

ESSAYS ON LABOR ISSUES IN ACCOUNTING

by

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To my family and friends. They are the joy of life.

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by

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This dissertation consists of two parts. In the first part, I document the economywide extent of corporate violations related to non-financial stakeholders such as employees, environment, and customers and the associated incentives provided in executive bonus plans. Using firm-level data on corporate violations from 47 federal agencies, I find that the number of violations per year is lower in firms with bonus plans that place less emphasis on expenses, a practice referred to as “cost-shielding”, compared to those with cost-cutting bonus plans. The relation between cost-shielding incentives and corporate violations is more pronounced for firms with weaker corporate governance, firms that operate in competitive industries, and firms with less monopsony power. In additional tests, I confirm my findings using more detailed data from the U.S. Department of Labor’s Wage and Hour Division and document that the number of employment-related violations decreases after managers receive an employee-related goal in their bonus plans for the first time. These findings highlight a novel link between incentives that stem from compensation plans and corporate compliance practices –an indicator of the risks borne by firms to non-financial stakeholders. In the second part, I examine the effect of the change in employee incentives on the extent of accounting restatements using the adoption of Employee Stock Ownership Plans

(ESOPs) as an exogenous shock. ESOPs provide employees with long-term ownership in the firm by investing the firm's stock in employees' retirement accounts. I find evidence of an increased probability of restating financial statements after the adoption of ESOPs. Overall, this study contributes to our understanding of the forces that affect accounting restatements.

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CHAPTER 1

HOW EXECUTIVE INCENTIVE PLANS HELP CURB CORPORATE MISCONDUCT

1.1 Introduction

Corporate laws and regulations impose constraints on what firms can and cannot legally accomplish. These rules often implicitly or explicitly require firms to expend additional resources for compliance. The potential improvements in profitability and competitive gains from non-compliance can incentivize managers to cut corners. Such corporate misconduct can pose significant threats to society and the environment in the form of environmental disasters or loss of employee or customer wealth and health. Prior research has shown that managers face pressure to meet their financial incentives, and they react to this pressure by compromising on compliance, which often means cutting expenditures related to product safety (Kini, Shenoy, and Subramaniam, 2014), workplace safety (Cohn and Wardlaw, 2016; Caskey and Ozel, 2017), and worker pay (Raghunandan, 2021). These studies have focused on external incentives such as increased leverage, negative cash flow shocks, and market expectations. In this study, I focus on the incentives created by executive bonus plans and examine how these incentives relate to the economywide extent of corporate misconduct, defined as violations of federal and state regulations. My evidence suggests that both cost-shielding and the presence of regulatory compliance goals in executive bonus plans are negatively associated with firms' tendency to violate corporate laws and regulations.

My analysis views corporate misconduct from the perspective of managers. A typical bonus plan is largely based on financial metrics, although non-financial metrics have become

increasingly common over time (Ittner, Larcker, and Rajan, 1997; Campbell, 2008). Thus, while most bonus plans do not explicitly incentivize or disincentivize compliance with corporate laws and regulations, the choice of financial metrics can implicitly alter executives' decisions regarding cutting corners.

For example, the investigation into the Butte wildfire in California in 2015, which destroyed over 500 homes and 70,000 acres, found Pacific Gas and Electric (PG&E) company executives guilty of aggressively reducing safety expenditures to meet their bonus goals related to cost-efficiency.¹ The same company was also found guilty in the San Bruno gas explosion in 2010 for deliberately not surveying pipelines because executives' bonus plans included awards for not having gas leaks. Although firms may desire the management to hold a tight grip around costs, and bonus plans can be useful in achieving these goals, these anecdotes highlight that corporate misconduct can be an unintended consequence of incentives in bonus plans.

I examine whether firms that provide incentives to reduce costs in executive bonus plans exhibit higher corporate violations compared to other firms. Following Bloomfield, Gipper, Kepler, and Tsui (2021), I define the bonus plans that exclude particular costs as cost-shielding bonus plans. Using corporate violations data from Violation Tracker, the first wide-ranging database on enforcement actions by federal and state agencies, I find that the number of violations per year is lower in firms with cost-shielding bonus plans compared to those with cost-cutting bonus plans for the 2000-2020 period. In multivariate analyses, where I control for firm-level characteristics as well as industry and year fixed effects to account for time-invariant unobservable

¹ Source: <http://www.firelawblog.com/2017/09/11/bonuses-utility-company-executive-lead-major-california-wildland-fire>

factors, I find the association between cost-shielding incentives and corporate violations remains statistically and economically significant. A one-standard-deviation increase in cost-shielding incentives is associated with a 21% drop in the number of violations per year. Additionally, I examine whether firms that explicitly include a "regulatory compliance" metric in executive bonus plans exhibit lower corporate violations compared to those that do not. I find that the number of violations per year is lower in these firms. A one-standard-deviation increase in regulatory compliance incentives is associated with a 6% drop in the number of violations per year.

I conduct three cross-sectional analyses to closely examine the relation between cost-shielding incentives in executive bonus plans and corporate violations. First, I find that the relation is weaker in firms with better corporate governance, measured by the recognition of the Inevitable Disclosure Doctrine (IDD) and managers' influence over the board of directors. In fact, after the recognition of the IDD by U.S. state courts, which exogenously increases executives' career concerns, I do not observe the relation between cost-shielding incentives and violations. These findings align with the corporate governance's role in reducing managers' tendency to cut corners in order to hit the bonus targets. They are also in line with the findings in the literature that effective internal (Jensen, 1993; Hermalin and Weisbach, 1998) and external (Ali, Li, and Zhang, 2019) monitoring mechanisms play a significant role in managerial actions. Overall, my findings suggest a substitution effect between cost-shielding incentives and better corporate governance.

Second, I find a weaker relation between cost-shielding incentives in executive bonus plans and corporate violations when the industry competition is low. Shleifer and Vishny (1993) classify misconduct as with and without theft. The former category shares important similarities with cost-reducing violations. For example, wage and hour violations are a form of theft from employees

(Raghunandan, 2021). Prior literature conjectures that cost-reducing misconduct reduces prices in competitive markets, thereby strengthening the offender firm's competitive position. Having observed this, the firm's peers' demand for ethical behavior declines, leading to the spread of violations (Shleifer and Vishny, 1993; Shleifer, 2004). Along these lines, I test and find that the association between cost-shielding incentives and corporate violations is weaker in non-competitive industries. Stated differently, cost-shielding incentives have a greater impact on violations in competitive industries, curbing the managers' tendency to compromise on regulatory compliance in attempts to cut costs.

Third, I use labor market monopsony as a proxy for managers' power over employees and examine the relation between cost-shielding incentives and employment-related violations in this setting. In monopsonistic labor markets, a few employers dominate hiring. In contrast, in markets with low labor concentration, employees have more employment alternatives and are more likely to leave than be exploited. I calculate labor market concentration using the Herfindahl-Hirschman index (HHI) based on employment numbers for each industry-year. Consistent with managers' reduced power to exploit employees, I find that employees are less exposed to employment-related violations in markets with low labor concentration and that cost-shielding incentives have a higher impact on the number of employment-related violations in markets with low labor concentration compared to monopsonistic markets.

In my primary analyses, I measure the number of violations based on the penalty year since it is reported by all federal and state agencies and is available for all types of violations. In additional tests, I replicate my primary analyses using the Department of Labor's Wage and Hour Division (WHD) data, which provides detailed information on start and end dates of violations. The WHD

dataset includes federal minimum wage, overtime pay, recordkeeping, child labor violations, and other violations regarding worker pay. I find that the number of WHD violations that start in a given fiscal year is lower in firms with cost-shielding bonus plans compared to those with cost-cutting bonus plans. In this sample, I also test and find that the number of WHD violations decreases after managers receive an employee-related corporate social responsibility (CSR) goal as part of their bonus plan for the first time. This finding and the cross-sectional findings collectively provide evidence of bonus plans curbing or inciting the violations.

My study contributes to the nascent literature concerning the impact of firms' financial incentives on the risks faced by non-financial stakeholders. Rose (1990) finds that lower profit margins are associated with the worst safety performance among small airline carriers. Kini et al. (2014) find that firms' adverse financial position leads to severe product recalls. Cohn and Wardlaw (2016) find that increased leverage and negative cash flow shocks adversely impact the investment in workplace safety. Caskey and Ozel (2017) find that managers compromise workplace safety in attempts to meet earnings benchmarks. Unlike these studies, I focus on incentives that stem from compensation plans and provide the initial large-sample evidence on the relation between corporate compliance practices and such incentives. I document that this relation is not only statistically significant but also economically meaningful. Furthermore, unlike prior studies, my study focuses on all types of corporate violations, and hence, addresses the risks imposed by firms on non-financial stakeholders such as employees, consumers, the public, and the environment. Although corporate violations can impose direct and indirect monetary costs on financial stakeholders (Armour, Mayer, and Polo, 2017), the costs faced by non-financial

stakeholders are often non-monetary and typically irreversible (e.g., death/injury of employees, pollution, climate risks).

My study is also related to the growing literature studying the role of bonus plans in communicating corporate objectives (e.g., Guay, Kepler, and Tsui, 2019; Bloomfield, Gipper, Kepler, and Tsui, 2021) by providing evidence of a previously undocumented link: offsetting incentives to violate regulations. Additionally, my study comments on the ongoing debate on the effectiveness of the CSR goals (e.g., Albuquerque, Koskinen, and Zhang, 2019; Albuquerque, Koskinen, Yang, and Zhang, 2020; Larcker and Watts, 2020; Broadstock, Chan, Cheng, and Wang, 2021; Ding, Levine, Lin, and Xie, 2021; Raghunandan and Rajgopal, 2021) by showing that employee-related CSR goals given as part of executive bonus plans alleviate employment-related violations.

My study highlights a potential benefit of cost-shielding incentives in the form of lower corporate violations, but it does not address the optimality of corporate violations. The optimal number of such violations is presumably higher than zero. However, in the light of growing investor demand for sustainable investing, it is important to consider factors associated with corporate compliance. For example, in the United States, the size of sustainably invested assets in 2020 was \$17.1 trillion, one-third of the total size of the assets under management.² Perhaps as a response to this growing demand, companies are increasingly becoming vocal about their social and environmental practices. Many boards established new committees to focus on these matters. My findings emphasize whether managerial incentives speak to this dynamism.

² Source: <https://www.ussif.org/fastfacts>

1.2 Institutional Background

1.2.1 Bonus Plans

Although the substantial portion of executive incentives comes from their equity portfolios, boards allocate considerable time and effort to creating bonus plan packages and extensively use them as part of the executive compensation contracts. Principal-agent theory suggests that optimal incentive contracts can have a mix of equity and non-equity-based plans, even when the principal's objective is to maximize equity value. Specifically, bonus plans communicate clearly defined goals linked to precise rewards, and in this sense, "may well provide stronger incentives than equity-based plans, even when the magnitude of the payoff is smaller" (Murphy and Jensen, 2011, p.1). Furthermore, executive bonus plans indicate how other key employees in the organization, such as lower-level executives and managers, are compensated. For example, Murphy (2001) finds that the median executive bonus plan has 123 participants. Accordingly, executive bonus plans provide a credible signal of what the entire management team pays attention to (Guay, Kepler, and Tsui, 2019).

Extant studies in accounting and finance show that bonus plans communicate actionable priorities to executives and are a significant source of their financial incentives (Guay, Kepler, and Tsui, 2019; Bloomfield, Gipper, Kepler, and Tsui, 2021). Along these lines, my analysis examines executive bonus plans through the lens of managerial focus. Although most bonus plans do not explicitly incentivize or disincentivize compliance with corporate laws and regulations, the choice of actionable priorities communicated through bonus plan goals can implicitly alter managers' tendency to cut corners.

1.2.2 Regulatory Violations and Incentives for Compliance

Corporate compliance is regulated by a diverse body of government agencies in the United States. Some of these agencies are the Department of Justice, Department of Labor, Mine Safety and Health Administration, Occupational Safety and Health Administration, Environmental Protection Agency, Federal Trade Commission, Consumer Financial Protection Bureau, and Food and Drug Administration. These agencies promote standards including worker rights, workplace safety, a clean environment, consumer protection, and industry practices. In addition, they issue guidance for employers, monitor inspections, respond to reported violations, and take enforcement actions against non-compliant firms.

Regulations are often divided into two main categories as social regulations and economic regulations. Social regulations relate to issues on health, safety, and the environment, whereas economic regulations relate to a broad base of activities in particular industries. Regulators' motivation is often externalities (e.g., pollution) and risk reduction (e.g., sickness, injury, or death) for social regulation and public interest for economic regulation (Dudley and Brito, 2012, pp.77-80). According to the Regulators' Budget, the U.S. government spent \$26 billion on social regulations related to consumer safety and health, transportation, workplace, and environment and energy in 2020, compared to \$14 billion on economic regulations.

Firms' incentives for complying with regulations arise from direct and indirect costs of violations such as penalties, reputation loss, wage differentials, and limitations on collaborating with the government. In 2015, companies spent \$78 billion in penalties, which is nearly five percent of the \$1,665 billion domestic corporate profits in 2015 per the U.S. Bureau of Economic Analysis. Evidence suggests that indirect costs may be even more severe. Armour et al. (2017)

find that reputational losses are nearly nine times the size of penalties when the misconduct is against customers and investors. According to Ascent's research report in 2020, indirect costs, including productivity loss, revenue loss, and business disruption, are estimated to be six times what firms typically pay for penalties.³

Compliance performance can also impact a firm's market value. The degree of regulatory compliance on the issues linked to the environment, labor, consumers, and industry practices relates to corporate sustainability. Recent data on professionally managed assets reveals investor demand for sustainable investing. In the United States, the size of sustainably invested assets in 2020 was 17.1 trillion, one-third of the total size of the assets under management. Relevantly, Bénabou and Tirole (2010) argue that firms have incentives for good corporate behavior because corporate social responsibility can make a firm more profitable. Consistently, Albuquerque et al. (2019) show that the firms that are good corporate citizens receive higher valuations. Several recent studies find that the U.S. market valued the firms that are good corporate citizens more favorably during the 2020 pandemic (Albuquerque, Koskinen, Yang, and Zhang, 2020; Broadstock, Chan, Cheng, and Wang, 2021; Ding, Levine, Lin, and Xie, 2021). In line with the influence of compliance performance on market value, a growing number of firms use compliance goals as part of the executive compensation plan.

A lack of regulatory compliance can have severe consequences on non-investor stakeholders such as employees, consumers, the public, and the environment. While some violations can be undone by covering the stakeholders' financial losses (e.g., wage-and-hour violations, consumer

³ Source: <https://www.ascentregtech.com/blog/the-not-so-hidden-costs-of-compliance>

over-billing), violations that lead to deaths and permanent injuries are irreversible. Certain environmental non-compliance, such as the use of chlorpyrifos, a toxic pesticide, jeopardizes public health. Non-compliance-related pollution heightens the climate risk. In addition, a recent study by Tessum, Paoletta, Chambliss, Apte, Hill, and Marshall (2021) find that air pollution, the largest environmental cause of human mortality, disproportionately affects low-income and minority communities, suggesting that consequences of non-compliance may be more grave on particular segments of stakeholders.

1.2.3 Good Jobs First and The Violation Tracker Data

The data on enforcement actions against corporations for violations of federal regulations comes from Good Jobs First, a national policy resource center promoting corporate and government accountability. The Corporate Research Project, a non-profit center operated by Good Jobs First, assists community, environment, and labor organizations in researching and analyzing industries to increase corporate accountability. It also maintains a comprehensive database, called Violation Tracker, on enforcement actions by 47 federal agencies since 2000. Violation Tracker is the first wide-ranging database on corporate misconduct. It covers banking, consumer protection, false claims, environmental, wage and hour, discrimination, price-fixing, and other resolved cases from federal regulatory agencies, the Department of Justice, state attorney generals, state regulatory agencies, and private litigation in the form of class-action lawsuits. In addition to violation and agency details at the establishment level, the data contains information about the establishment's location, parent company, industry, ownership structure, and litigation-related variables such as the court, case title, and resolution type.

Table 1, Panel A provides the violation types and dollar amount of penalties at the establishment level. From most frequent to least, the violation types in the sample are safety, environment, employment, consumer protection, financial, government-contracting, competition, and healthcare. The mean (median) of penalties implies that, on average, financial (government-contracting) violations are the most costly, and safety (safety) violations are the least costly to the firm. Panel B provides the largest penalties for each violation type, imposing agency, and the offense. The largest establishment-level penalty in the sample is nearly \$17 billion, imposed by the Department of Justice on Bank of America for mortgage abuses.

Table 2 presents statistics regarding the types of enforcement actions. Panel A presents the most frequent offenses in the sample. The most frequent offenses in the sample are related to workplace safety, environment, wage and hour, and consumer protection. Panel B presents the top agencies that enforce penalties. Some of the most active agencies in the sample are the Federal Railroad Administration of the Transportation Department, Environmental Protection Agency, Wage and Hour Division of the Department of Labor, and California Department of Managed Healthcare. Panel C presents the distribution of enforcement across government levels. Nearly 80% of the penalties are enforced at the federal level and 20% at the state level. Panel D presents the frequency of civil and criminal violations, and Panel E presents the number of violation cases filed by agencies and private litigation. The overwhelming majority of violations are civil and filed by agencies as opposed to private litigation.

1.3 Research Design

I examine the relation between corporate violations and the incentives provided in executive bonus plans. Since the dependent variable in my primary analyses, i.e., the number of violations, is discrete and count data, I estimate the following Poisson models for firm i in year t :

$$\text{Violation Count}_{it} \sim \text{Poisson}(\lambda_{it})$$

$$\lambda_{it} = \exp\{\beta_0 + \beta_1 \text{CostShield}_{it} \text{ or AvgSM}_{it} + \beta_2 \text{ReguComp}_{it} + \gamma \text{Controls}_{it} + \alpha_j + \alpha_t + \varepsilon_{it}\} \quad (1)$$

where $\text{Violation Count}_{it}$ is the number of violations, α_j and α_t are the industry and year fixed effects, CostShield_{it} and AvgSM_{it} are measures for the degree of cost shielding in a firm's annual bonus plan, ReguComp_{it} is an indicator equal to one if a firm includes a regulatory compliance metric in the annual bonus plan, Controls_{it} is a vector of controls, and ε_{it} is the error term.

I use penalty dates to measure Violation Count since it is the only date available in the data. The drawback of using penalty dates is the possibility that the violation may have been going on for longer than a year before it is penalized. To mitigate this concern, following Christensen, Floyd, Liu, and Maffett (2017), I measure Violation Count over two-year periods in my primary analyses. The results remain similar when I use one-year periods. Additionally, in robustness tests, I explore the Department of Labor's Wage and Hour Division (WHD) data, which provides a specific start date for violations, and find that my inferences remain unchanged.

I measure managerial incentives to reduce costs induced by bonus plans using two proxies. First, following Bloomfield et al. (2021), I define CostShield based on the presence of two performance metrics from the income statement in the bonus plan: earnings-based metrics (e.g.,

net income, EBIT, EBITDA) and sales metric.⁴⁵ I set a categorical variable equal to 1 for sales metric and 0 for earnings-based metrics to reflect the degree of cost shielding. I then compute CostShield as the firm-year average of these categorical variables. For example, a CEO bonus plan that includes earnings, profit margin, ROIC, and sales metrics would receive a CostShield value of $(\text{sales metric} * 1 + \text{earnings-based metrics} * 0) / 4 = 0.25$ for that firm-year. Greater values of CostShield reflect a greater degree of cost shielding. As a second proxy, I use the average sales metric, AvgSM, based on the presence of three performance metrics in the bonus plan: earnings-based metrics, sales metric, and stock price metric. Similar to the CostShield calculation, I set a categorical variable equal to 1 for sales metric, 0 for earnings-based metrics, and 0 for stock price metric to reflect the degree of cost shielding. I then count the number of each metric and compute AvgSM as the weighted firm-year average of these categorical variables using the counts as weights. For example, a CEO bonus plan that includes three sales metrics and seven earnings or stock price metrics would receive an AvgSM value of 0.30 for that firm-year. Unlike CostShield, AvgSM reflects the presence of stock price metrics and the count of each metric in the bonus plan. Like CostShield, greater values of AvgSM reflect a greater degree of cost shielding. Greater cost shielding in bonus plans implies that the executives have lower incentives for cutting costs to earn bonuses. Since violations predominantly relate to activities that give rise to expenses, lower

⁴ Bloomfield et al. (2021) define cost shielding based on the presence of four performance metrics: earnings, EBIT, EBITDA, and sales. I aggregate the first three under earnings-based metrics because the vast majority of violations relate to revenues and expenses included in EBITDA, and the variation from EBITDA to earnings is unlikely to alter a firm's tendency to violate within the framework of my study.

⁵ I classify Incentive Lab metrics coded as "Earnings", "EPS", "Profit Margin", "ROA", "ROE", "ROI", "ROIC", "EBT", "EBIT", "Operating Income", and "EBITDA" as earnings-based metrics, and metrics coded as "Sales" and "Gross Revenues" as sales metric.

incentives for cutting costs should produce fewer regulatory violations. As a result, I expect CostShield and AvgSM to be negatively associated with the number of violations.

In addition to providing incentives to reduce costs, some bonus plans explicitly include a "regulatory compliance" metric to encourage managers to comply with regulations. To examine whether this metric is associated with a firm's propensity to violate regulations, I define ReguComp as an indicator variable equal to one if the CEO receives a regulatory compliance metric in the annual bonus plan. To the extent that ReguComp reduces managers' tendency to cut corners and violate regulations in attempts to earn bonuses, I expect β_2 to be negative in Eq. (1).

I control for various firm characteristics that may affect corporate violations. Prior literature finds lower profitability (Rose, 1990) and increased leverage (Kini, Shenoy, and Subramaniam, 2014; Cohn and Wardlaw, 2016) negatively impact consumer, product, and employee safety. Accordingly, I include ROA as the firm's income before extraordinary items divided by total assets at the beginning of the year and Leverage as the firm's total short-term and long-term debt divided by total assets at the beginning of the year in the regressions. I also include the natural logarithm of 1+the number of years the firm has been in Compustat, FirmAge, the natural logarithm of the firm's total assets at the beginning of the year, Size, the natural logarithm of the firm's total number of employees at the beginning of the year, Ln(Employees), and firm's one-year stock return at the beginning of the year, Return, in my analyses.

1.4 Data and Summary Statistics

1.4.1 Data

I obtain the data on corporate violations from Violation Tracker, the data on bonus plans from Incentive Lab, and the financial data from Compustat. The sample period is determined by data availability and is from 2000 to 2020. To ensure that firms are subject to U.S. regulations, I limit the sample to firms headquartered and incorporated in the United States. I require the availability of data on corporate incentive plans and financial data necessary to calculate the variables in Eq. (1). These selection criteria result in 1,456 firms and 13,956 firm-year observations.

1.4.2 Summary Statistics

Table 3, Panel A provides violation summary statistics. 49% of the firms in the sample have at least one violation during the sample period. The average firm in the sample has about four violations in a given year. The mean value of penalty paid is \$15 million in the full sample and \$40 million among firm-years with violations.

Table 3, Panel B provides summary statistics for firm characteristics. All financial variables are winsorized at the top and bottom percentile. The median firm is around 25 years old (i.e., $\text{FirmAge} = 3.26$), has total assets of around \$5 billion (i.e., $\text{Size} = 8.5$), and 9,300 employees (i.e., $\text{Ln}(\text{Employees}) = 2.24$). The median firm also has Leverage of 24 percent, ROA of 5 percent, and Return of 7 percent.

Table 3, Panel C provides summary statistics for incentive bonus plans. The mean (median) firm in the sample has 3.36 (3) metrics in the bonus plan. Of these 3.36 (3) metrics, 2.35 (2) are income statement metrics which compares to 2.27 (2) in Bloomfield et al. (2021). The rest of the

bonus plan includes 0.10 (0) stock price metrics and 0.92 (1) strategic metrics (e.g., regulatory compliance, quality, CSR goals). The average firm in the sample has 15% CostShield and 17% AvgSM in the bonus plan. Similar to Bloomfield et al. (2021), I find that cost shielding is highest in healthcare and telecommunication industries and lowest in utilities and energy industries.

Table 3, Panel D provides the Pearson (below diagonal) and Spearman (above diagonal) correlations between Violation Count and other variables. The correlations indicate that the number of violations in a given year is higher in firms with less cost-shielding bonus plans and in large and mature firms. Bonus plans that explicitly include a "regulatory compliance" metric are negatively associated with the number of violations, and leverage is positively associated with the number of violations.

1.5 Results

1.5.1 Main Results

Regulatory violations can stem from managers' tendency to cut corners in attempts to earn bonuses. For example, due to cost-cutting incentives in the bonus plans, managers may participate in illegal conduct by not paying their employees for the work performed off the clock, sacrificing workplace safety standards, and improperly handling environmentally harmful waste. In this section, I conduct analyses to explore the impact of the incentives provided in executive bonus plans.

Table 4 presents the main results from the model defined in Eq. (1). The first two columns show the results with CostShield, and the last two columns show the results with AvgSM. The

dependent variable is the number of violations. All columns report the results with industry and year fixed effects. In all models, I cluster standard errors at the firm level.

In line with the negative univariate correlation between Violation Count and CostShield in Panel D of Table 3, columns 1 and 2 of Table 4 report that, on average, firms with cost-shielding incentives have fewer violations. The coefficient on CostShield is -0.013 in column 1 and -0.011 in column 2 after including the control variables. In both models, the coefficient on CostShield is statistically significant at the 1% level. To calculate the economic magnitude of the effect in column 2, I multiply the coefficient on CostShield with its standard deviation, 20.9479, and find the standardized coefficient of CostShield. I then transform the standardized coefficient to incidence rate as $e^{\beta-1}$ to calculate the percentage change in the expected violation count for firms with cost-shielding incentives. I find that a one standard deviation increase in CostShield is associated with a 21% drop in Violation Count, i.e., the number of violations per year is 21% lower in firms with cost-shielding bonus plans compared to those with cost-cutting bonus plans.

Columns 3 and 4 report the tests with AvgSM. The results are similar to those of CostShield's. The coefficient on AvgSM is -0.011 in column 3 and -0.009 in column 4 after including the control variables. As for the economic magnitude of the effect in column 4, I find that a one standard deviation increase in AvgSM is associated with a 20% drop in Violation Count, i.e., the number of violations per year is 20% lower in firms with cost-shielding bonus plans, measured by AvgSM, compared to those with cost-cutting bonus plans.

Columns 2 and 4 also show that, on average, firms that explicitly include a "regulatory compliance" metric in the CEO's annual bonus plan have fewer violations. The coefficient on ReguComp is -0.633 in column 2, the CostShield model, and -0.643 in column 4, the AvgSM

model. In both models, the coefficient on CostShield is statistically significant at the 1% level. These findings are also economically significant. One standard deviation increase in ReguComp is associated with a 6% drop in Violation Count.

In column 2, the coefficients on Size and ROA are positive and statistically significant. This implies that, on average, larger and more profitable firms are involved in more violations. The coefficient on Leverage has a positive sign as predicted by Cohn and Wardlaw (2016), but it is not statistically significant (z-statistic of 1.34) in my sample. The coefficient on Ln(Employees) also has a positive sign, yet it is not statistically significant. However, the effect of Ln(Employees) is likely absorbed by Size as the Pearson (Spearman) correlation between the two is 0.56 (0.54), which is fairly high. Finally, the coefficients on FirmAge and Return are close to zero and statistically insignificant, suggesting no statistically significant impact of firm age and returns on the number of violations. The findings related to the control variables in column 4 are similar to those of column 2.

1.5.2 Cross-Sectional Differences

Corporate Governance

Corporate governance likely reduces the degree of managers' inclination to cut corners in order to earn bonuses and, consequently, to violate regulations since corporate governance is expected to prevent managers from taking actions that maximize their own wealth at the expense of stakeholders' (Jensen and Meckling, 1976). Effective monitoring instruments, such as future employment opportunities (Ali, Li, and Zhang, 2019) and board independence (Jensen, 1993; Hermalin and Weisbach, 1998), play a role in managers' actions. I test whether corporate

governance reduces the association between managers' tendency to violate regulations and the incentives given in managers' bonus plans.

I use the adoption dates of the Inevitable Disclosure Doctrine (IDD) by state from Klasa, Ortiz-Molina, Serfling, and Srinivasan (2018), Table 1 as a proxy for managers' concerns about their future employment opportunities. The IDD prevents employees who know their firm's trade secrets from working for rivals and thereby restricts managers' employment opportunities in the future. Put differently, managers are less likely to risk losing their jobs when IDD is in effect. I define IDD as an indicator variable equal to one if the IDD is valid in a given year in the states where firms are headquartered. The average IDD adoption rate in the sample across the sample period is 52%. If the concerns about future employment opportunities limit managers' tendency to violate regulations, then I expect to find weaker results in firm-years that the IDD is valid.

Following prior literature (e.g., Efendi, Srivastava, and Swanson, 2007; Zhao and Chen, 2008), I use CEO's influence on the board as a proxy for board independence. Monitoring can impair in the boards where the CEO is highly influential. I define Chair as an indicator variable equal to one if the CEO serves as the board chair in a given year. 46% of the firm-years in the sample have a CEO that serves as the board chair. If lack of monitoring by the board increases managers' tendency to violate regulations, then I expect to find stronger results in firm-years that the CEO serves as the board chair.

Table 5, Panel A reports the results in the IDD setting. The first three columns show the results with CostShield, and the last three columns show the results with AvgSM. All columns report the results with industry and year fixed effects. In addition, I apply state fixed effects in columns 3 and 6. In all models, I cluster standard errors at the firm level. For both CostShield and AvgSM, I

find that the coefficient on the interaction term is positive and statistically significant. These results support the inference that the association between managers' tendency to violate regulations and the incentives provided in managers' bonus plans is less pronounced when managers' outside employment opportunities are restricted.

Panel B reports the results from estimating the interaction term with Chair. In columns 2 and 4, the coefficient on Chair has a positive sign, but it is not statistically significant (z-statistics of 1.55 and 1.57, respectively). The coefficient on the interaction term has a negative sign, as predicted, but it is marginally insignificant (z-statistics of 1.51 and 1.63, respectively). Overall, my findings from IDD and Chair tests suggest that better corporate governance settings mitigate the positive link between cost-cutting incentives in managers' bonus plans and the propensity to violate regulations.

Industry Competition

Shleifer and Vishny (1993) categorize two cases of misconduct: misconduct with and without theft. The former category shares important similarities with cost-cutting violations. For example, wage and hour violations are a form of theft from employees (Raghunandan, 2021). They conjecture that competition encourages the spread of cost-reducing misconduct. When illicit actions are cost-reducing, they also reduce prices in competitive markets, strengthening the offender firm's competitive position. Having observed this, the firm's peers' demand for ethical behavior declines, leading to the spread of violations (Shleifer and Vishny, 1993; Shleifer, 2004). I predict that managers' tendency to violate regulations in attempts to achieve cost-cutting incentives in bonus plans will be weaker in non-competitive industries. To test this prediction, I use Herfindahl-Hirschman Index (HHI), which is well-grounded in the industrial organization

theory. The HHI is defined as the sum of squared market shares of firm i in industry j in year t . Following Giroud and Mueller (2010), I compute the market shares based on firms' sales in three-digit SIC industries from Compustat. A higher HHI indicates weaker competition. I define low competition, *LCompetition*, as an indicator variable equal to one if a firm-year observation is in the upper tercile of the HHI distribution.

Table 6 reports the results from estimating Eq. (1) with an interaction term for *LCompetition*. For both *CostShield* and *AvgSM*, I find that the coefficient on the interaction term is positive and statistically significant. The coefficient on *LCompetition* has a negative sign, although it is not statistically significant. These results are consistent with the greater impact of cost-shielding incentives on the number of violations in competitive industries, curbing the managers' tendency to compromise on regulatory compliance in attempts to cut costs.

As a robustness check, I consider Census HHI as an alternative to Compustat HHI. I use the "fitted HHI" produced by Keil (2017) using the U.S. Census Bureau at the U.S. Department of Commerce. "Fitted HHI" is estimated based on concentration ratios and covers manufacturing and non-manufacturing industries. I define *LCompetition* as an indicator variable equal to one if a firm-year observation is in the upper tercile of the "fitted HHI" distribution and repeat the analysis. My results remain similar.

Labor Monopsony

Labor monopsony, or labor concentration, occurs when a few employers control the hiring in the market. In monopsonistic labor markets, employers have increased power over workers due to the lack of employment alternatives. In contrast, in markets with low labor concentration, employees have more bargaining power and are more likely to leave than to be exploited. I

conjecture that managers will be less likely to violate employment-related regulations in attempts to achieve cost-cutting incentives in bonus plans if they have reduced power over employees.

I use labor HHI as a proxy for labor concentration. Labor HHI is defined as the sum of squared employee shares of firm i in industry j in year t . I compute the employee shares based on firms' number of employees from Compustat. A lower HHI indicates lower labor concentration. I define low concentration, `LConcentration`, as an indicator variable equal to one if a firm-year observation is in the lowest tercile of the labor HHI distribution.

Table 7 reports the results with `LConcentration`. In columns 2 and 4, the coefficients on `CostShield` and `AvgSM` indicate that cost-shielding incentives are not associated with employment-related violations in monopsonistic markets. This finding suggests heterogeneity in the impact of cost-shielding incentives across different market characteristics. The coefficients on `LConcentration` and the interaction terms indicate that employees are less exposed to employment-related violations in markets with low labor concentration and that cost-shielding incentives have a higher impact on the number of employment-related violations in markets with low labor concentration compared to monopsonistic markets. These results are consistent with managers being more reluctant to exploit employees in attempts to achieve cost-cutting incentives in their bonus plans when their bargaining power over employees is reduced.

1.6 Additional Tests

In my main analyses, I use penalty dates to measure Violation Count since it is the only date available in the data. In this section, I explore the Department of Labor's Wage and Hour Division (WHD) data where I observe the start and end dates of violations. WHD enforces federal minimum wage, overtime pay, recordkeeping, and child labor requirements of the Fair Labor Standards Act,

the Family and Medical Leave Act, and other Federal laws regarding worker pay. The average (median) time difference in days between the start and end dates of WHD violations from 2000 to 2020 is 601 (728) days, which corresponds to 1.64 (1.99) years. 99.5% of the WHD violations are resolved within three years. To ensure that I know the start dates for all violations that occurred during the sample period, I combine WHD violations with the no-violation firms headquartered and incorporated in the United States from Compustat. Stated differently, I exclude the firms whose violation start dates I am not able to pinpoint. I require the availability of data on corporate incentive plans and financial data necessary to calculate the variables in Eq. (1). These selection criteria result in 6,107 firm-year observations.

Table 8 reports the results from estimating Eq. (1) in the WHD sample. Consistent with the results in Table 8, columns 2 and 4 in Panel A show that, on average, firms with cost-shielding incentives have fewer violations. As for the economic magnitude of the effect, I find that the number of WHD violations that start in a given fiscal year is 17% lower in firms with cost-shielding bonus plans, measured by CostShield and AvgSM, compared to those with cost-cutting bonus plans. Unlike Table 4, the coefficient on Ln(Employees) is positive and statistically significant. This suggests that firms with a higher number of employees are involved in more WHD violations.

Recently, a growing number of papers have discussed the effectiveness of corporate social responsibility (CSR) from the perspective of investors (e.g., Albuquerque, Koskinen, Yang, and Zhang, 2020; Larcker and Watts, 2020; Broadstock, Chan, Cheng, and Wang, 2021; Ding, Levine, Lin, and Xie, 2021) and within-firm practices (e.g., Albuquerque, Koskinen, and Zhang, 2019; Raghunandan and Rajgopal, 2021). Along these lines, I explore the effectiveness of CSR goals in

executive bonus plans on their intended purpose using the WHD sample. Specifically, I test whether the number of labor violations decreases after managers receive an employee-related CSR goal as part of their bonus plan for the first time. Table 8, Panel B reports the results from this analysis. The coefficient on AfterCSR-Employee is negative and statistically significant. The economic magnitude of the effect corresponds to a 22% drop in employment-related violations after managers receive an employee-related CSR goal for the first time. My results reveal that CSR goals given as part of executive compensation plans are likely to impact related activities within the firm. Consequently, such compensation plans may signal investors firms' commitment to CSR issues.

1.7 Conclusion

Using novel and comprehensive data aggregated from 47 federal agencies, I document that firms that place less emphasis on expenses in their executive bonus plans, i.e., cost-shielding firms, exhibit lower violations compared to firms that provide cost-cutting incentives. The magnitude of my findings is not small: A one-standard-deviation increase in cost-shielding incentives is associated with a 21% drop in the number of violations per year. The results are more pronounced in firms with weaker corporate governance, firms that operate in competitive industries, and firms with less monopsony power. These findings suggest that, in attempts to meet their cost-related goals, managers are more likely to compromise on compliance when monitoring is weak, when they face pressure to reduce slack and improve efficiency, and when they have bargaining power over labor. I also show that firms that provide a regulatory compliance goal in their executive bonus plans exhibit lower violations compared to other firms. In additional analyses, I find that

employment-related violations decline after managers receive a bonus goal related to employee welfare for the first time.

I document various types of misconduct among corporations in the United States. Previous literature almost exclusively focused on the shareholder aspects of misconduct. My findings highlight that only two percent of violations pertain to financial stakeholders. The remaining part of violations is committed against non-financial stakeholders, primarily labor, the environment, and consumers. Some of these violations jeopardize public health, heighten climate risk, and cause permanent injuries and death of employees. While non-financial stakeholders encounter such complications, financial stakeholders also bear direct and indirect costs. The direct costs of violations amounted to \$722 billion in penalties from 2000 to 2020, which corresponds to nearly three percent of the total corporate profits over this period per the U.S. Bureau of Economic Analysis. The indirect costs of non-compliance, such as reputational damages, productivity loss, and business disruption, are estimated to be six to nine times the size of penalties (Armour, Mayer, and Polo., 2017; Ascent, 2020).

My analyses do not cover the confidential court settlements of corporate violations, suggesting that my estimates likely understate the true extent of the relation between bonus plan incentives and corporate violations. Additionally, my findings underline the incentives that stem from compensation contracts and the related risks faced by non-financial stakeholders as a whole. However, recent evidence shows that risks of non-compliance are more severe on particular segments of non-financial stakeholders. For example, Tessum et al. (2021) find that air pollution, the largest environmental cause of human mortality, disproportionately affects low-income and

minority communities. Whether and how executive incentives relate to risks faced by different demographics of non-financial stakeholders is an interesting venue for future research.

APPENDIX A
SUPPLEMENTAL TABLES FOR CHAPTER 1

Table 1. Violation Types and Damages

This table reports violation types and penalties. Panel A presents the number of penalties and dollar amount of penalties by violation type for publicly traded firms headquartered and incorporated in the U.S. over 2000-2020 with non-missing financial data. Panel B presents the most substantial penalties in each violation category.

A. Violation Types and Damages (in mn USD)

Violation Type	Obs.	Mean	Sd.	Median	Max.
Competition	311	26	89	2	925
Consumer protection	2,276	6	57	0	2,125
Employment	2,874	4	21	0	640
Environment	4,907	4	106	0	5,150
Financial	666	182	1,062	2	16,650
Government contracting	375	38	108	5	1,200
Healthcare	131	86	324	1	2,300
Safety	16,177	0	8	0	900

B. Examples of Substantial Damages

Violation Type	Offense	Agency	Company	Penalty
Competition	FX market manipulation	DOJ	Citigroup	925
Consumer protection	Mortgage abuses	CFPB	Ocwen Financial	2,125
Employment	Overtime work	Private litigation	Walmart	640
Environment	Environmental violation	EPA	Occidental Petroleum	5,150
Financial	Mortgage abuses	DOJ	Bank of America	16,650
Government contracting	FCA fraud	DOJ	Wells Fargo	1,200
Healthcare	Unapproved promotions	FDA	Pfizer	2,300
Safety	Motor vehicle safety	NHTSA	General Motors	900

Table 2. Violation Characteristics

This table reports violation characteristics. Panel A presents the most frequent offenses observed in the sample. Panel B presents the top agencies that enforce penalties. Panel C presents the distribution of the enforcement across government levels. Panel D presents the frequency of civil and criminal violations. Panel E presents the number of violation cases filed by agencies and private litigation. The sample covers all publicly traded firms headquartered and incorporated in the U.S. over 2000-2020 with non-missing financial data.

A. Violation Details		C. Government Level of Enforcement	
Offense (Top 10)	Obs.	Government Level	Obs.
Workplace safety or health violation	9,020	Federal	21,796
Railroad safety violation	5,966	State	5,852
Environmental violation	4,828	Local	94
Insurance violation	1,620	Multiple	1
Wage and hour violation	1,336		
Aviation safety violation	977	D. Civil and Criminal Cases	
Labor relations violation	747	Civil/Criminal	Obs.
Employment discrimination	453	Civil	27,594
Consumer protection violation	401	Criminal	123
False Claims Act and related	364	Civil and criminal	26
B. Penalty Enforcement		E. Initiation of Enforcement	
Agency (Top 10)	Obs.	Agency/Private	Obs.
Federal Railroad Adm.	5,965	Agency action	26,933
Occupational Safety & Health Adm.	5,761	Private litigation	810
Mine Safety and Health Adm.	3,249		
Environmental Protection Agency	1,303		
Federal Aviation Adm.	975		
Labor Dept. Wage and Hour Division	861		
National Labor Relations Board	747		
California Dept. of Managed Healthcare	512		
Texas Commission on Enviro. Quality	466		
Pennsylvania Dept. of Enviro. Protection	455		

Table 3. Descriptive Statistics

This table reports violation and firm summary statistics. Panel A presents the summary statistics corresponding to violation data. Panel B presents the summary statistics of the firm-level variables. Panel C presents the summary statistics of the performance goals. Panel D presents the correlation matrix. The sample covers all publicly traded firms headquartered and incorporated in the U.S. over 2000-2020 with non-missing financial data. Observations are firm by year. Variable definitions are listed in Appendix A. In panel D, coefficients in bold are statistically significant at 10% level or better.

Variable	Obs.	Mean	Sd.	Median	Min.	Max.	#.Firms
A. Violation Summary Statistics							
<i>Violation dummy</i>	13,956	0.37	0.48	0	0	1	1,456
<i>Violation count</i>	13,956	3.93	17.85	0	0	495	1,456
<i>Total penalties (in mn USD):</i>							
<i>All firm-years</i>	13,956	15	323	0	0	27,060	1,456
<i>Violation firm-years</i>	5,128	40	533	0.12	0	27,060	708
B. Firm Summary Statistics							
<i>FirmAge</i>	13,956	3.23	0.72	3.26	0.69	4.23	1,456
<i>Size</i>	13,956	8.61	1.54	8.50	4.26	12.79	1,456
<i>Ln(Employees)</i>	13,956	2.19	1.58	2.24	-2.92	5.68	1,456
<i>Leverage</i>	13,956	0.26	0.20	0.24	0.00	0.98	1,456
<i>ROA</i>	13,956	0.05	0.08	0.05	-0.46	0.26	1,456
<i>Return</i>	13,956	0.12	0.46	0.07	-0.76	2.52	1,456
C. Incentive Summary Statistics							
<i>CostShield</i>	13,956	0.15	0.21	0	0	1	1,456
<i>AvgSM</i>	13,956	0.17	0.24	0	0	1	1,456
<i>AvgEBM</i>	13,956	0.78	0.27	1	0	1	1,456
<i>ReguComp</i>	13,956	0.01	0.10	0	0	1	1,456
<i>CSR-Safety</i>	13,956	0.07	0.26	0	0	1	1,456
<i>CSR-Environment</i>	13,956	0.03	0.16	0	0	1	1,456
<i>CSR-Employee</i>	13,956	0.06	0.24	0	0	1	1,456
<i>CSR-Consumer</i>	13,956	0.07	0.26	0	0	1	1,456

Table 3, Continued

D. Correlation Matrix						
	<i>Violation Count</i>	<i>CostShield</i>	<i>AvgSM</i>	<i>ReguComp</i>	<i>FirmAge</i>	<i>Size</i>
<i>Violation Count</i>		-0.16	-0.16	-0.03	0.30	0.40
<i>CostShield</i>	-0.08		0.97	0.00	-0.13	-0.18
<i>AvgSM</i>	-0.08	0.92		0.00	-0.13	-0.18
<i>ReguComp</i>	-0.02	0.01	0.01		-0.02	0.04
<i>FirmAge</i>	0.10	-0.15	-0.14	-0.02		0.35
<i>Size</i>	0.17	-0.20	-0.20	0.03	0.33	
<i>Ln(Employees)</i>	0.17	-0.11	-0.12	-0.06	0.35	0.56
<i>Leverage</i>	0.02	-0.09	-0.07	0.00	0.05	0.13
<i>ROA</i>	0.01	-0.01	-0.02	-0.04	0.06	-0.02
<i>Return</i>	-0.01	0.02	0.02	0.02	-0.08	-0.08

	<i>Ln(Employees)</i>	<i>Leverage</i>	<i>ROA</i>	<i>Return</i>
<i>Violation Count</i>	0.46	0.14	0.05	0.01
<i>CostShield</i>	-0.08	-0.12	0.09	0.02
<i>AvgSM</i>	-0.08	-0.11	0.08	0.02
<i>ReguComp</i>	-0.06	0.00	-0.05	0.00
<i>FirmAge</i>	0.36	0.12	0.03	-0.04
<i>Size</i>	0.54	0.21	-0.18	-0.03
<i>Ln(Employees)</i>		0.10	0.13	-0.03
<i>Leverage</i>	0.05		-0.20	-0.04
<i>ROA</i>	0.15	-0.17		0.10
<i>Return</i>	-0.06	-0.03	0.09	

Table 4. Violations and Performance Goals in Executive Bonus Plans

This table reports the results of Poisson regressions where the dependent variable is the number of violations in a given firm-year. The sample covers all publicly traded firms headquartered and incorporated in the U.S. over 2000-2020 with non-missing financial data. Variable definitions are listed in Appendix A. All regressions are estimated with industry and year fixed effects, and standard errors are clustered by firm. Z-statistics are in parenthesis. *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively.

	Dependent variable: <i>Violation Count</i>			
	(1)	(2)	(3)	(4)
<i>CostShield</i>	-0.013*** (-3.44)	-0.011*** (-3.07)		
<i>AvgSM</i>			-0.011*** (-3.26)	-0.009*** (-3.14)
<i>ReguComp</i>		-0.633*** (-2.98)		-0.643*** (-3.01)
<i>FirmAge</i>		0.028 (0.21)		0.028 (0.21)
<i>Size</i>		0.583*** (4.21)		0.586*** (4.23)
<i>Ln(Employees)</i>		0.125 (0.96)		0.124 (0.95)
<i>Leverage</i>		0.470 (1.34)		0.469 (1.34)
<i>ROA</i>		1.270** (2.30)		1.243** (2.26)
<i>Return</i>		-0.028 (-0.58)		-0.029 (-0.59)
<i>Constant</i>	1.260*** (3.76)	-4.628*** (-4.71)	1.256*** (3.75)	-4.639*** (-4.73)
Fixed effects	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes
Observations	13,956	13,956	13,956	13,956
Log likelihood	-82,090	-60,790	-82,116	-60,721

Table 5. Corporate Governance, Violations and Performance Goals in Executive Bonus Plans

This table reports the results of Poisson regressions where the dependent variable is the number of violations in a given firm-year. The corporate governance variable in Panel A, *IDD*, is an indicator equal to one if the Inevitable Disclosure Doctrine is valid in a given year in the states where firms are headquartered. The corporate governance variable in Panel B, *Chair*, is an indicator equal to one if the CEO serves as board chair in a given year. The sample covers all publicly traded firms headquartered and incorporated in the U.S. over 2000-2020 with non-missing financial data. Variable definitions are listed in Appendix A. All regressions are estimated with industry and year fixed effects, and standard errors are clustered by firm. State fixed effects are included in models (3) and (6). Z-statistics are in parenthesis. *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively.

A. Inevitable Disclosure Doctrine						
Dependent variable: <i>Violation Count</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
<i>CostShield</i>	-0.032*** (-4.88)	-0.025*** (-4.21)	-0.017*** (-3.62)			
<i>AvgSM</i>				-0.025*** (-4.06)	-0.019*** (-3.47)	-0.013*** (-2.72)
<i>IDD</i>	-0.259 (-0.90)	-0.254 (-0.93)	-0.050 (-0.20)	-0.245 (-0.85)	-0.226 (-0.84)	-0.036 (-0.15)
<i>CostShield*IDD</i>	0.029*** (3.50)	0.023*** (2.75)	0.017*** (2.96)			
<i>AvgSM*IDD</i>				0.023*** (3.03)	0.016** (2.30)	0.012** (2.28)
<i>ReguComp</i>		-0.608*** (-2.72)	-0.370* (-1.72)		-0.620*** (-2.79)	-0.374* (-1.74)
<i>FirmAge</i>		0.031 (0.22)	0.103 (1.05)		0.030 (0.22)	0.100 (1.03)
<i>Size</i>		0.580*** (4.48)	0.486*** (6.57)		0.582*** (4.47)	0.487*** (6.59)
<i>Ln(Employees)</i>		0.121 (1.01)	0.290*** (3.70)		0.120 (1.00)	0.291*** (3.72)
<i>Leverage</i>		0.458 (1.35)	0.635** (2.26)		0.464 (1.36)	0.636** (2.25)
<i>ROA</i>		1.212** (2.20)	0.800 (1.34)		1.196** (2.18)	0.817 (1.38)
<i>Return</i>		-0.030 (-0.64)	0.008 (0.21)		-0.029 (-0.63)	0.010 (0.25)
<i>Constant</i>	1.426*** (3.33)	-4.407*** (-5.23)	-6.168*** (-7.08)	1.411*** (3.29)	-4.436*** (-5.26)	-6.168*** (-7.11)
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13,956	13,956	13,956	13,956	13,956	13,956

Table 5, Continued

Log likelihood	-80,944	-60,139	-48,149	-81,123	-60,231	-48,195
B. CEO = Chair of the Board						
	Dependent variable: <i>Violation Count</i>					
	(1)	(2)	(3)	(4)		
<i>CostShield</i>	-0.010** (-2.42)	-0.007** (-2.02)				
<i>AvgSM</i>			-0.008** (-2.22)	-0.006** (-2.10)		
<i>Chair</i>	0.608*** (4.68)	0.221 (1.55)	0.607*** (4.70)	0.219 (1.57)		
<i>CostShield*Chair</i>	-0.005 (-0.92)	-0.006 (-1.51)				
<i>AvgSM*Chair</i>			-0.005 (-0.99)	-0.006 (-1.63)		
<i>ReguComp</i>		-0.646*** (-3.04)		-0.655*** (-3.07)		
<i>FirmAge</i>		0.016 (0.12)		0.016 (0.12)		
<i>Size</i>		0.575*** (4.17)		0.578*** (4.19)		
<i>Ln(Employees)</i>		0.122 (0.93)		0.122 (0.93)		
<i>Leverage</i>		0.463 (1.33)		0.459 (1.32)		
<i>ROA</i>		1.222** (2.24)		1.198** (2.21)		
<i>Return</i>		-0.022 (-0.49)		-0.023 (-0.50)		
<i>Constant</i>	0.785** (2.26)	-4.656*** (-4.75)	0.783** (2.26)	-4.662*** (-4.77)		
Fixed effects	Yes	Yes	Yes	Yes		
Clustered SE	Yes	Yes	Yes	Yes		
Observations	13,956	13,956	13,956	13,956		
Log likelihood	-80,071	-60,569	-80,118	-60,498		

Table 6. Competition, Violations and Performance Goals in Executive Bonus Plans

This table reports the results of Poisson regressions where the dependent variable is the number of violations in a given firm-year. The low competition variable, *LCompetition*, is an indicator equal to one if an observation is in the upper tercile of the Herfindahl-Hirschman Index (HHI) distribution. The sample covers all publicly traded firms headquartered and incorporated in the U.S. over 2000-2020 with non-missing financial data. Variable definitions are listed in Appendix A. All regressions are estimated with industry and year fixed effects, and standard errors are clustered by firm. Z-statistics are in parenthesis. *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively.

	Dependent variable: <i>Violation Count</i>			
	(1)	(2)	(3)	(4)
<i>CostShield</i>	-0.028*** (-4.90)	-0.020*** (-3.73)		
<i>AvgSM</i>			-0.023*** (-4.66)	-0.016*** (-3.56)
<i>LCompetition</i>	-0.350 (-1.22)	-0.238 (-1.14)	-0.342 (-1.18)	-0.215 (-1.04)
<i>CostShield*LCompetition</i>	0.028*** (3.85)	0.016** (2.24)		
<i>AvgSM*LCompetition</i>			0.023*** (3.76)	0.012** (2.11)
<i>ReguComp</i>		-0.610*** (-2.79)		-0.628*** (-2.83)
<i>FirmAge</i>		-0.075 (-0.27)		-0.075 (-0.28)
<i>Size</i>		0.625*** (4.54)		0.628*** (4.56)
<i>Ln(Employees)</i>		0.081 (0.64)		0.080 (0.64)
<i>Leverage</i>		0.401 (1.11)		0.404 (1.11)
<i>ROA</i>		1.249** (2.13)		1.245** (2.12)
<i>Return</i>		-0.040 (-0.81)		-0.041 (-0.82)
<i>Constant</i>	1.422*** (3.87)	-4.462*** (-4.85)	1.414*** (3.85)	-4.489*** (-4.89)
Fixed effects	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes
Observations	13,322	13,322	13,322	13,322
Log likelihood	-77,763	-58,154	-77,826	-58,130

Table 7. Monopsony, Violations and Performance Goals in Executive Bonus Plans

This table reports the results of Poisson regressions where the dependent variable is the number of employment violations in a given firm-year. The low labor concentration variable, *LConcentration*, is an indicator equal to one if an observation is in the lowest tercile of labor HHI distribution. The sample covers all publicly traded firms headquartered and incorporated in the U.S. over 2000-2020 with non-missing financial data. Variable definitions are listed in Appendix A. All regressions are estimated with industry and year fixed effects, and standard errors are clustered by firm. Z-statistics are in parenthesis. *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively.

	Dependent variable: <i>Employment Violation Count</i>			
	(1)	(2)	(3)	(4)
<i>CostShield</i>	0.002 (0.51)	-0.000 (-0.14)		
<i>AvgSM</i>			0.002 (0.52)	-0.001 (-0.29)
<i>LConcentration</i>	-0.479*** (-3.28)	-0.354*** (-2.59)	-0.498*** (-3.39)	-0.369*** (-2.68)
<i>CostShield*LConcentration</i>	-0.022*** (-4.36)	-0.010** (-1.98)		
<i>AvgSM*LConcentration</i>			-0.018*** (-4.01)	-0.007* (-1.74)
<i>ReguComp</i>		-0.480* (-1.77)		-0.486* (-1.81)
<i>FirmAge</i>		-0.326* (-1.68)		-0.322* (-1.66)
<i>Size</i>		0.154** (1.99)		0.155** (2.00)
<i>Ln(Employees)</i>		0.706*** (10.24)		0.707*** (10.24)
<i>Leverage</i>		0.207 (0.69)		0.207 (0.69)
<i>ROA</i>		0.220 (0.38)		0.219 (0.38)
<i>Return</i>		-0.014 (-0.29)		-0.014 (-0.29)
<i>Constant</i>	-0.537 (-1.39)	-3.992*** (-5.88)	-0.538 (-1.39)	-4.007*** (-5.90)
Fixed effects	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes
Observations	13,978	13,978	13,978	13,978
Log likelihood	-12,973	-9,978	-12,990	-9,980

Table 8. Violations and Performance Goals in Executive Bonus Plans – the WHD Sample

This table reports the results of Poisson regressions where the dependent variable is the number of wage and hour violations in a given firm-year. Panel A repeats the baseline regressions performed in Table 4 using the Department of Labor’s Wage and Hour Division sample. Panel B presents the main analysis after a CEO receives an employee-related performance goal in the bonus plan for the first time. The sample covers all publicly traded firms headquartered and incorporated in the U.S. over 2000-2020 with non-missing financial data. Variable definitions are listed in Appendix A. All regressions are estimated with industry and year fixed effects, and standard errors are clustered by firm. Z-statistics are in parenthesis. *, **, *** indicate statistical significance at 10%., 5% and 1% level, respectively.

	Dependent variable: <i>Violation Count</i>			
	(1)	(2)	(3)	(4)
<i>CostShield</i>	-0.014*** (-2.93)	-0.008* (-1.72)		
<i>AvgSM</i>			-0.011*** (-2.70)	-0.007* (-1.81)
<i>ReguComp</i>		-0.126 (-0.22)		-0.124 (-0.21)
<i>FirmAge</i>		-0.413 (-1.14)		-0.394 (-1.10)
<i>Size</i>		0.066 (0.68)		0.069 (0.72)
<i>Ln(Employees)</i>		0.837*** (8.44)		0.836*** (8.40)
<i>Leverage</i>		-0.166 (-0.30)		-0.157 (-0.28)
<i>ROA</i>		3.015*** (2.90)		3.004*** (2.88)
<i>Return</i>		-0.072 (-0.86)		-0.072 (-0.85)
<i>Constant</i>	-3.442*** (-5.42)	-5.616*** (-3.74)	-3.474*** (-5.47)	-5.727*** (-3.85)
Fixed effects	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes
Observations	6,107	6,107	6,107	6,107
Log likelihood	-2,299	-1,796	-2,303	-1,796

Table 8, Continued

B. After Employee-Related Performance Goals		
	Dependent variable: <i>Violation Count</i>	
	(1)	(2)
<i>CostShield</i>	-0.021*** (-3.07)	
<i>AvgSM</i>		-0.018*** (-3.07)
<i>AfterCSR-Employee</i>	-0.512** (-2.24)	-0.507** (-2.21)
<i>ReguComp</i>	-0.219 (-0.36)	-0.258 (-0.43)
<i>FirmAge</i>	-0.885** (-2.33)	-0.855** (-2.22)
<i>Size</i>	0.015 (0.11)	0.028 (0.21)
<i>Ln(Employees)</i>	1.115*** (5.70)	1.099*** (5.52)
<i>Leverage</i>	-1.028 (-0.94)	-0.963 (-0.85)
<i>ROA</i>	0.935 (0.43)	0.995 (0.46)
<i>Return</i>	0.057 (0.48)	0.061 (0.51)
<i>Constant</i>	-19.655*** (-12.25)	-20.406*** (-12.92)
Fixed effects	Yes	Yes
Clustered SE	Yes	Yes
Observations	984	984
Log likelihood	-300	-300

Table 9. Variable Definitions

Variable	Description
<i>Violation dummy</i>	Indicator variable equal to one if a violation occurred in year t.
<i>Violation count</i>	The number of violations by each firm in years t and t+1.
<i>Total penalties</i>	The dollar amount of penalties in year t.
<i>FirmAge</i>	Natural logarithm of 1+ firm's age at the beginning of the year.
<i>Size</i>	Natural logarithm of firm's total assets at the beginning of the year. (Compustat AT)
<i>Ln(Employees)</i>	Natural logarithm of firm's total number of employees at the beginning of the year. (Compustat EMP)
<i>Leverage</i>	Firm's total short-term and long-term debt divided by total assets at the beginning of the year. (Compustat (DLC+DLTT)/AT)
<i>ROA</i>	Firm's income before extraordinary items divided by total assets at the beginning of the year. (Compustat IB/AT)
<i>Return</i>	Firm's one-year stock return at the beginning of the year. (Compustat, return calculated with PRCC_F)
<i>CostShield</i>	Sales metric dummy divided by the total number of different sales and earnings-based metrics that the CEO received in year t.
<i>AvgSM</i>	The number of sales metrics divided by the total number of sales, earnings-based, and stock price metrics that the CEO received in year t.
<i>AvgEBM</i>	The number of earnings-based metrics divided by the total number of sales, earnings-based, and stock price metrics that the CEO received in year t.
<i>ReguComp</i>	Indicator variable equal to one if the CEO received a regulatory compliance metric in year t.
<i>CSR-Safety</i>	Indicator variable equal to one if the CEO received a safety-related metric in year t.
<i>CSR-Environment</i>	Indicator variable equal to one if the CEO received an environment-related metric in year t.
<i>CSR-Employee</i>	Indicator variable equal to one if the CEO received an employee-related metric in year t.
<i>CSR-Consumer</i>	Indicator variable equal to one if the CEO received a consumer-related metric in year t.
<i>IDD</i>	Indicator variable equal to one if the Inevitable Disclosure Doctrine is valid in a given year in the states where firms are headquartered.
<i>Chair</i>	Indicator variable equal to one if the CEO serves as board chair in a given year.
<i>LCompetition</i>	Indicator variable equal to one if an observation is in the upper tercile of the HHI distribution.
<i>LConcentration</i>	Indicator variable equal to one if an observation is in the lowest tercile of labor HHI distribution.
<i>AfterCSR-Employee</i>	Indicator variable equal to one after the CEO received an employee-related metric for the first time.

Table 10. Calculation of CostShield, AvgSM, and AvgEBM

A sample bonus plan is given below. *CostShield* is sales metric dummy divided by the total number of different sales and earnings-based metrics (i.e., earnings, profit margin, ROIC, and sales), $1/4 = 0.25$. *AvgSM* is the number of sales metrics divided by the total number of sales, earnings-based, and stock price metrics (i.e., one earnings, two profit margin, two ROIC, three sales, and two stock price metrics), $3/10 = 0.30$. *AvgEBM* is the number of earnings-based metrics divided by the total number of sales, earnings-based, and stock price metrics, $5/10 = 0.50$.

Example: PayPal Holding, Inc.

CIK	Fiscal Year	Metric Type	Metric	CostShield	AvgSM	AvgEBM
1633917	2015	Accounting	Earnings	0.25	0.30	0.50
1633917	2015	Accounting	Profit Margin	0.25	0.30	0.50
1633917	2015	Accounting	Profit Margin	0.25	0.30	0.50
1633917	2015	Accounting	ROIC	0.25	0.30	0.50
1633917	2015	Accounting	ROIC	0.25	0.30	0.50
1633917	2015	Accounting	Sales	0.25	0.30	0.50
1633917	2015	Accounting	Sales	0.25	0.30	0.50
1633917	2015	Accounting	Sales	0.25	0.30	0.50
1633917	2015	Stock Price		0.25	0.30	0.50
1633917	2015	Stock Price		0.25	0.30	0.50
1633917	2015	Other	Individual	0.25	0.30	0.50

APPENDIX B
SUPPLEMENTAL FIGURES FOR CHAPTER 1



Figure 1. Violation Distributions in Cost-Shielding and Cost-Cutting Firms

This figure plots the mean violation distribution in firms that provide zero cost shielding and high-cost shielding in executive bonus plans. Cost-shielding incentives are defined as sales metric dummy divided by the total number of different sales and earnings-based metrics that the CEO received in a year. High-cost shielding indicates a cost shield score of 50% or more.

CHAPTER 2

EMPLOYEE OWNERSHIP AND ACCOUNTING RESTATEMENTS

2.1 Introduction

I examine the effect of the change in employee incentives on the probability of accounting restatements. The shock I examine is the adoption of Employee Stock Ownership Plans (ESOPs) between 1993 and 2017. ESOPs increase employees' stake in the firm by granting them long-term stock ownership and voting rights. Misreporting is hypothesized to have evolved as a function of a firm's workforce as well as manager's compensation and corporate governance (e.g., Call, Kedia, and Rajgopal, 2016; Call, Campbell, Dhaliwal, and Moon Jr., 2017). Accordingly, I hypothesize that the probability of accounting restatements should change after adopting ESOPs. Consistent with this hypothesis, I find a significant increase in the probability of restating after adopting ESOPs relative to non-ESOP firms.

The role of employees in misreporting is established in recent literature (Dyck, Morse, and Zingales, 2010; Call et al., 2016; Call et al., 2017). ESOPs create a new block of shareholders, namely employee-owners. This implies that employees have new incentives following the adoption of ESOPs. For instance, employee ownership can act as a mechanism that aligns employees' interests with shareholders'. Consistent with this argument, past research has found that employee ownership is associated with characteristics correlated with shareholder wealth (Kim and Ouimet, 2014). If this argument holds in my setting, accounting restatements will likely decrease through employee disapproval towards misrepresentation and increased work effort after adopting ESOPs. Alternatively, employee ownership can create entrenched labor, and employee-

owners can adopt a ‘quiet life’, maximizing their utility instead of shareholders’ (Jensen and Meckling, 1979). Following this argument, Faleye, Mehrotra, and Morck (2006) have shown that firms with considerable employee ownership invest less in long-term assets, take fewer risks, grow more slowly, create fewer jobs, and exhibit lower labor and total factor productivity. If this argument holds in my setting, accounting restatements will likely increase due to entrenched labor. My contribution to this literature is to propose a quasi-natural experiment setting to examine the effect of changing employee incentives on accounting restatements.

The identification strategy is to test whether the adoption of ESOPs will increase or decrease the probability of restating in firms that adopted the ESOP compared to firms that did not. However, it is not obvious that there should be an increase or decrease in the probability of restating after adopting ESOPs. If this is the case, one should not observe any changes in the probability of restating in the post-period. Therefore, the effect of ESOP adoptions on the probability of restating is an empirical question.

I employ a difference-in-difference (DID) design to examine the effect of ESOP adoptions on the probability of restating. The DID method assures that the results are not affected by secular time trends or time-invariant omitted correlated variables that affect all firms. My sample includes 46 firms and 884 firm-year observations from 1993 to 2017. Firms that adopted ESOPs are my treatment group (23 firms with 442 firm-year observations), while a size, industry, and year-matched sample of firms that did not adopt ESOPs is my control group (23 firms with 442 firm-year observations). I study the change in the probability of restating before and after adopting ESOPs. Restatements are measured by an indicator variable equal to 1 during the misstatement period and 0 otherwise, as illustrated in Figure 2. As hypothesized, the probability of restating for

the treatment group significantly increases relative to the control group after adopting ESOPs. The economic magnitude of the results is also significant. The probability of restating increases by 0.8% for the treatment firms compared to control firms in the post-adoption period.⁶ Since costs associated with restatements are substantial to the firm, 0.8% increase in the probability of restating is material (Hribar and Jenkins, 2004; Palmrose, Richardson, and Scholz, 2004; Lev, Ryan, and Wu, 2008).

Next, I explore whether the increase in the probability of restating following the adoption of ESOPs varies in the cross-section. Previous research suggests that the effect of ESOP adoptions should vary based on the number of employees in the firm and the size of the ESOP compared to the firm's outstanding shares (Kim and Ouimet, 2014; Faleye et al., 2006). My cross-sectional variation tests explore these two dimensions. First, I examine whether the increase in the probability of restating is more pronounced for firms with numerous employees. This is because firms with numerous employees are more prone to free-rider problems. Employees may feel that their reduced work efforts are less likely to be noticed in these firms. Therefore, I expect these firms to exhibit more increase in restating probability than firms with fewer employees. Surprisingly, the results show that having numerous employees does not statistically significantly affect the probability of restating for the treatment firms compared to the control firms in the post-adoption period.

Then, I examine whether the post-adoption increase in the probability of restating is greater for firms with larger ESOP sizes compared to the firm's outstanding shares. I expect the employees

⁶ In untabulated results, the beta coefficient and log-odds ratio of ESOP*POST are 3.384 and 1.002244, respectively. This translates into a 0.8% increase in the probability of restating.

with larger ESOPs to be less concerned about losing their jobs and to adopt a ‘quiet life’ to a greater extent, leading to reduced work effort. However, I do not find evidence for a greater increase in the probability of restating in firms with larger ESOPs.

I conduct various sensitivity tests to ensure the robustness of the results. First, I check for the parallel trends assumption in the DID design and confirm that the results are not driven by a violation of this assumption. Next, I review two other underlying assumptions of DID models, SUTVA and perfect compliance, and discuss that my model does not violate these assumptions. Finally, I show that the results are not sensitive to the matching procedure using an alternative research design.

My study contributes to the literature by enhancing our understanding of the drivers of accounting restatements. Past research has documented that misreporting is associated with characteristics correlated with employee compensation (Call et al., 2016). My study arguably achieves better identification by using an exogenous shock to employees’ stake in the firm and shows that ESOPs increase the probability of restating in the adopting firms in the post-period.

My study is also related to the literature that examines the role of employees on financial reporting and corporate-doings, such as Call et al. (2017) and Faleye et al. (2006). My study complements these studies by analyzing the effect of ESOP adoptions on the probability of restatements.

The remainder of the paper is organized as follows. Section II provides institutional background and develops the hypotheses. Section III outlines the empirical methodology and variable construction. Section IV presents the results. Section V examines the robustness. Section VI concludes.

2.2 Institutional Background and Hypothesis Development

2.2.1 Employee Stock Ownership Plans

An Employee Stock Ownership Plan (ESOP) is a tax-favored, long-term stock ownership plan given to employees to reward and motivate them. The plan must be allocated to all full-time employees. The allocation of shares can be made equally or based on relative pay or a combination of both. ESOPs are different from profit-sharing plans, stock options, stock bonuses, and 401Ks because employees can liquidate their ownership only when they retire or leave the company but not before.⁷ In addition, employees have voting rights if the ESOP is created with voting shares in publicly traded firms. Furthermore, ESOP participants can be represented by a representative on the board if the plan is large. Overall, firms create a new block of shareholders by giving employees long-term ownership, voting rights, and a voice in corporate governance.

2.2.2 Employee Stock Ownership Plans and Restatements

Restatements are a form of misreporting determined as a function of manager's compensation and corporate governance (Dechow, Ge, and Schrand, 2010). In addition to these determinants, Call et al. (2017) find that a firm's workforce has a significant effect on internal control violations and frequency of restatements. Employees, directly and indirectly, engage in restatements by preparation of accounting information and by providing raw internal data that will eventually become financial reports. Hence, employee-shareholders will likely have new incentives on

⁷ Employees can take the shares with them when they leave the company once the shares are vested. The vesting process can take up to 10 years, depending on the plan.

financial reporting following the adoption of ESOPs. Since restatements adversely affect shareholder wealth (Hribar and Jenkins, 2004; Palmrose et al., 2004; Lev et al., 2008), employee-shareholders may engage in less misreporting after adopting ESOP. As a result, ESOPs can decrease the frequency of restatements. Alternatively, since ESOPs create entrenched labor, employee-shareholders can adopt a ‘quiet life’ and maximize their utility instead of shareholder value (Jensen and Meckling, 1979; Faleye et al., 2006). If employees put less effort into work, ESOPs can consequently increase the frequency of restatements.

My objective is to empirically test these opposing hypotheses regarding employee ownership and the probability of restating. This leads to my primary hypothesis is the null form:

H1: ESOP adoptions will have no effect on the probability of restating in the adopting firms.

2.2.3 Cross-Sectional Variation

Next, I explore how the effect of ESOP adoptions should vary in the cross-section. Previous discussions in the literature suggest that the effect of ESOP should vary based on the number of employees in the firm and the size of the ESOP compared to the firm’s outstanding shares (Kim and Ouimet, 2014; Faleye et al., 2006).

First, I examine the effect of ESOP adoptions based on the number of employees in the firm. Existing research predicts that the potential positive change in employee incentives after adopting ESOP should be more pronounced in firms with not-so-numerous employees because the positive change in employee incentives is contaminated by a free-rider problem in firms with numerous employees. For example, in firms with numerous employees, workers may feel that their hard effort is less likely to make a difference, and their reduced effort is less likely to be noticed. Therefore, if the probability of restating decreases following the adoption of ESOPs, then the effect

is more likely to be observed in firms with not-so-numerous employees. Similarly, if the probability of restating increases following the adoption of ESOPs, then the effect is more likely to be observed in firms with numerous employees. This discussion leads to the following hypothesis in the alternate form:

H2: ESOP adoptions will have a more pronounced effect on the probability of restating in firms with not-so-numerous employees (numerous employees) if the probability of restating falls (rises) following the post-adoption period.

I also expect the potential change in employee incentives after adopting ESOPs to depend on the size of the ESOP compared to the firm's outstanding shares. I argue that ESOPs that control more than 5% of the firm's outstanding shares are more likely to have power on misreporting. Morck, Shleifer, and Vishny (1988) suggest that more than 5% equity block stops top managers from dominating corporate control. Finance literature on corporate policies (e.g., Faleye et al., 2006) suggest that an employee block that controls more than 5% of the firm's outstanding shares will have real effects on the corporate policy. I extend this rationale and hypothesize that ESOPs that control more than 5% of the firm's outstanding shares are more likely to affect the probability of restating. Accordingly, I hypothesize that:

H3: ESOP adoptions will have a more pronounced effect on the probability of restating when employees control more than 5% of the firm's outstanding shares.

2.3 Research Design and Data

2.3.1 Empirical Methodology

I employ a difference-in-difference (DID) methodology to study the effect of ESOP adoptions on the probability of restating. My treatment firms have adopted ESOP at any time during the life of the firm. Control firms have never adopted an ESOP and belong to the same industry, year, and size quartile as the treatment firms. Each firm in the matched sample has at least one observation in the pre-adoption period and one observation in the post-adoption period. As in any DID setting, I examine the change in the probability of restating for treatment firms after adopting ESOPs relative to the change in the probability of restating for control firms during the sample period. My DID specification is:

$$\Pr(\text{RESTATEMENT}_{it}) = \beta_0 + \beta_1\text{ESOP}_{it} + \beta_2\text{POST}_{it} + \beta_3\text{ESOP*POST}_{it} + \gamma\text{Controls}_{it} + \varepsilon_{it} \quad (1)$$

where RESTATEMENT is an indicator variable equal to 1 during the misstatement period at a given firm and 0 otherwise, as shown in Figure 2. ESOP is an indicator variable that takes a value of 1 for treatment firms and 0 for control firms. For the treatment firms, POST is an indicator variable equal to 1 in the years after adopting ESOPs and 0 before in the years before the adoption of ESOPs. I assign a pseudo post variable to the control firms corresponding to the treatment firm that they are matched. The coefficient of interest is that of the interaction variable, which is the difference between the change in the probability of restating exhibited by treatment firms after the adoption of ESOPs and the change in the probability of restating exhibited by control firms after the adoption of ESOPs.

I develop the Efendi, Srivastava, and Swanson (2007) model to arrive at my control variables: CHAIR_{it}, CEO_SALARY_{it-1}, CEO_OPTIONS_{it-1}, INTERESTCOV_{it-1}, FUNDS_{it-1}, BIG4_{it}, and

SIZE_{it-1}. CHAIR_{it} is an indicator variable equal to 1 if the CEO is the board chair and 0 otherwise. CEO_SALARY_{it-1} is the CEO's base salary. CEO_OPTIONS_{it-1} is the CEO's in-the-money options scaled by CEO's salary. INTERESTCOV_{it-1} is the inverse interest coverage ratio, calculated as interest expense divided by operating income before depreciation. FUNDS_{it-1} is an indicator variable equal to 1 if the sum of debt and equity funds raised exceeds 20% of total assets and 0 otherwise. BIG4_{it} is an indicator variable equal to 1 if a firm's auditor is one of the big four auditors and 0 otherwise. SIZE_{it-1} is the natural logarithm of the firm's total assets. A more detailed definition of each variable is provided in Appendix C.

2.3.2 Sample Selection and Data

I obtain the financial data from Compustat, executive information from ExecuComp, restatements from Audit Analytics, and the employee ownership data from National Center for Employee Ownership (NCEO). The sample period covers from 1993 to 2017. I exclude firms classified as financials (SIC 6000-6999), utilities (SIC 4900-4999), and public administration/non-classifiable (SIC 9000-9999).

The firms that adopt ESOPs during the sample period are illustrated in Figure 3. The earliest adoption was in 1994, and the latest adoption was in 2015. My final sample has 442 treatment firm-years and 442 control firm-years from 1993 to 2017. The descriptive statistics for the treatment and control samples are reported in Table 11. The control firms, on average, have more interest expense, more funds raised through equity and debt, and they are less likely to be audited by the big-four auditors than treatment firms. However, both treatment and control firms are similar in size, executive compensation, and CEO's control over corporate governance. The collective bargaining indicator, COLBARG, suggests that very few treatment firms in the sample

do collective bargaining. The majority of the treatment firms in the sample have a plan that controls at least 5% of the firm's outstanding shares. All treatment firms in the sample combine an ESOP with a 401K plan.

2.4 Results

2.4.1 Main Results

I first document the results of the tests examining the effect of ESOP adoptions on the probability of restating. Table 12, Panel A presents the coefficients from the regression estimation in Eq. (1) using the pooled matched sample. The coefficient on ESOP*POST is positive and significant with a p-value of 0.034. This suggests an increase in the probability of restating for treatment firms relative to control firms after adopting ESOPs. The coefficient of ESOP*POST is 2.293. This means we expect an increase by 2.293 in the log-odds of the dependent variable RESTATEMENT for ESOP firms relative to non-ESOP firms in the post-period, holding all other independent variables constant. In Panel B, I estimate Eq. (1) within a 10-year window. Again, the coefficient on ESOP*POST is positive and statistically significant. In both Panel A and Panel B, a positive association is documented between the probability of restating and the big-four auditors. One reason for this association could be a riskier client portfolio of big-four auditors. Another interpretation could be that big-four auditors are more likely to reveal misstatements, and consequently, a restatement follows.

2.4.2 Cross-Sectional Differences

While Table 12 shows that, on average, the probability of restating increases after adopting ESOPs, the results might be driven by certain subsets of firms. Specifically, I report the same model estimated with a dummy variable NUMEROUS in Table 13 to explore if the increase in the probability of restating is more pronounced in the firms with numerous employees. The coefficient on ESOP*POST*NUMEROUS is positive but insignificant. Table 13 suggests that being a firm with numerous employees does not statistically significantly affect the probability of restating for ESOP firms compared to non-ESOP firms in the post-adoption period.

Next, I examine whether the probability of restating varies depending on the degree of control employees have on corporate policies. I use a dummy variable, ESOPG5, equal to 1 if the ESOP controls more than 5% of the firm's outstanding shares and 0 otherwise, following Faleye et al. (2006). The results of this analysis are presented in Table 14. The coefficient on ESOP*POST*ESOPG5 suggests that employee ownership that controls more than 5% of the firm's outstanding shares does not statistically significantly affect the probability of restating for ESOP firms compared to non-ESOP firms in the post-adoption period. However, the results of this analysis should be interpreted with caution. In the final sample, 78% of the total number of firm-year observations, i.e., 684 out of 878 observations, have an ESOP that controls at least 5% of the firm's outstanding. ESOP*POST*ESOPG5 could appear insignificant due to lack of variation because almost all firms in the sample have an ESOP that controls at least 5% of the firm's outstanding shares.

2.5 Robustness Checks

2.5.1 Parallel Trends Assumption

Following Roberts and Whited (2013), I first perform a falsification test to validate the parallel trends assumption in my setting. For each treatment firm, I replace the year of ESOP adoption t with $t-1$, $t-2$, and $t-3$. Then, I construct the matched treatment and control sample based on these false-adoption years using the same matching methodology. Finally, I estimate the falsification test using the same empirical model for the entire sample and a sample with a 10-year window. The results are presented in Table 15. The falsification test coefficient on $ESOP*POST$ is not statistically different from zero. This indicates that the results are not attributable to the violation of the parallel trends assumption.

2.5.2 Stable Unit Value Treatment and Perfect Compliance Assumptions

In addition to the parallel trends assumption, DID models require stable unit value treatment (SUTVA) and perfect compliance assumptions. The SUTVA assumption is violated if the treatment status of the treatment group affects the outcomes of the control group and vice versa. In my setting, a firm's adopting ESOP does not affect a non-ESOP firm's probability of accounting restatements. Therefore, the results are not attributable to the violation of the SUTVA assumption. The perfect compliance assumption requires that all treatment firms receive the treatment in the post-treatment period, and none of the firms receive the treatment in the pre-treatment period. In my setting, this assumption is satisfied by the definition of ESOPs. All ESOP firms have ESOP benefits in the post-treatment period, and no firm can have ESOP benefits before adopting the ESOP.

2.6 Conclusion

Using the adoption of ESOPs, I examine the effect of an exogenous change in employee incentives on the probability of accounting restatements. Accounting literature shows that labor has a valid role in the preparation of accounting information and in providing raw internal data that will eventually become financial reports (Call et al. 2017). Prior literature also documents that labor ownership can lead to entrenched labor and reduce work effort (Jensen and Meckling, 1979; Faleye et al., 2006). Such a situation will likely adversely affect the frequency of restatements. Consistent with these arguments, I hypothesize and find that the probability of restating increases after the adoption of ESOPs. Moreover, these findings are robust to various sensitivity tests that revoke the possibility of other confounding factors driving the results. Overall, my study contributes to understanding the forces that affect accounting restatements.

APPENDIX C
SUPPLEMENTAL TABLES FOR CHAPTER 2

Table 11. Summary Statistics for ESOP and Non-ESOP Firms

This table presents the summary statistics for ESOP firms and non-ESOP firms matched based on size, industry, and year. Variable definitions are listed in Appendix C. The difference column shows the difference in means between ESOP firms and non-ESOP firms. *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively.

						(1) ESOP = 0	
Variable	N	Mean	Sd.	Min	Max		
<i>CHAIR</i>	442	0.61	0.49	0	1		
<i>CEO_SALARY</i>	442	867	346	150	2332		
<i>CEO_OPTIONS</i>	442	17	63	0	998		
<i>INTERESTCOV</i>	442	0.28	0.45	0	2		
<i>FUNDS</i>	442	0.19	0.39	0	1		
<i>BIG4</i>	442	0.87	0.33	0	1		
<i>SIZE</i>	442	8.09	1.45	3.32	11		
<i>IRREG</i>							
<i>EMP</i>							
<i>COLBARG</i>							
<i>KSOP</i>							
<i>ESOPG5</i>							

						(2) ESOP = 1		(1)-(2) Difference		T-stat
Variable	N	Mean	Sd.	Min	Max					
<i>CHAIR</i>	442	0.57	0.49	0	1	0.04	1.16			
<i>CEO_SALARY</i>	442	817	495	110	3649	50	1.75			
<i>CEO_OPTIONS</i>	442	16	32	0	330	1	0.60			
<i>INTERESTCOV</i>	442	0.17	0.38	0	2	0.11	3.92***			
<i>FUNDS</i>	442	0.10	0.29	0	1	0.09	4.07***			
<i>BIG4</i>	442	0.93	0.25	0	1	-0.06	-2.96**			
<i>SIZE</i>	442	8.27	1.65	3.40	12.23	-0.18	-1.71			
<i>IRREG</i>	442	0.05	0.21	0	1					
<i>EMP</i>	442	126	400	0.12	2300					
<i>COLBARG</i>	442	0.09	0.28	0	1					
<i>KSOP</i>	442	1	0	1	1					
<i>ESOPG5</i>	439	0.78	0.41	0	1					

Table 12. The Effect of ESOPs on the Probability of Restating

This table presents the results of the Logit regressions where the dependent variable is an indicator equal to one if there is a restatement in a given firm-year. Columns (1) and (2) report the results for the entire sample. Columns (3) and (4) report the results within the 10-year period following the ESOP adoption. The sample period is 1993-2017. Variable definitions are listed in Appendix C. *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively.

	Dependent variable: <i>RESTATEMENT</i>			
	(1)	(2)	(3)	(4)
<i>ESOP</i>	-2.614** [0.013]	-2.571** [0.015]	-2.604** [0.013]	-2.647** [0.013]
<i>POST</i>	0.196 [0.568]	0.381 [0.311]	0.392 [0.273]	0.397 [0.299]
<i>ESOP*POST</i>	2.376** [0.027]	2.293** [0.034]	2.316** [0.033]	2.348** [0.033]
<i>CHAIR</i>		-0.118 [0.581]		-0.215 [0.410]
<i>CEO_SALARY</i>		0.000 [0.837]		0.000 [0.418]
<i>CEO_OPTIONS</i>		0.001 [0.641]		-0.009 [0.166]
<i>INTERESTCOV</i>		-0.055 [0.836]		-0.183 [0.571]
<i>FUNDS</i>		0.346 [0.191]		0.420 [0.175]
<i>BIG4</i>		1.641*** [0.008]		1.389** [0.026]
<i>SIZE</i>		-0.241** [0.014]		-0.204* [0.078]
<i>CONS</i>	-1.897*** [0.000]	-1.559* [0.062]	-1.885*** [0.000]	-1.598* [0.085]
Observations	884	884	596	596
Pseudo R-sq	0.030	0.062	0.048	0.083

Table 13. Number of Employees and the Effect of ESOPs on the Probability of Restating

This table presents the results of the Logit regressions where the dependent variable is an indicator equal to one if there is a restatement in a given firm-year. NUMEROUS in an indicator variable equal to one if the number of employees in the firm is in the top quartile of the sample. The sample period is 1993-2017. Variable definitions are listed in Appendix C. *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively.

Dep. variable: <i>RESTATEMENT</i>	
	(1)
<i>ESOP</i>	-2.441** [0.021]
<i>POST</i>	0.336 [0.369]
<i>NUMEROUS</i>	15.473 [0.989]
<i>ESOP*POST</i>	2.286** [0.035]
<i>ESOP*NUMEROUS</i>	-11.060 [0.988]
<i>POST*NUMEROUS</i>	-0.219 [0.572]
<i>ESOP*POST*NUMEROUS</i>	9.860 [0.989]
<i>CHAIR</i>	-0.167 [0.439]
<i>CEO_SALARY</i>	0.000 [0.580]
<i>CEO_OPTIONS</i>	0.001 [0.459]
<i>INTERESTCOV</i>	-0.066 [0.803]
<i>FUNDS</i>	0.327 [0.216]
<i>BIG4</i>	1.491** [0.016]
<i>SIZE</i>	-0.111 [0.335]
<i>CONS</i>	-2.217** [0.014]
Observations	884

Table 14. Large ESOPs and the Effect of ESOPs on the Probability of Restating

This table presents the results of the Logit regressions where the dependent variable is an indicator equal to one if there is a restatement in a given firm-year. ESOPG5 is an indicator variable equal to one if the ESOP is more than 5% of the firm's outstanding shares. The sample period is 1993-2017. Variable definitions are listed in Appendix C. *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively.

Dep. variable: <i>RESTATEMENT</i>	
	(1)
<i>ESOP</i>	-14.760 [0.987]
<i>POST</i>	0.536 [0.268]
<i>ESOPG5</i>	0.286 [0.728]
<i>ESOP*POST</i>	14.170 [0.987]
<i>ESOP*ESOPG5</i>	12.650 [0.988]
<i>POST*ESOPG5</i>	-0.057 [0.876]
<i>ESOP*POST*ESOPG5</i>	-12.260 [0.989]
<i>CHAIR</i>	-0.083 [0.702]
<i>CEO_SALARY</i>	0.000 [0.744]
<i>CEO_OPTIONS</i>	0.001 [0.605]
<i>INTERESTCOV</i>	-0.050 [0.851]
<i>FUNDS</i>	0.367 [0.167]
<i>BIG4</i>	1.632*** [0.008]
<i>SIZE</i>	-0.236** [0.017]
<i>CONS</i>	-1.687** [0.046]
Observations	878

Table 15. Placebo years of ESOP adoption

This table presents the results of the coefficient estimates of the falsification tests with placebo years of ESOP adoption. Time T is the actual year of ESOP adoption. Columns (1)-(3) report the results for the entire sample. Columns (4)-(6) report the results within the 10-year period following the false ESOP adoption year. The sample period is 1993-2017. Variable definitions are listed in Appendix C. *, **, *** indicate statistical significance at 10%, 5% and 1% level, respectively.

	Dependent variable: <i>RESTATEMENT</i>					
	(1) $T-1$	(2) $T-2$	(3) $T-3$	(4) $T-1$	(5) $T-2$	(6) $T-3$
<i>ESOP</i>	-1.604 [0.157]	-1.055 [0.380]	-15.43 [0.993]	-1.497 [0.191]	-0.765 [0.534]	-15.65 [0.995]
<i>POST</i>	0.728 [0.188]	1.091 [0.111]	0.452 [0.516]	0.806 [0.156]	1.148 [0.113]	0.445 [0.544]
<i>ESOP*POST</i>	1.563 [0.184]	0.810 [0.517]	15.4 [0.993]	1.436 [0.231]	0.052 [0.968]	15.04 [0.995]
<i>CHAIR</i>	-0.563* [0.050]	-0.745** [0.017]	-1.120*** [0.001]	-0.501 [0.137]	-0.28 [0.529]	-0.57 [0.285]
<i>CEO_SALARY</i>	0.000 [0.989]	0.000 [0.905]	0.000 [0.778]	0.000 [0.586]	0.000 [0.771]	0.000 [0.650]
<i>CEO_OPTIONS</i>	-0.082 [0.442]	-0.117 [0.345]	-0.071 [0.613]	-0.157 [0.265]	-0.120 [0.488]	-0.084 [0.690]
<i>INTERESTCOV</i>	0.202 [0.506]	0.198 [0.539]	0.199 [0.556]	0.146 [0.682]	0.169 [0.690]	0.407 [0.378]
<i>FUNDS</i>	0.316 [0.375]	0.221 [0.582]	0.193 [0.637]	0.816** [0.049]	1.209** [0.026]	1.074* [0.067]
<i>BIG4</i>	1.827** [0.015]	1.686** [0.028]	1.492* [0.052]	1.573** [0.039]	0.897 [0.274]	0.567 [0.490]
<i>SIZE</i>	-0.245** [0.030]	-0.266** [0.034]	-0.004 [0.981]	-0.196 [0.145]	-0.093 [0.582]	0.134 [0.564]
<i>CONS</i>	-1.981* [0.051]	-1.943* [0.076]	-2.873** [0.016]	-2.280** [0.042]	-2.995** [0.026]	-3.542** [0.025]
Observations	13,956	13,956	13,956	13,956	13,956	13,956
Pseudo R-sq	0.082	0.090	0.101	0.097	0.085	0.115

Table 16. Variable Definitions

Variable	Description
<i>CHAIR</i>	Indicator variable equal to one if the CEO serves as board chair in a given year.
<i>CEO_SALARY</i>	The salary of the CEO at the beginning of the year. (ExecuComp SALARY)
<i>CEO_OPTIONS</i>	CEO's total exercisable and unexercisable in-the-money options scaled by salary at the beginning of the year. (ExecuComp (OPT_UNEX_EXER_EST_VAL+OPT_UNEX_UNEXER_EST_VAL)/SALARY)
<i>INTERESTCOV</i>	Firm's interest expense divided by operating income before depreciation at the beginning of the year. The ratio is capped at 2 (Efendi et al., 2007). If operating income before depreciation is negative, <i>INTERESTCOV</i> is 2. (Compustat XINT/ OIBDP)
<i>FUNDS</i>	Indicator variable equal to one if total new long-term debt and new equity exceeds 20% of the total assets at the beginning of the year. (Compustat (DLTIS+SSTK)>20%*AT)
<i>BIG4</i>	Indicator variable equal to one if the auditor is a big-4 firm in a given year. (Compustat AU = 4 5 6 7)
<i>SIZE</i>	Natural logarithm of firm's total assets at the beginning of the year. (Compustat AT)
<i>IRREG</i>	Indicator variable equal to one if a restatement involves to fraud, SEC investigation, or board involvement in a given year. (Audit Analytics RES_FRAUD, RES_SEC_INVEST, RES_BOARD_APP)
<i>EMP</i>	Firm's total number of employees at the beginning of the year. (Compustat EMP)
<i>NUMEROUS</i>	Indicator variable equal to one if EMP is in the top quartile of the sample.
<i>ESOPG5</i>	Indicator variable equal to one if firm's ESOP is more than 5% of the firm's outstanding shares at the beginning of the year.
<i>COLBARG</i>	Indicator variable equal to one if collective bargaining is available to firm's employees in a given year. (NCEO COLLECTIVEBARGAINING = Yes)
<i>KSOP</i>	Indicator variable equal to one if firm combines ESOP with a 401K plan. (NCEO KSOP = Yes)
<i>SCORP</i>	Indicator variable equal to one if firm is an S corporation. (NCEO SCORPORATION = Yes)

Table 17. Misstatement Years by Year and Industry

This table presents the number of misstatement years by year for non-ESOP and ESOP firms in columns (1) and (2). The column (3) reports the number of misstatement years in the Fama-French 12 industry categories for the entire sample.

(1) ESOP = 0		(2) ESOP = 1		(3)	
Year	N	Year	N	Industry	N
1997	1	1999	1	Consumer Nondurables	122
1998	1	2001	2	Consumer Durables	20
1999	6	2003	1	Manufacturing	175
2000	7	2004	2	Energy	20
2001	3	2005	2	Chemicals	108
2002	3	2006	2	Business Equipment	155
2003	1	2007	3	Retail	192
2004	5	2008	4	Healthcare	32
2005	3	2009	5	Other	60
2006	2	2010	3	Total	884
2007	4	2011	3		
2008	3	2012	5		
2009	3	2013	7		
2010	2	2014	2		
2011	2	2015	3		
2012	6	Total	45		
2013	6				
2014	4				
2015	4				
Total	66				

APPENDIX D
SUPPLEMENTAL FIGURES FOR CHAPTER 2

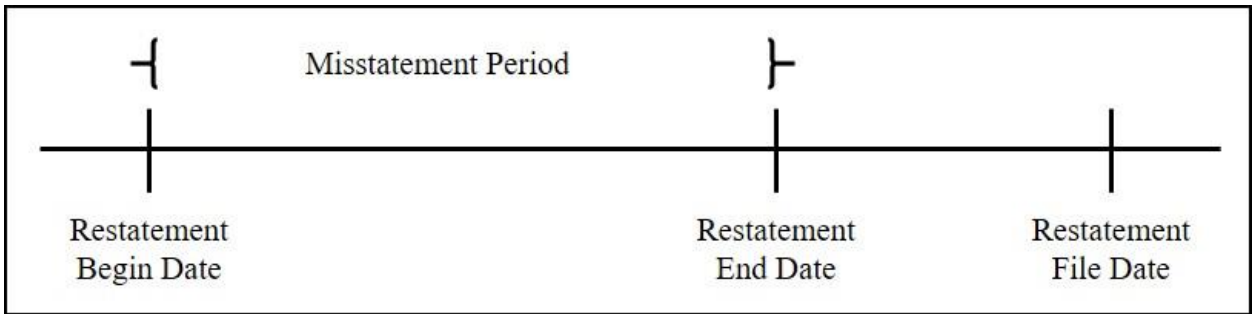


Figure 2. Misstatement Period Timeline

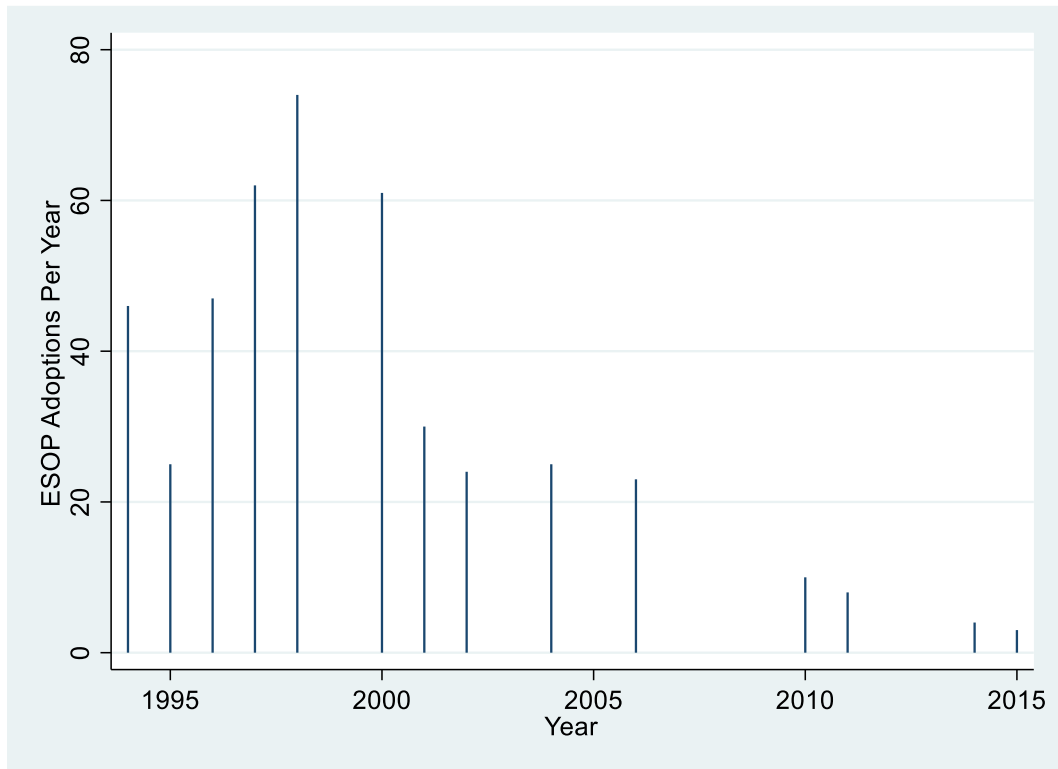


Figure 3. ESOP Adoption Frequency for the Sample Firms

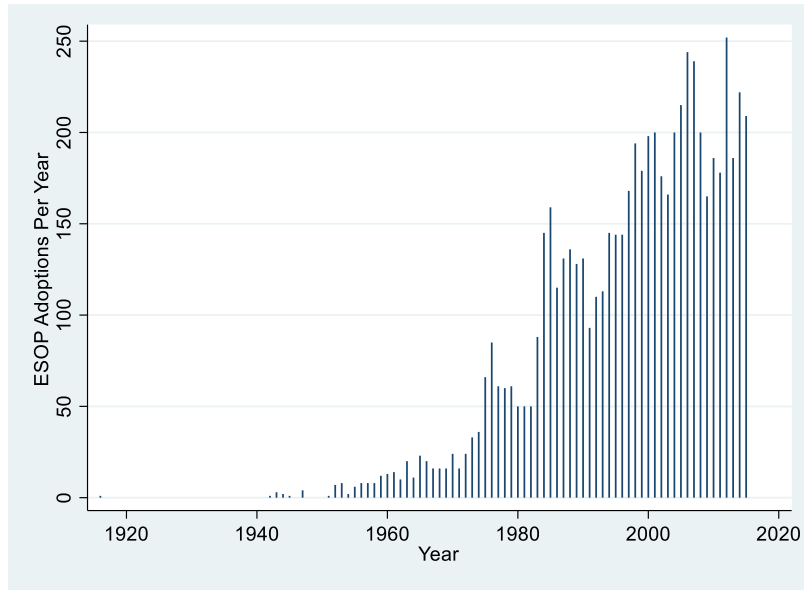


Figure 4. ESOP Adoption Frequency for Public and Private Firms

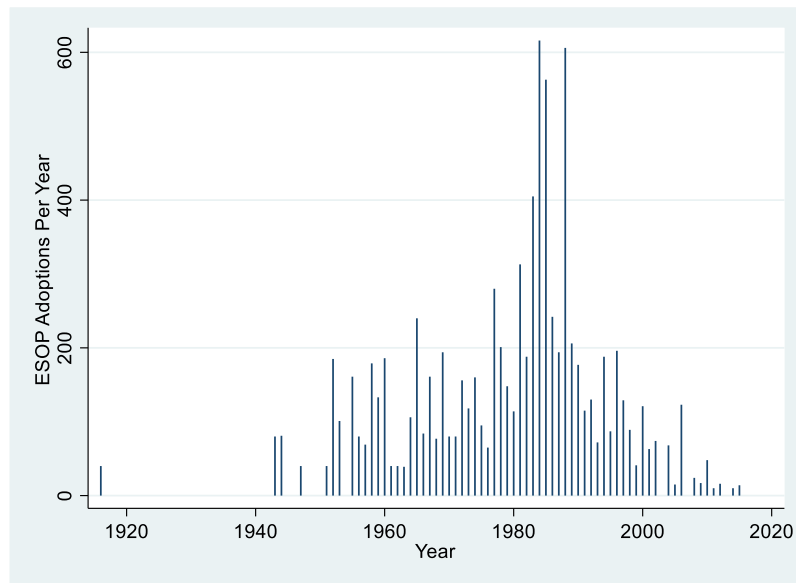


Figure 5. ESOP Adoption Frequency for Public Firms

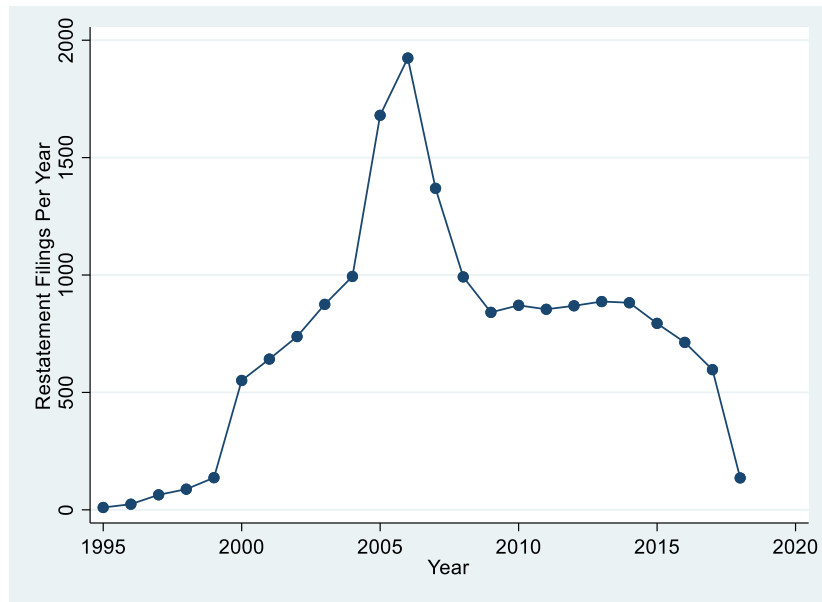


Figure 6. Restatement Filings for Public Firms

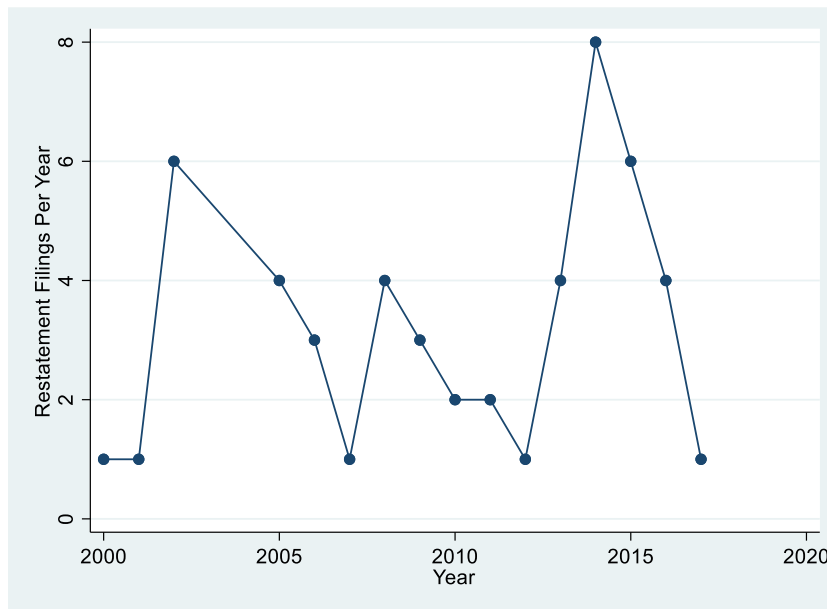


Figure 7. Restatement Filings for the Sample Firms

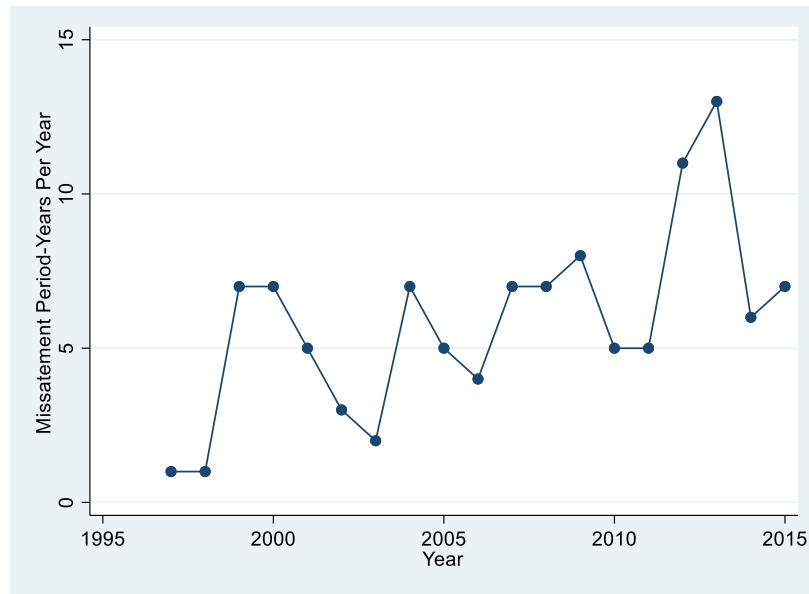


Figure 8. Misstatement Period-Years for the Sample Firms

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BIOGRAPHICAL SKETCH

Pinar Gencer earned her bachelor's degree in Business Administration at the Middle East Technical University with the highest distinction in 2015. She completed her master's studies in Finance at Sabanci University in 2016. After obtaining her master's degree, she started her PhD in Accounting at The University of Texas at Dallas in 2016. Her research focuses on environmental, social, and governance issues, compliance, and the disclosure of these practices. Her work was invited to the Rising Scholars Conference by Harvard Business School in 2021. Pinar Gencer has taught Introduction to Financial Accounting classes at The University of Texas at Dallas since 2019.

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EDUCATION

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Masters in Finance, Sabanci University, July 2016
BS in Business Administration, Middle East Technical University, June 2015
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WORKING PAPERS

How Executive Incentive Plans Help Curb Corporate Misconduct, 2022.
Employee Ownership and Accounting Restatements: Evidence from ESOPs, 2022.
Employee Satisfaction and Firm Performance, 2022.

SERVICE

Ad Hoc Reviewer, American Accounting Association Financial Accounting and Reporting Section, 2022.

TEACHING

Instructor, The University of Texas at Dallas
Introductory Financial Accounting, Spring 2022
Introductory Financial Accounting, Summer 2021, Evaluation: 4.83/5
Introductory Financial Accounting, Fall 2020, Evaluation: 4.89/5
Introductory Financial Accounting, Fall 2019, Evaluation: 4.87/5

Teaching Assistant, The University of Texas at Dallas
Financial Statement Analysis (MBA), Cost Accounting (MBA), Intermediate Financial Accounting (MBA), Introductory Management Accounting (Undergraduate), Introductory Financial Accounting (Undergraduate)

CONFERENCE PARTICIPATION

Rising Scholars Conference, 2021, <i>Presenter</i>	Harvard Business School
Symposium on Financial Market Research and Policy Development, 2021	UT Austin
The First Labor and Accounting Conference, 2021	Stanford Business School
Brownbag Seminars, 2021, 2018, 2017, <i>Presenter</i>	UT Dallas
American Accounting Association Financial Accounting and Reporting Section, 2021	

American Economic Association Annual Meetings, 2019 – 2021
American Finance Association Annual Meetings, 2019 – 2021
American Accounting Association Annual Meetings, 2019 – 2020

HONORS

Harvard Business School, Rising Scholar, 2021
The University of Texas at Dallas, Dean's Excellence Scholarship, 2021-2022
The University of Texas at Dallas, PhD Fellowship 2016 – 2021
Sabanci University, Merit-Based Full Scholarship, 2016
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