DO FINANCIAL ANALYSTS INFLUENCE EMPLOYEE TREATMENT?

EVIDENCE FROM A NATURAL EXPERIMENT

by

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DISSERTATION ABSTRACT

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Title: Do Financial Analysts Influence Employee Treatment? Evidence from a Natural Experiment

I examine the influence of financial analysts on firms' treatment of employees. I apply a unique setting by implementing a difference-in-differences design around brokerage mergers as an exogenous shock to analyst coverage. Consistent with a hypothesis that analysts exert negative pressure on employee treatment, my findings show that the exogenous drop in analyst coverage results in a significant improvement in employee treatment. To provide further insight on the results, I run cross-sectional tests and find that the improvement in employee treatment is weaker among firms with more short-term oriented investors and stronger among firms that place greater value on human capital. I also find that the improvement in employee treatment is weaker when firms are more financially constrained and stronger when firms are under more analyst pressure due to previously missing analysts' consensus earnings forecasts. Finally, I find that the improvement in employee treatment, due to the exogenous drop in analyst coverage, appears to lead to greater innovation. My paper speaks to how analysts can influence stakeholder management by offering evidence on the adverse consequence of analyst coverage on employee treatment.

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CHAPTER I

INTRODUCTION

While there is considerable evidence of analysts' role as information intermediaries (Ramnath, Rock and Shane 2008; Kothari, So andVerdi 2016; Bradshaw, Ertimur and O'Brien 2017), an emerging stream of research suggests analysts also play a governance role as monitors. The evidence in these studies promotes the idea that analysts influence managers to make better management and investment decisions (e.g., Irani and Oesch 2013; Derrien and Kecskés 2013; Chen, Harford and Lin 2015; Ayres, Campbell, Chyz, and Shipman 2019), but their presence also has potential governance misalignment effects such as limiting innovation (He and Tian 2013). I add to this growing research on analysts' role in corporate governance by examining whether analysts influence employee treatment.

Employee treatment represents a multi-dimensional set of employee participation and incentive policies and practices that creates an engaging and inclusive work environment.[1] Prior studies find that improved employee treatment has a favorable impact on firms' operational, financial, and stock price performance (Jiao, 2010; Edmans, 2011; Faleye and Trahan, 2011; Ertugrul, 2013). According to Deloitte (2016), 78% of today's business leaders report employee engagement as one of their top concerns. Better employee treatment facilitates corporate success for two main reasons. First, success requires employees' proactive participation and teamwork (Dougherty, 1992; Van de Ven, 1986). Within an organization, increased teamwork and

[1] Employers can improve employee treatment by, for example, inviting employees to participate in corporate decision making (i.e., greater employee involvement), providing employees with more flexible working schedules, offering them stronger health and safety programs, and even creating more inclusive and diverse work environments.

engagement across different segments provide opportunities for mutual learning and collaboration that stimulate the creation of new ideas and the improvement of overall performance (Tsai and Ghoshal, 1998; Tsai, 2001). As a consequence, employee participation and cooperation in the process is a necessary condition for the firm's success. Second, by treating employees better (e.g., flexible working schedules, good working conditions, attractive retirement benefits), firms can recruit and retain talented people. A satisfying workplace can also foster employee job loyalty and increase employee productivity (Black and Lynch, 2004; Bloom, Kretschmer, Van Reenen 2011, Bloom, Liang, Roberts, Ying, 2015). The social exchange model developed by Organ (1997) argues that employees view pleasant working conditions as a "gift" from the firm and respond with increased dedication to their job. When a firm retains talented and committed employees, the firm has more continuity and is better able to produce superior performance that is better aligned with the firm's corporate goals and shareholders' interests.

While evidence suggests that employee treatment is a key driver for firms' success, the ex-ante net effect of analyst coverage on employee treatment is not clear. On one hand, analysts play a role in monitoring and mitigating managers' self-serving behavior (Jensen and Meckling, 1976). In this monitoring role, analysts constantly collect and analyze information about the firms they cover. They discuss and question firm strategies and interface with management directly in earnings conference calls and other events. Evidence in the literature shows that analysts are associated with reductions in earnings management (Yu, 2008), better financial reporting quality (Irani and Oesch, 2013), and declines in value-reducing acquisitions (Chen, Harford, and Lin, 2015). In addition, Doukas, Kim, and Pantzalis (2005) find a positive association between analyst coverage and firm value and attribute this relationship to analysts'

monitoring role. Thus, by paying attention to the implications of corporate decisions and actions that are related to employee treatment, it is plausible that greater analyst coverage results in firms improving the quality of employee treatment.

On the other hand, the presence of analysts may put excessive pressure on managers to meet earnings targets since research finds that firms suffer significant adverse consequences when missing analyst forecasts (Skinner and Sloan 2002; Matsunaga and Park 2001).[2] The pressure on managers to meet earnings targets can distort managers' investment behavior and push them to forgo value-increasing projects (e.g., investing in employees) (Graham, Harvey. and Rajgopal 2005; Irani and Oesch 2016; He and Tian 2013). For example, some analysts have complained about Costco treating their employees well. One analyst even stated that "it's better to be an employee [at Costco] than a shareholder" (Greenhouse 2005).[3] In a more recent example showing analysts' views on employee treatment at the expense of shareholders, analysts were not pleased with Costco increasing its employees' wages with pandemic pay due to the Covid-19 crisis.[4] In addition, if management's excessive pressure to meet earnings targets is channeled toward employees, as was the case during the sales scandal at Wells Fargo (McLean 2017), that may also result in worse treatment of employees.[5] Thus, it is plausible that greater analyst coverage leads to a deterioration in employee treatment by creating excessive pressure on

[2] For example, firms can suffer a negative market reaction (i.e., stock prices drop) if earnings targets are not met (Skinner and Sloan, 2002). Also, missing earnings forecasts result in a negative incremental effect on the managers' bonuses (Matsunaga and Park 2001).
[3] https://www.nytimes.com/2005/07/17/business/yourmoney/how-costco-became-the-antiwalmart.html
[4] https://finance.yahoo.com/news/wall-street-drills-costco-stock-because-its-paying-workers-2-more-an-hour-during-covid-19-172507787.html
[5] https://www.vanityfair.com/news/2017/05/wells-fargo-corporate-culture-fraud

managers and to analysts trying to reign in employee treatment to improve earnings that benefit shareholders.

I measure employee treatment using data from the KLD corporate social responsibility index ratings database. Following Flammer and Luo (2017), I focus on two KLD components that are related to the company's employees and capture the engagement and inclusiveness of the work environment. Specifically, I construct my employee treatment variable (*Emp Index*) by summing up all strengths that pertain to employee relations (e.g., employee involvement, health and safety policies) and diversity (e.g., promotion of women and minorities, work/life balance programs such as childcare, elder care, or flextime).[6] I obtain analyst coverage data from I/B/E/S, firm financial statement information from Compustat, and institutional ownership information from Thomson Reuters Institutional Holdings (form 13F) files. My final sample is 23,601 firm-year observations during 1995-2011.

I start my analysis with a baseline panel data model to investigate the relation between employee treatment and analyst coverage. After controlling for firm-specific variables and including firm and year fixed effects, I find a negative association between employee index (*Emp Index*) and analyst coverage. This result from the baseline test is consistent with the pressure hypothesis of analysts and suggests that greater analyst coverage is associated with a reduction in employee treatment.

Endogeneity concerns complicate the examination of analysts' influence on employee treatment. It is difficult to infer a causal relation between firms' analyst coverage and their

[6] The complete list of employee-related KLD strengths related to the two components (i.e., employee relations and diversity) used in measuring employee treatment is provided in Appendix A.

employee treatment due to potential correlated omitted variables (Roberts and Whited 2013). For example, high-quality managers may tend to manage companies attracting more analyst coverage, while high-quality managers may also actively engage in improving employee treatment. In this case, management talent is unobservable and correlated with both analyst coverage and employee treatment, which could bias my coefficient estimates of the analyst coverage measure upward.

To mitigate potential endogeneity concerns, I employ an identification strategy by exploiting a quasi-natural-experimental setting. Following prior research (Irani and Oesch 2013; Derrien and Kecskés 2013; Chen, Harford and Lin 2015; Guo, Perez-Catrillo and Toldra-Simats 2019), I use brokerage house mergers as a source of an exogenous decrease in the number of analysts.[7] These events directly affect firms' analyst coverage but should be exogenous to employee treatment. I start by identifying firms that lose analyst coverage because of broker mergers. Then, I employ a difference-in-differences (*DID*) design around these exogenous reductions in analyst coverage. The results indicate a negative causal effect of analyst coverage on employee treatment, which is consistent with the hypothesis that analysts' excessive pressure on managers results in poorer employee treatment.

I also conduct cross-sectional analyses to provide additional insight into how analyst coverage affects employee treatment. I first examine whether the treatment effect is less pronounced in firms where shareholders are not likely to benefit from improved treatment. Prior research indicates that transient institutional investors weaken corporate control and encourage managerial myopia (e.g., Bushee 1998; Dikolli et al. 2009). Accordingly, greater ownership by

[7] I thank Kelly and Ljungqvist (2012) for making the list of brokerage merger events available.

transient institutional investors reflects a more short-term focused investor base and thus discourages long-term investment, such as investment in employee treatment. I use Bushee's (1998) institutional investor type classifications to identify firms with transient institutional ownership. I find that the treatment effect (i.e., improvement in employee treatment) is less pronounced for firms with more transient institutional ownership (i.e., short-term oriented investors).

Second, I examine whether the importance of human capital to the firm influences the treatment effect of analyst coverage on employee treatment. High-tech firms rely more on innovation and human capital, rather than on physical capital, since these aspects play a more important role in these firms' success (Zingales, 2000). Human relations theories argue that employee treatment improves corporate performance since it increases employees' productivity and retains valuable human capital, especially in modern technological industries. Accordingly, the improvement in employee treatment after the exogenous reduction in analyst coverage is expected to be more pronounced among firms in high-tech industries. Consistent with my prediction, the results show that the improvement in employee treatment is more pronounced among firms where human capital is more important (i.e., firms operating in high-tech industries and R&D firms).

In addition, I test whether the impact of analyst coverage on employee treatment differs based on firms' level of financial constraints. Campello, Graham, and Harvey (2010) study how financial constraints influence corporate spending and find, based on a survey of CEOs in the financial crisis, that constrained firms planned deeper cuts in tech spending, employment, and capital spending. In addition, Li (2011) studies the interaction between financial constraints and

R&D and finds that financially constrained firms are more likely to cut R&D projects than capital investment. Given that providing more employee benefits (i.e., improving employee treatment) is a long-term investment and cannot easily be removed without repercussions, I predict that the treatment effect will be more pronounced among less financially constrained firms. Consistent with my prediction, I find the improvement in employee treatment after the exogenous drop in analyst coverage to be weaker among financially constrained firms.

In additional analyses, I perform some tests to provide further insights regarding my main findings. First, I examine whether a firm's ability to meet earnings targets matters for the relation between analyst coverage and employee treatment. Missing earnings targets can put pressure on managers. Research shows that meeting analyst earnings expectations is important for managers (Graham et al. 2005) since firms can suffer a negative stock market reaction if the earnings targets are not met (Skinner and Sloan, 2002). I find that the treatment effect (i.e., improvement in employee treatment) is more pronounced among firms that previously missed earnings targets, consistent with the notion that missing forecasts puts more pressure on firms and influences employee treatment.

Second, I investigate the financial and operating performance consequences to firms from the improvement of employee treatment due to the exogenous reduction in analyst coverage. If analyst pressure is causing firms to sub-optimally invest in employee treatment, then the reduction of analyst coverage should allow firms to make more optimal investments in employee treatment that lead to better financial and operating performance. Conversely, if analysts are monitoring the firm's investments in employee treatment, then the reduction in coverage could result in firms wasting resources on employee treatment. I estimate a two-stage least squares

(2SLS) model on industry-adjusted return on assets (*Ind Adj ROA*) and Industry adjusted operating cash flow (*Ind Adj CFO*) to assess the impact of the improvement of employee treatment due to the drop of analyst coverage on firm financial performance. I find the improvement in employee treatment resulting from the exogenous drop in analyst coverage has no harmful effect on firm's financial performance.

In addition, I apply the 2SLS framework on corporate patenting activity to assess the impact of the improvement of employee treatment due to the drop of analyst coverage on firm operating performance. Prior research (Acharya et al. 2014; Chang et al. 2015; Bradley et al. 2015; Chen et al. 2016) documents that employee treatment is an important factor in facilitating firms' innovation outcomes. Using the exogenous drop in analyst coverage that results in improvement in employee treatment as an instrument, I evaluate the impact of employee treatment improvement on firm patenting activities. I find a positive impact of the predicted value of the employee index on a firm's innovation outcomes. The result of this test supports the argument that the improvement in employee treatment, after the exogenous drop in analyst coverage, has a positive effect on corporate innovation (i.e., patenting activities), suggesting a positive impact of employee treatment improvement on firm performance.

Finally, I check the robustness of my result by examining whether the main results are sensitive to alternative measures of employee treatment. I use two alternative measures of employee treatment. First, I reconstruct the employee treatment variable by deducting the total number of concerns to reach a net measure of the employee treatment index (*Emp Index Net*). Second, I use the inclusion in the List of ''100 Best Companies to Work For'' that is published every year by Fortune Magazine as an alternative measure of employee treatment. I find

consistent results of a negative causal effect of analyst coverage on employee treatment when using both alternative measures of employee treatment.

My paper contributes to several streams of academic literature. First, it contributes to the debate in the analyst literature regarding whether analysts really serve much of a governance role. Some recent studies show a positive monitoring role of analysts. For example, Chen et al. (2015) find that a decrease in analyst coverage results in CEOs receiving higher excess compensation and becoming more likely to engage in value-destroying acquisitions. Similarly, Derrien and Kecskés (2013) find that a decrease in analyst coverage increases the cost of capital, which results in a decrease in firm investments. However, the presence of analysts can also impose costs by exerting excessive pressure on managers. He and Tian (2013) document that firms covered by a larger number of analysts generate fewer patents and patents with lower impact. My study contributes to this line of adverse consequences of analyst coverage by showing that greater analyst coverage sub-optimally constrains firms' investment in employee treatment.

My study is also related to Adhikari (2016) and Qian, Lu, and Yu (2019), which examine the influence of financial analysts on corporate social responsibility (CSR). Both papers document a negative impact of analyst coverage on CSR performance, but propose different arguments to explain the effect. While Adhikari (2016) argues that the negative impact is consistent with the idea that analysts curb undesirable spending on CSR activities by disciplining managers, Qian, Lu, and Yu (2019) reason the negative impact leads managers to become more myopic and focus on short-term goals. My research ontributes to this literature in two ways. First, I focus on one primary stakeholder group, namely employees (Waddock, Bodwell and

Graves, 2002), to better assess the influence of analysts on this important stakeholder. Second, I further examine whether the impact of analysts on employee treatment improves or hurts corporate performance (i.e., firms' financial and operating performance) that helps differentiate between these two proposed arguments. My results are more consistent with the Qian et al. (2019) explanation, since the improvement in employee treatment does not harm performance and in fact may improve employee productivity.

This paper also contributes to the literature on strategic human capital, which focuses on employees as a source of competitive advantage (e.g., Campbell, Coff, and Kryscynski, 2012; Coff and Kryscynski, 2011; Ganco, Ziedonis, and Agarwal, 2015). While employees are considered an important driver of firm value and critical for maintaining a competitive advantage, it is uncertain whether financial analysts play a role in influencing the quality of firms' employee treatment. Given the importance of employee treatment in providing competitive advantages in the marketplace (Chatman and Jehn, 1994; Bennett and Pierce, 2016), my study contributes to this literature by documenting that greater analyst coverage appears to have a harmful effect on employee treatment.

CHAPTER II

EMPLOYEE TREATMENT AND RELATED ANALYST LITERATURE

Employee Treatment and Firm Value

Employees are considered to be a firm's most valuable asset and a key source of competitive advantage (e.g., Coff 1997). Investment in human capital is not limited to salaries and wages, but also encompasses how employers treat their employees. For example, firms can invite employees to participate in corporate decision making (i.e., greater employee involvement), provide employees with more flexible work schedules, offer them stronger health and safety programs, and even create more inclusive and diverse work environments. Employee treatment also represents an important matter for firm outcomes and productivity. Prior research finds a positive impact of improved employee treatment on firms' operational, financial, and stock price performance. For example, Edmans (2011) finds that the stock returns of firms that treat their employees more positively exceed the stock returns of firms that do not treat their employees as well. Similarly, Verwijmeren and Derwall (2010) and Bae et al. (2011) find that positive employee treatment schemes are negatively associated with the probability of default and debt ratios. Ghaly, Dang, and Stathopoulos (2015) document that employee treatment is positively correlated with cash holdings. Organizational behavior and strategy research also finds that employee treatment enhances the motivation of an individual in the workplace (Amabile and Kramer, 2012), thereby raising firm performance (Harter et al., 2010; Gartenberg et al., 2016).[8] Research also finds that improving employee treatment results in increased creativity (Amabile

[8] Employee treatment can be considered an important factor in enhancing firms' productivity since the presence of non-wage benefits also plays a role in attracting prospective employees (Liu et al. 2018).

et al., 2004, 2005) and performance (Harter, Schmidt, Agrawal, Plowman, Blue, 2013) and provides competitive advantages in the marketplace (Chatman and Jehn, 1994; Bennett and Pierce, 2016).

The former CEO of General Electric, Jack Welch, stated, "It goes without saying that no company, small or large, can win over the long run without energized employees" (Bloomberg, 2008).[9] The Gallup Organization (2004) finds critical links between employee treatment and business growth and profitability. Moreover, such concern over employee treatment has been growing over time. Google Trends' index on "employee engagement" has increased enormously from early 2004 to early 2020.[10] Greater employee treatment has a number of additional benefits for firms. For example, one way a firm can improve employee treatment is through greater employee involvement and engagement that comes with offering employee stock compensation, which aligns the interest between employees and shareholders. This alignment reduces the incentive to shirk, which results in allocating more time and/or effort towards the firm. Flammer and Luo (2017) find that firms improve employee treatment to mitigate adverse behavior at the workplace.

In summary, this prior research suggests that human capital is integral for firms' success and better employee treatment improves firm productivity and performance. In the next section, I discuss the role financial analysts could play in the treatment of employees.

[9] https://www.bloomberg.com/news/articles/2008-05-23/motivate-your-employees-like-jack-welchbusinessweek-business-news-stock-market-and-financial-advice

[10] https://trends.google.com/trends/explore?date=all&geo=US&q=employee%20engagement

Analyst Literature

Analysts play a monitoring role and serve as an external governance mechanism (Jensen and Meckling 1976) by tracking firms' financial statements on a regular basis and interacting with management directly (e.g., raising questions in conference calls at earnings announcements). As external monitors, analysts can also influence managers to forego sub-optimal business activities or encourage activities that result in better firm performance (e.g., Demiroglu and Ryngaert, 2010; Jung et al., 2012). In addition, analysts are associated with reductions in earnings management (Yu, 2008), better financial reporting quality (Irani and Oesch, 2013), declines in value-reducing acquisitions (Chen, Harford, and Lin, 2015), and identification of corporate wrongdoing (Dyck, Morse, and Zingales 2010). Given the performance benefits of employee treatment discussed previously, analysts could provide indirect monitoring of employee treatment by paying attention to the implications of corporate decisions related to employee treatment. Overall, based on these arguments, it is plausible that greater analyst coverage could influence firms to improve employee treatment.

However, an alternative hypothesis is that the presence of analysts can create excessive short-term pressure on managers through earnings forecasts that has a downward effect on employee treatment. Research suggests that meeting or beating analyst forecasts became the most significant benchmark for managers (Brown and Caylor, 2005). Jensen and Fuller (2002) show that managers all too often conform to excessively aggressive analyst earnings forecasts and accept external expectations as targets to achieve. The pressure on managers to meet earnings targets can result in distorting managers' investment behavior and pushing them to forgo value-increasing projects (e.g., investing in employees) while manipulating earnings to meet targets.

Graham, Harvey, and Rajgopal (2005) report that the majority of managers admit to engaging in earnings management to meet earnings targets at the cost of their firms' long-term prospects. Research shows that when firms miss analyst forecasts, they usually suffer significant adverse consequences. For example, firms can suffer from stock price drops (Skinner and Sloan, 2002), and managers' bonuses are negatively affected if earnings targets are not met (Matsunaga and Park 2001). Zhang and Gimeno (2016) elaborate further on the effect of meeting analysts' earnings pressure on firm behavior and provide evidence that analysts' forecasts can lead to earnings pressures that motivate management to take selective action to meet targets at the expense of a firm's longer-term competitiveness. For example, He and Tian (2013) provide evidence that the pressure analysts exert on managers to meet earnings targets results in impeding innovative projects. There is another plausible way that the pressure of analysts on managers can be channeled to employee treatment. To meet earning targets, firms can refrain from investing in employees or cut funding for human capital projects. Analysts can also create direct pressure by encouraging managers to not invest so much in their employees. For example, some analysts have complained about Costco treating their employees well. Overall, there are many ways in which the presence of financial analysts could result in excess pressure on managers that has a negative effect on employee treatment.

Due to the opposing possible effects of financial analyst coverage on employee treatment, it is a question that empirical analysis could help answer. However, given the opposing effects, I make no formal directional prediction.

H1: Analyst coverage is not associated with employee treatment.

CHAPTER III

SAMPLE SELECTION AND SUMMARY STATISTICS

In this section, I describe the sample selection process and how each variable is constructed, followed by summary statistics.

Sample Selection

The data on employee treatment are obtained from the KLD database, which is a data set with annual ratings of the environmental, social, and governance (ESG) performance of companies. For my study, I have available KLD data from 1995 until 2011. Analyst coverage data are from the Institutional Brokers' Estimate System (I/B/E/S) database. I obtain firm financial statement information from Compustat and institutional ownership from Thomson Reuters Institutional Holdings (form 13F) files. I exclude observations with missing accounting information, as well as companies that are located outside of the U.S. My final sample used in the baseline regressions consists of 23,601 firm-year observations from 1995-2011.

Variable Construction

I construct an employee-related KLD index variable to capture the level of employee treatment within a firm. Following Flammer and Luo (2017), I focus on two KLD components that are related to a company's employees. Specifically, I construct an Employee Index (*Emp Index*) by summing up strengths that pertain to employee relations (e.g., strong retirement benefits programs, worker involvement and/or ownership through stock options and provide them with ownership through stock options, strong health and safety programs) and diversity

(e.g., notable progress in the promotion of women and minorities, outstanding employee benefits, work/life balance programs such as childcare, elder care, or flextime).[11]

My main explanatory variable of interest is a company's analyst coverage. To compute analyst coverage (*Analyst Coverage*), I follow Irani and Oesch (2016) and calculate the number of unique analysts covering a particular firm in a given fiscal year from the I/B/E/S summary file. I include several control variables in my analysis. First, I control for firm size (*Market Value*) since large firms generally have more resources and therefore are in a better position to invest in employees. I also control for financial leverage (*Leverage*), defined as the ratio of total debt over total assets. Previous empirical evidence finds that leverage is negatively associated with CSR in general and with employee treatment in particular (e.g., Bae et al. 2011; Barnea and Rubin 2010). My control variables also include profitability (*ROA*), dividends (*Payout*), and Tobin Q (*Tobin Q*). Well-performing firms and firms with greater investment opportunities are potentially in a better position to provide satisfying jobs by improving employee treatment. I also control for the proportion of fixed assets (*Capital Intensity*) and the level of capital expenditures (*Capital Expenditures*) as measures of physical capital intensity and investment in capital expenditures, respectively. In addition, I include controls for cash holdings (*Cash*), sales growth (*Sales Growth*), advertising expenses (*AD*), and research and development intensity (*R&D*). I control for total institutional ownership (*Inst Inv %*) and labor intensity (*Labor Intensity*) in order

[11] The complete list of employee-related KLD strengths related to the two components (i.e., employee relations and diversity) used in measuring employee treatment is provided in Appendix A. In addition to identifying strengths, KLD provides a list of concerns for each component (e.g., poor union relations, civil penalties for willful violations of employee health and safety standards, substantially under-funded defined benefit pension plan). Accordingly, an alternative approach is to calculate a net employee index measure by subtracting the total concerns from the total strengths. In the additional analysis section, I use the net employee index measure as the dependent variable and find consistent results with my main test.

to capture the effect that institutional investors and number of employees might have on employee treatment. All variables are defined in detail in Appendix B. To mitigate the impact of outliers, all continuous variables are winsorized at the 1st and 99th percentiles of their empirical distribution.

Summary Statistics

In Table 1, I present summary statistics for my sample firms. The mean (median) employee treatment (*Emp Index*) is 0.87 (0.00) with a range from 0 to 12. The average sample firm has a mean (median) of 8.71 (7.0) earnings forecasts (*analyst coverage*). The average (median) firm has a market value of assets of about $7.20 ($7.06) billion, Tobin Q ratio of 1.73 (1.35), ROA of 2.0% (4.0%), sales growth of 7.0% (5.0%), and financial leverage of 22.0% (19.0%). About 3.0% (1.0%) is the average (median) dividend payout.

CHAPTER IV

EMPIRICAL RESULTS

I begin this section by estimating a baseline regression of employee treatment on analyst coverage in section 4.1. In section 4.2, I deal with identification issues by employing the *DiD* technique by using exogenous shocks to analyst coverage caused by brokerage mergers.

Baseline OLS Regression

I first examine the relation between analyst coverage and employee treatment as measured by *Emp Index* score, in an Ordinary Least Square (OLS) regression framework. I estimate the following regression to examine how analyst coverage affects employee treatment:

$$Emp\ Index_{i,t+1}\ or\ Emp\ Index_{i,t+2} = \alpha + \beta Analyst\ Coverage_{i,t} + \gamma Controls_{i,t} + \gamma Year\ FE_{i,t} + \gamma Firm\ FE_{i,t} + \varepsilon_{i,t} \quad (1)$$

where *i* and *t* represent firm and year. Employee treatment (*Emp Index*) and analyst coverage (*Analyst Coverage*) are defined in section 3. I estimate the effect of analyst coverage in year t on *Emp Index* both in year *t* + 1 and *t* + 2. This is because the effect of analyst following on employee treatment might show up with some lag, as improvement in employee treatment is likely to take some time to come to fruition. *Controls* is a vector of control variables, as discussed in Section 3.2. *Year FE* represents year fixed effects, which control for any common trend in employee treatment over time (e.g., employee law changes). *Firm FE* represents firm fixed effects, which control for other time-invariant unobservable firm attributes that might

influence employee treatment. The results are reported in Table 2. The coefficient estimate on analyst coverage is statistically insignificant one year out (column 1), but negative and statistically significant at the 1% level in year *t*+2 (column 2). This preliminary evidence is consistent with the pressure hypothesis and may suggest a lag or delay in changes to employee treatment when analyst coverage changes. As for the control variables, I find that *Payout* has a significant and positive coefficient, indicating that firms that provide dividends for shareholders are more likely to improve employee treatment. I also find that advertising expenses (*AD*) and *Tobin Q* have significant negative coefficients, which suggests that firms that spend more on advertising to attract sales and have higher market values invest less in employee treatment.

Quasi-Natural Experiment

In this section, I use a quasi-natural experiment to further address endogeneity concerns in the relation between analyst coverage and employee treatment. I follow prior research (e.g., Guo, Perez-Catrillo and Toldra-Simats 2019) and use brokerage house mergers as a source of an exogenous decrease in the number of analysts. I obtain the list of brokerage mergers from Hong and Kacperczyk (2010).[12] When two brokerage houses merge, the analysts from the two merging houses that were covering the same firms become redundant. After the merger, the surviving house usually retires some of these analysts and, as a result, the firms that had been followed by the two merging houses lose about one financial analyst. The loss of analyst coverage due to brokerage mergers happens for reasons that are exogenous to the characteristics of the firm being covered (Hong and Kacperczyk 2010; Derrien and Kecskés 2013; Chen et al. 2015).

[12] I thank the authors, Hong and Kacperczyk, for making this list of brokerage merger events available.

A list of the individual broker merger events during my sample period is presented in Appendix C. I use the merger events to estimate a DID model, which handles multiple events. I follow Gormley and Matsa's (2011) "stacking" approach to construct a sample of treated and control firms. First, I construct cohorts of treated and control firms for each merger year in chronological order. Then, I stack the data across cohorts into one dataset that I use for my estimation model.

To construct each cohort, I perform the following steps. First, for each merger, I specify a three-month window around the merger date to account for the possibility that the mergers spanned for several days or months in the I/B/E/S data. Second, I use a 12-month period around this window to construct the group of treated firms. Third, I classify a firm into the treated group, for each merger, if it was covered by both merging brokerages during the 12-month period before the merger window and continued to be covered in the 12-month period after the merger window by the surviving brokerage. Fourth, for each merger, I construct a control group of firms that were not affected by the merger event. This control group contains firms that were not covered by both houses before the merger and were present in the Compustat and I/B/E/S databases during the event window for that merger. I consider a one-year window before the merger (pre-merger window) and one-year and two-years windows after the merger (post-merger windows). I require that my treated and control firms be active in Compustat and have coverage in the I\B\E\S detail file during the pre and post window period that correspond to each merger. In the "stacked" sample, I end up with 458 treated firms and 3,277 control firms, which is similar in size to other studies that use these brokerage mergers.

I estimate the following DID model, which takes into account multiple merger events:

$$Emp\ Index_{i,t} = \beta_0 + \beta_1 \left(Treat_{i,t} * Post_{i,t}\right) + \gamma Controls_{i,t} + \delta Year\ FE_{i,t} + \vartheta Firm\ FE_{i,t} + \upsilon Merger\ FE_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where $Emp\ Index_{i,t}$ is employee treatment for firm i, $Post_{i,t}$ denotes a dummy variable that is equal to one in the period after the merger and zero otherwise, and $Treat_{i,t}$ is an indicator equal to one if a company is part of the treatment sample. I include firm and year fixed effects that absorb the main effects of both *Treat* and *Post*, respectively. I also follow Guo et al. (2019) and include merger fixed effects (υ) and cluster the standard errors at the firm-merger level to account for potential covariance of outcomes within firms over time. The coefficient β_1 is the DID coefficient and captures the effect of the decrease in analyst coverage after a merger on employee treatment of the treated firms relative to control firms. Since the treated firms decrease analyst coverage, a positive β_1 would indicate that a drop in coverage increases employee treatment, consistent with the excessive pressure story, while a negative β_1 would be consistent with the governance role of analysts.

To test whether my difference-in-differences design really does capture a reduction of analyst coverage, I first test whether analyst coverage decreases after brokerage mergers for treatment firms. I estimate equation (3) but replace *Emp Index* with analyst coverage as the dependent variable. The results, presented in Table 3 show that treated firms lose, on average, about one analyst in the first and second year after the merger relative to firms in the control group. Thus, the *DID* coefficients for my main tests, which I discuss next, capture the effect of an exogenous decrease in analyst coverage.

The results of my main test are presented in Table 4. The *DID* estimates generally show that the reduction in analysts from brokerage mergers has a significant effect on employee treatment in the one-year and two-year post-merger windows relative to firms in the control group. Specifically, the *DID* coefficients for *Emp Index* in columns 1 and 2 are statistically significant and show that after the exogenous drop in analyst coverage due to mergers, firms are more likely to improve their employee treatment. The *DID* coefficient in Table 4 column 1 (column 2) is 0.115 (0.107), which suggests that a decrease in coverage by one analyst is associated with an approximately 11% (10%) increase in the employee treatment index.[13]

[13] I use the mean value of Emp Index (1.07) from the difference-in-difference sample (N= 12,533) to calculate the magnitude effect of change in analyst coverage on employee treatment index.

CHAPTER V

CROSS-SECTIONAL ANALYSES

In this section, I present some cross-sectional analyses to provide further understanding about how analyst coverage affects employee treatment differently, depending on factors that may mitigate or exacerbate the short-term pressures imposed by analysts. In section 5.1, I examine the role of institutional ownership on the relation between analyst coverage and employee treatment. In section 5.2, I explore whether the importance of human capital to the firm influences analysts' short-term pressure on employee treatment. I also test, in section 5.3, how the impact of analyst coverage on employee treatment varies based on a firm's level of financial constraints.

Institutional Ownership Orientation (Short-Term Oriented Investors)

First, I test whether the improvement in employee treatment due to reduced analyst coverage is more (less) pronounced in firms where shareholders are (not) likely to benefit from improved treatment of employees. In particular, I focus on the role of institutional investors. Utilizing Bushee's (1998) institutional investor classifications, I classify each treatment firm based on shares owned by transient institutions as a percentage of total institutional ownership. Prior research indicates that transient institutional investors weaken corporate control and encourage managerial myopia (e.g., Bushee 1998; Dikolli et al. 2009). Accordingly, ownership by transient institutional investors reflects short-term focused investors and, thus, discourages long-term investment such as investments in employees. I split the sample into high and low transient institutional ownership based on the median ownership in the sample. The results, in Table 5, show the existence of a significant difference in the DID coefficients between the two groups based on transient institutional ownership. I find a significant negative coefficient on the three-

way interaction (DID × Institutional ownership), suggesting that the group with lower transient institutional ownership (i.e., less short-term oriented investors) experiences higher improvements in employee treatment after the exogenous drop in analyst coverage. Overall, this result suggests that the treatment effect is less pronounced for firms with more transient investors, consistent with the prediction that the effect is weaker among firms with short-term oriented investors.

Importance of Human Capital

To better understand the effect that financial analysts have on employee treatment, I also examine whether the importance of human capital to the firm influences the improvement in employee treatment due to the reduction in analyst coverage. Employee treatment is particularly important for firms that depend more on creativity and innovative activities of their employees, since human, rather than physical, capital plays a more important role in their success (Zingales, 2000). Human relations theories (Maslow, 1943; Hertzberg et al., 1959; McGregor, 1960) argue that employee treatment improves corporate performance since it increases employee productivity and retains valuable human capital, especially in modern technological industries such as pharmaceuticals and information technology. Given the importance of employee treatment for firms where technology and innovation are important, I expect the improvement in employee treatment after the exogenous reduction in analyst coverage to be more pronounced among firms where human capital is more important.

To identify firms where human capital is more important, I use two proxies: 1) firms operating in technology industries and 2) firms that have R&D. Table 6 presents the results of

these cross-sectional tests. First, I split the sample according to whether firms belong to high-tech versus low-tech industries, following John, Knyazeva, and Knyazeva (2015). In the first and third columns, I find that the DID coefficient is positive and statistically significant for firms in high-tech industries compared to firms in low-tech industries (columns 1 and 2). Second, I split the sample into firms with R&D, since R&D spending is heavily concentrated in technology and science-oriented industries. High-tech firms typically use state-of-the-art techniques and have high R&D investment. I find, in Table 6 Panel B, that the DID coefficient is positive and statistically significant for firms with R&D compared to firms without R&D (columns 3 and 4). Overall, the results are consistent with my prediction and provide evidence that the treatment effect (i.e., improvement in employee treatment) is more pronounced among firms that place greater value on human capital.

Financial Constraints

In this section, I study whether the impact of analyst coverage on employee treatment differs based on a firm's level of financial constraints. Campello, Graham, and Harvey (2010) study how corporate spending is conditional on financial constraints and find that constrained firms planned deeper cuts in tech spending, employment, and capital spending during the 2008 financial crisis. They also find that financially constrained firms were forced to bypass attractive investment opportunities due to the lack of affordable external financing. In addition, Li (2011) studies the interaction between financial constraints and R&D and finds that financially constrained firms are more likely to cut R&D projects rather than capital investment. Since improving employee treatment in many cases is a long-term investment because it cannot easily

be removed without repercussions (e.g., reducing employee benefits could result in employee turnover), I predict that the treatment effect will be more pronounced among less financially constrained firms. Following prior research, I use two common indices, the KZ Index (Kaplan and Zingales 1997) and the WW Index (Whited and Wu 2006), to measure the firms' financial constraint status. Both indices are designed so that higher values for the index indicate greater financial constraints. I split each measure into terciles and create a dummy variable that equals 1 for the top tercile to capture financially constrained firms (*High KZ* and *High WW*). Consistent with my prediction, the results in Table 7 provide evidence that the treatment effect of improved employee treatment due to the exogenous drop in analyst coverage is less pronounced among financially constrained firms.

CHAPTER VI

ADDITIONAL ANALYSIS

"Earnings Target Pressure" Explanation

In this section, I examine whether a firm's ability to meet earnings targets matters for the relation between analyst coverage and employee treatment. Missing earnings targets can generate pressure on managers since firms can suffer a negative market reaction (i.e., stock prices drop) if earnings targets are not met (Skinner and Sloan, 2002), and managers lose out on bonuses when they miss earnings forecasts (Matsunaga and Park, 2001). Thus, I test whether the effect of analyst coverage on employee treatment is stronger among firms that experience greater pressure from analysts in the pre-event period due to missing analyst earnings targets.

First, I measure firms' most recent history of missing annual earnings (EPS) targets to test the impact of missing earnings targets on the treatment effect. I split my sample into two groups: 1) firms that had a negative annual earnings surprise (i.e., actual EPS < analysts' consensus EPS) in the year before the merger event (*Misser*) and 2) firms that do not have a negative earnings surprise (i.e., actual EPS ≥ analysts' consensus EPS) in the year before the merger event.

In Table 8, I present the results of the impact of analyst coverage on employee treatment conditional on previously missing earnings targets. The result shows that the treatment effect is more pronounced among firms that missed their earnings target in the pre-merger period. The *DID* coefficients reported in columns 1 and 2 are positive and statistically significant, which is consistent with the idea that the effect of analyst coverage on employee treatment is more pronounced among firms that experience greater pressure from analysts in the pre-event period

due to missing analysts' earnings targets. These results suggest that the pressure to meet earnings expectations influences how managers treat their employees.

Improvement in Employee Treatment and Firms' Performance Consequences

In this section, I examine whether the improvement in employee treatment due to the exogenous drop in analyst coverage improves or harms firms' future operating performance. Even though the results from my main test show that an exogenous drop in analyst coverage leads to an increase in employee treatment, it is unclear whether this is good or bad for firm value. Based on prior research (Jiao, 2010; Edmans, 2011; Faleye and Trahan, 2011; Ertugrul, 2013), this might indicate that firms should improve their performance following the increase in employee treatment. However, it is possible that analyst pressure actually disciplines managers by eliminating wasteful spending on employee treatment (Adhikari 2016) and, thus, the improvement in employee treatment due to exogenous drop in analyst coverage will actually lower firmperformance and productivity. To address this possibility, I examine whether the improvement in employee treatment due to the exogenous drop in analyst coverage improves or deteriorates firms' financial and operating performance.

I apply a two-stage least squares (2SLS) framework using the improvement in employee treatment due to the exogenous events of analyst reduction as an instrument for employee treatment and evaluate its impact on firms' financial and operating performance. The DID (treat*post) is not expected to be related to firm performance other than through its impact on employee treatment, and therefore satisfies the exclusion restriction. First, I estimate the 2SLS model to examine the influence of the exogenouse drop in analyst coverage on firm's financial

performance. I use two proxies to measure firm's financial performance, namely industry-adjusted ROA and industry-adjusted net operating cash flow. Given that prior studies document evidence on the positive impact of employee treatment on firms' operational and financial performance (Jiao, 2010; Edmans, 2011; Faleye and Trahan, 2011; Ertugrul, 2013), I expect to find a significant positive relation between firms' operating performance proxies and the interaction term between the DID effect (*Treat * Post*) and employee treatment. However, if analyst coverage disciplines managers to reduce the extra spending on employees, which serves the shareholders' interest through enhancing firms' operating performance, then I would expect a negative relation between firms' operating performance proxies and the interaction between the DID effect and employee treatment.

In Table 9, I find the improvement in employee treatment, due to the exogenous drop in analyst coverage, is not significantly associated with firms' financial performance measures. Such evidence suggest that the improvement in employee treatment, due to the exogenous drop in analyst coverage, has no harm on firm's financial performance.

Second, I estimate the 2SLS model to examine the impact of the exogenous drop in analyst coverage on firm operating performance. Prior research (Acharya et al. 2014; Chang et al. 2015; Bradley et al. 2015; Chen et al. 2016) documents that employees are an important factor that facilitates firms' patenting activities. Of particular interest, Chen et al. (2016) focus on employee treatment and provide evidence that firms with better employee treatment produce greater innovative outputs. To assess whether the improvement in employee treatment due to the reduction in analyst coverage is good or bad for firm performance, I use the improvement in employee treatment due to the exogenous events of analyst reduction as an instrument for

employee treatment and evaluate its impact on firms' patenting activities. The DID (treat*post) is not expected to be related to patenting activities other than through its impact on employee treatment, and therefore satisfies the exclusion restriction. I use U.S. firm patent data, provided by Kogan, Papanikolaou, Seru, and Stoffman (2017), to measure corporate innovation outcomes. Kogan et al. (2017) construct the dataset by downloading the history of U.S. patent documents from Google Patents (https://patents.google.com). This patent search engine includes patent applications and grants from the United States Patent and Trademark Office (USPTO). Following prior research, I use two metrics that describe firms' patenting activities to proxy for firms' innovation outcomes. The first metric is a count of the number of patents applied for by a firm each year. The second metric is the number of citations subsequently received by the patent applied for in each year. Citation count captures the quality of innovation since patent citation implies that the patented technology is valuable for subsequent innovation endeavors.[14]

Before applying the 2SLS framework, I estimate the effect of employee treatment on patenting activities to show consistent evidence to prior research of the positive association between employee treatment and the number of patents and patent citations (Chen et al. 2016).[15] Columns one and two in Table 10 confirm the positive association between employee treatment and the number of patents filled and the number of patent citations, respectively. After

[14] There is a limitation to using patent data since not all innovation outcomes are patented (Hall, Jaffe, and Trajtenberg, 2001). This can be attributed to some inventions not meeting patentability criteria set by USPTO, the inventor relying on secrecy, or the inventor relying on other means instead of patents to protect the innovation. Despite these limitations, there is no other widely available measure to better capture firms' technological advances and innovation outcome (Griliches 1990). In the regression, I include industry fixed effect to control for heterogeneity in the use of patents across industries.

[15] Following prior research (e.g., Hirshleifer, Low, and Teoh 2012; Chang, Fu, Low, and Zhang 2015; Sunder, Sunder, and Zhang 2017), I include industry fixed effects rather than firm fixed effects in the patents and patent citation regressions since innovation measures are highly persistent variables. The industry fixed effect helps in controlling for heterogeneity in the use of patents and patent citation across industries.

confirming the positive association between employee treatment and patenting activities, I apply the 2SLS model, while using the DID (treat*post) as an instrumental variable, to show impact of the exogenous drop in analyst coverage on patenting activities. In Table 10, columns 4 and 5, the predicted employee treatment index (Emp Index $_{predict}$) is positively related to patenting activities, with the coefficient estimate being significant at 1% level. Column 4 (5) shows that after the exogenous reduction in analyst coverage, the improvement in employee treatment results in an increase in the number of patents (patent citations) in the post-merger windows. The results support the argument that the improvement in employee treatment, after the exogenous drop in analyst coverage, has a positive effect on corporate innovation (i.e., patenting activities), suggesting a positive impact of employee treatment improvement on firm performance.

Alternative Measures of Employee Treatment

In the final set of tests, I examine whether the main results are sensitive to alternative measures of employee treatment. I use two alternative measures of employee treatment. First, I reconstruct the employee treatment variable by subtracting the total number of concerns to reach a net measure of employee treatment index (*Emp Index Net*). In addition to strengths, KLD also provides a list of concerns for each component (e.g., poor union relations, civil penalties for willful violations of employee health and safety standards, substantially under-funded defined benefit pension plan). Accordingly, an alternative approach is to calculate a net employee index measure by subtracting the total concerns from the total strengths. I replace the employee index variable (*Emp Index*) with a net employee index variable (*Emp Index Net*), which represents a net measure of the strength and concerns reported for employee-related components of the KLD

data. The coefficients on *Treat*Post* in Table 11, columns 1 and 2, are positive and significant, suggesting the negative impact of analyst coverage on employee treatment. This result is consistent with the main finding of my study.

Second, I use whether the company was included in Fortune Magazine's list of the100 Best Companies to Work For that is published every year by Fortune Magazine as an alternative measure of employee treatment.[16] Fortune creates its list by considering extensive employee surveys and reviewing company culture. The employee survey, which counts as two-thirds of a firm's score, asks questions pertaining to employees' attitudes towards management credibility, job satisfaction, and camaraderie. The remaining one-third of the company score is related to the company's cultural review conducted by Fortune, which includes detailed questions on demographic makeup, pay, and benefit programs, as well as the company's management philosophy, methods of internal communication, opportunities, diversity effort, and other factors. To the extent that a firm's inclusion on the Fortune Magazine's best 100 companies list reflects firms' ability to implement better employee-friendly policies (i.e., better employee treatment), I replace the employee treatment index with an indicator variable that is equal to one if the firm is listed in Fortune's list and zero otherwise. I find consistent results of a negative causal effect of analyst coverage on inclusion in the Fortune's list. The coefficient estimate for the Fortune indicator is positive and significant in Table 11, columns 3 and 4. This result suggests analyst coverage has a negative impact on improvement in employee treatment, measured by its inclusion in Fortune's list, corroborating the main findings using KLD data.

[16] Prior studies (Faleye and Trahan, 2011; Edmans, 2011; Bae et al., 2011) have used the Fortune Magazine list measure of employee satisfaction as an alternative to the KLD-based index. The coverage of the data on the Fortune Magazine list starts from 1998.

CHAPTER VII

CONCLUSION

I investigate the impact of analyst coverage on employee treatment. This is an important topic since employee treatment is critical to corporate success. I propose two competing hypotheses with opposite empirical predictions to explain the impact of financial analysts on employee treatment. The first hypothesis suggests that analysts can play a governance role and discipline managers from engaging in self-serving behavior, predicting a positive effect on employee treatment. The second hypothesis advocates that analysts can create excessive pressure on managers to meet earning targets (i.e., make short-sighted decisions), predicting a negative effect on employee treatment. I use a unique setting by implementing a difference-in-differences technique and using brokerage mergers as an exogenous shock to analyst coverage. Consistent with the pressure hypothesis, I find a significant negative relation between analyst coverage and employee treatment.

I conduct cross-sectional analyses to provide further understanding of the effect of analyst coverage on employee treatment. First, I find that firms with short-term focused institutional ownership experience a weaker improvement in employee treatment after the exogenous drop in analyst coverage. Second, I test the difference in treatment effect conditional on the importance of human capital. I find that the improvement in employee treatment is more pronounced among firms that rely more on human capital (i.e., high-tech firms and firms with R&D spending). Third, I find that treatment effect is weaker among financially constrained firms and stronger among firms that previously missed analysts' consensus earnings forecasts, suggesting that the impact of analyst coverage on employee treatment is driven by the pressure on managers to meet

earnings targets. Finally, I examine the influence of employee treatment improvement on firms' performance and find that the improvement in employee treatment, due to the exogenous drop in analyst coverage, is positively associated with firms' operating performance.

This study contributes to the financial analyst literature by showing that analysts' influence on firms extends to firms' employees. Despite prior evidence on how analyst coverage influences firms' corporate social performance by disciplines managers to curb discretionary spending on CSR activities (Adhikari 2016) or creating pressure on managers to meet short-term goals (Qian, Lu, and Yu 2019), I focus on the influence of analyst coverage on one key group of stakeholders and provide evidence that analyst coverage can lead to a deterioration in employee treatment through imposing excessive pressure on firms. Further, I document an important implication of how analyst pressure influences firm operating performance and innovation activity through employee treatment. My study also adds to the debate of the governance role of analysts by providing further evidence on the adverse consequence of analyst coverage (He and tian 2013; Derrien and Kecskés 2013; Chen, Harford and Lin 2015; Ayres, Campbell, Chyz, and Shipman 2019).

APPENDIX A

KLD COMPONENTS THAT REPRESENT EMPLOYEE TRERTMENT

EMPLOYEE RELATIONS

Strengths

- o Union Relations: The company has taken exceptional steps to treat its unionized workforce fairly.
- o Cash Profit Sharing: The company has a cash profit-sharing program through which it has recently made distributions to a majority of its workforce.
- o Employee Involvement: The company strongly encourages worker involvement and/or ownership through stock options available to a majority of its employees; gain sharing, stock ownership, sharing of financial information, or participation in management decision-making.
- o Retirement Benefits Strength: The company has a notably strong retirement benefits program.
- o Health and Safety Strength: The company has strong health and safety programs.
- o Other Strength: The company has strong employee relations initiatives not covered by other KLD ratings

DIVERSITY

Concerns

- o CEO: The company's chief executive officer is a woman or a member of a minority group.
- o Promotion: The company has made notable progress in the promotion of women and minorities, particularly to line positions with profit-and-loss responsibilities in the corporation.
- o Board of Directors: Women, minorities, and/or the disabled hold four seats or more

(with no double counting) on the board of directors, or one-third or more of the board seats if the board numbers less than 12.

- o Work/Life Benefits: The company has outstanding employee benefits or other programs addressing work/life concerns, e.g., childcare, elder care, or flextime.

- Women and Minority Contracting: The company does at least 5% of its subcontracting, or otherwise has a demonstrably strong record on purchasing or contracting, with women-and/or minority-owned businesses.
- Employment of the Disabled: The company has implemented innovative hiring programs; other innovative human resource programs for the disabled, or otherwise has a superior reputation as an employer of the disabled.
- Gay and Lesbian Policies: The company has implemented notably progressive policies toward its gay and lesbian employees. In particular, it provides benefits to the domestic partners of its employees.
- Other Strength: The company has made a notable commitment to diversity that is not covered by other KLD ratings.

APPENDIX B
VARIABLE DEFINITIONS

Dependent Variables

Emp Index	The sum of strength scores for employee relations and diversity components (emp_str_num + div_str_num): From KLD

Variables of Interest

Analyst Coverage	The number of earnings forecasts (NUMEST) a firm receives at the fiscal year: From I/B/E/S

Firm Characteristics

Market Value	Natural log of market value of equity (Compustat PRCC_F * CSHO) measured at the end of fiscal year t;
ROA	Return-on-assets ratio defined as income before extraordinary items (Compustat IB) divided by book value of total assets (Compustat AT), measured at the end of fiscal year t;
LEV	Firm i's leverage ratio, defined as book value of debt (Compustat DLC+DLTT) divided by book value of total assets (Compustat AT) measured at the end of fiscal year t;
Cash	Cash and short-term investment (Compustat CHE) scaled by the total book value of assets (Compustat AT) measured at the end of fiscal year t;
Payout	Total dividends paid (Compustat DVC+DVP) divided by book value of total assets (Compustat AT) measured at the end of fiscal year t;
Tobin Q	Firm i's market-to-book ratio during fiscal year t, calculated as market value of equity (Compustat PRCC_F*CSHO) plus book value of assets (Compustat AT) minus book value of equity (Compustat CEQ) minus balance sheet deferred taxes (Compustat TXDB, set to 0 if missing), divided by book value of assets (Compustat AT);
R&D	Research and development expenditure (Compustat XRD) divided by book value of total assets (Compustat AT) measured at the end of fiscal year t, set to 0 if missing;
Capital Expenditure	Capital expenditure (Compustat CAPX) scaled by book value of total assets (Compustat AT) measured at the end of fiscal year t;
Capital Intensity	Net Property, Plant and Equipment for year t (Compustat PPENT) scaled by book value of total assets (Compustat AT) measured at the end of fiscal year t;
Advertising	Advertising expense (Compustat XAD) deflated by sales (Compustat SALE);
Sales Growth	Sales growth of year t is measured over three years, from t-1 to t+1 (compustat SALE);
Labor Intensity	Number of employees (Compustat EMP) divided by book value of total assets (Compustat AT) measured at the end of fiscal year t;
Inst Inv %	The institutional holdings (%) for firm i over fiscal year t, calculated as the arithmetic mean of the four quarterly institutional holdings reported through form 13F;

VARIABLE DEFINITIONS (CONTINUED)

Other variables

KZ Index	Firm i's KZ index measured at the end of fiscal year t, calculated as -1.002 × Cash Flow ((IB + DP)/L. PPENT) plus 0.283 × Tobin Q ((AT−CEQ− TXDB + PRCC_C∗CSHO / AT) plus 3.139 × Leverage ((DLTT + DLC)/(DLTT + DLC+SEQ)) minus 39.368 × Dividends ((DVP + DVC)/L.PPENT) minus 1.315 × Cash holdings (CHE/L.PPENT);
High KZ	A dummy variable equals one if firm is ranked top tercile based on the *KZ Index* , zero otherwise;
WW Index	Firm i's Whited and Wu index, which is computed as $-0.091CF_{i,t} - 0.062DIVPOS_{i,t} + 0.021TLTD_{i,t} - 0.044LNTA_{i,t} - 0.035SG_{i,t} + 0.102ISG_{i,t}$ where for firm i in year t, CF is the ratio of cash flow to book assets, DIVPOS is an indicator that equals one if the firm pays dividends, and zero otherwise, TLTD is the ratio of long-term debt to total assets, LNTA is the natural log of total assets, SG is own-firm sales growth computed as Sales(t)/Sales(t-1), and ISG is the firm's three-digit industry sales growth;
High WW	A dummy variable equals one if firm is ranked top tercile based on the *WW Index,* zero otherwise;
High-tech industry	A dummy variable equals 1 if firm operates in SIC codes defined as in John, Knyazeva and Knyazeva (2015), 0 otherwise;
Transient Investors	The institutional holdings (%) for firm i over fiscal year t held by transient institutional investors, provided by Brian Bushee at his website, http://acct.wharton.upenn.edu/faculty/bushee/IIclass.html
Misser	A dummy variable equals one for firm that misses analyst earning forecast in pre-event period, zero otherwise;
Ind Adj CFO	Industry adjusted operating cash flow (net cash flow from operating activities/ total assets) at the end of fiscal year t;
Ind Adj ROA	Industry adjusted return of assets (net income / total assets) at the end of fiscal year t;
Ln(Pat)	The natural logarithm of 1 plus the number of patents applied for by firm i in year t (Kogan, Papanikolaou, Seru and Stoffman 2017);
Ln(Cit)	The natural logarithm of 1 plus the number of patent citations received by firm i in year t (Kogan, Papanikolaou, Seru and Stoffman 2017).

APPENDIX C

DESCRIPTION OF THE MERGER EVENTS

This table reports a description of the merger events considered in this paper. The details were compiled from Hong and Kacperczyk (2010). I include the names and dates of the merging brokerage houses as well as their I/B/E/S identifiers and the merger date.

Brokerage house name	I/B/E/S identifier	Acquirer/Target	Merger date
Morgan Stanley Group, Inc.	192	Acquirer	5/31/1997
Dean Witter Discover & Co.	232	Target	
Smith Barney	254	Acquirer	11/28/1997
Salomon Brothers	242	Target	
EVEREN Capital Corp.	829	Acquirer	1/9/1998
Principal Financial Securities	495	Target	
DA Davidson & Co.	79	Acquirer	2/17/1998
Jensen Securities Co.	932	Target	
DaM Rauscher Corp.	76	Acquirer	4/6/1998
Wessels Arnold & Henderson LLC	280	Target	
First Union Corp., Charlotte, NC	282	Acquirer	10/1/1999
EVEREN Capital Corp.	829	Target	
Paine Webber Group, Inc.	189	Acquirer	6/12/2000
JC Bradford & Co.	34	Target	
Credit Suisse First Boston	100	Acquirer	10/15/2000
Donladson Lufkin & Jenrette	86	Target	
UBS Warburg Dillon Read	85	Acquirer	12/10/2000
Paine Webber	189	Target	
Fahnestock & Co.	98	Acquirer	9/18/2001
Josephthal Lyon & Ross	933	Target	
Janney Montgomery Scott LLC	142	Acquirer	3/22/2005
Parker/Hunter Inc.	860	Target	

Table 1

DESCRIPTIVE STATISTICS

All variables are defined in Appendix B.

Panel A: Descriptive statistics for baseline sample

Descriptive Statistics

				Percentile		
Variable	***N***	***Mean***	***S.D.***	***25%***	***50%***	***75%***
Emp Index	23,601	0.87	1.39	0.00	0.00	1.00
Analysts Coverage	23,601	8.71	7.21	3.00	7.00	13.00
Market Value	23,601	7.20	1.55	6.04	7.06	8.20
ROA	23,601	0.02	0.14	0.01	0.04	0.08
LEV	23,601	0.22	0.21	0.04	0.19	0.34
Cash	23,601	0.17	0.20	0.03	0.08	0.24
Payout	23,601	0.03	0.06	0.00	0.01	0.04
Tobin Q	23,601	1.73	1.45	0.93	1.35	2.10
RD	23,601	0.03	0.08	0.00	0.00	0.03
Capital Expenditure	23,601	0.04	0.06	0.01	0.03	0.06
Capital Intensity	23,601	0.23	0.23	0.04	0.15	0.34
AD	23,601	0.01	0.03	0.00	0.00	0.01
Sales Growth	23,601	0.07	0.15	0.00	0.05	0.11
Labor Intensity	23,601	0.00	0.01	0.00	0.00	0.01
Inst Inv %	23,601	0.66	0.24	0.51	0.70	0.86

Panel B: Descriptive statistics for Difference-in-Difference sample

Descriptive Statistics

				Percentile		
Variable	***N***	***Mean***	***S.D.***	***25%***	***50%***	***75%***
Emp Index	12,533	1.07	1.45	0.00	1.00	2.00
Analysts Coverage	12,533	7.98	8.30	0.00	6.00	13.00
Market Value	12,533	7.75	1.52	6.57	7.63	8.86
ROA	12,533	0.03	0.12	0.01	0.04	0.08
LEV	12,533	0.23	0.19	0.07	0.22	0.35
Cash	12,533	0.15	0.19	0.02	0.06	0.20
Payout	12,533	0.03	0.06	0.00	0.01	0.04
Tobin Q	12,533	1.89	1.60	0.98	1.46	2.32
RD	12,533	0.03	0.06	0.00	0.00	0.03
Capital Expenditure	12,533	0.05	0.05	0.01	0.03	0.06
Capital Intensity	12,533	0.24	0.23	0.05	0.18	0.38
AD	12,533	0.01	0.03	0.00	0.00	0.01
Sales Growth	12,533	0.07	0.14	0.01	0.06	0.12
Labor Intensity	12,533	0.00	0.01	0.00	0.00	0.01
Inst Inv %	12,533	0.65	0.22	0.51	0.68	0.81

Table 2

Baseline regression of employee treatment on analyst coverage. The table represents the regression of future Emp Index score on analyst coverage and other control variables. All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at the firm level. Robust p-value in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

VARIABLES	***Emp Index*** $_{t+1}$	***Emp Index*** $_{t+2}$
Analyst Coverage	**-0.001**	**-0.011*** **
	(0.722)	**(0.003)**
Market Value	0.094***	0.133***
	(0.000)	(0.000)
ROA	-0.023	0.048
	(0.773)	(0.620)
LEV	0.024	-0.026
	(0.832)	(0.840)
Cash	0.033	0.119
	(0.775)	(0.344)
Payout	0.565***	0.271
	(0.002)	(0.167)
Tobin Q	-0.045***	-0.038**
	(0.002)	(0.018)
R&D	-0.155	0.051
	(0.648)	(0.889)
Capital Expenditure	0.203	0.592**
	(0.445)	(0.048)
Capital Intensity	0.060	0.034
	(0.804)	(0.895)
Advertising	-1.649	-1.747
	(0.171)	(0.196)
Sales Growth	0.006	0.007
	(0.915)	(0.913)
Labor Intensity	-1.589	-4.086
	(0.789)	(0.526)
Inst Inv %	-0.193***	-0.137*
	(0.007)	(0.084)
Observations	20,322	16,969
R-squared	0.806	0.819
Firm Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes

Table 3

This table shows the effect of the exogenous shock (i.e., brokerage houses mergers) on the raw number of analysts. All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at the firm level. Robust p-value in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

	One-year post-merger window	Two-years post-merger window
VARIABLES	***Analyst Coverage***	***Analyst Coverage***
Treat * Post (DID Effect)	**-0.848*** (0.000)**	**-0.888*** (0.000)**
Observations	8,376	12,533
R-squared	0.928	0.921
Year Fixed Effects	Included	Included
Event Fixed Effects	Included	Included
Firm Fixed Effects	Included	Included

Table 4

This table shows the effect of the number of analysts on employee treatment using a difference-in-difference estimation, where the exogenous shock comes from brokerage house mergers. For each merge, I consider a one-year window before the merger (pre-merger window) and one-year and two-years windows after the merger (post-merger windows). All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at event level. Robust p-value in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

	One-year post-merger window	*Two-years post-merger window*
Variables	***Emp Index***	***Emp Index***
Treat * Post (DID effect)	**0.117****	**0.110***
	(0.030)	**(0.059)**
Market Value	0.059*	0.054**
	(0.092)	(0.017)
ROA	-0.182	-0.233***
	(0.126)	(0.001)
LEV	0.226	0.045
	(0.120)	(0.606)
Cash	-0.131	-0.035
	(0.492)	(0.763)
Payout	0.434	0.315*
	(0.112)	(0.055)
Tobin Q	-0.057	-0.057**
	(0.157)	(0.016)
R&D	-1.182	-0.644
	(0.314)	(0.383)
Capital Expenditure	0.046	0.098
	(0.912)	(0.722)
Capital Intensity	-0.221	-0.105
	(0.276)	(0.371)
Advertising	0.920	0.048
	(0.186)	(0.917)
Sales Growth	-0.077	-0.010
	(0.487)	(0.911)
Labor Intensity	12.071	6.203
	(0.243)	(0.426)
Inst Inv %	-0.481***	-0.464***
	(0.001)	(0.000)
Observations	8,376	12,533
R-squared	0.850	0.842
Year Fixed Effects	Included	Included
Event Fixed Effects	Included	Included
Firm Fixed Effects	Included	Included

Table 5
Treatment effect conditional on transient investors' ownership.

I split the sample by the median value of the transient institutional investor ownership percentage to proxy for short-term focused investors. All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at event level. Robust p-value in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

	One-year post-merger window	Two-years post-merger window
	***Transient* Investors**	
VARIABLES	***Emp Index***	***Emp Index***
*Treat*Post*	0.228***	0.212**
	(0.005)	(0.019)
Treat Transient Investors*	0.194	0.179
	(0.101)	(0.171)
Post Transient Investors*	0.050**	0.032
	(0.018)	(0.134)
Treat*Post* Transient Investors	**-0.326*** **	**-0.318*** **
	(0.001)	**(0.003)**
Controls	Yes	Yes
Observations	8,376	12,533
R-squared	0.850	0.842
Year Fixed Effects	Included	Included
Event Fixed Effects	Included	Included
Firm Fixed Effects	Included	Included

Table 6
Treatment effect conditional on the importance of human capital.

In the first and second columns, I interact the variable of interest with a an indicator variable for firms belong to technological industries, following John, Knyazeva, and Knyazeva (2015). In the third and fourth columns, I interact the variable of interest with an indicator variable for firms with research and development (*R&D*) spending. All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at event level. Robust p-value in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

	One-year post-merger window	Two-years post-merger window	One-year post-merger window	Two-years post-merger window
	Tech Firm		***With R&D***	
VARIABLES	***Emp Index***	***Emp Index***	***Emp Index***	***Emp Index***
*Treat * Post*	0.032	0.010	0.029	0.009
	(0.308)	(0.834)	(0.396)	(0.864)
*Treat * Human Capital*	-0.045	-0.081	0.025	-0.022
	(0.705)	(0.501)	(0.820)	(0.839)
*Post * Human Capital*	-0.067	-0.051*	-0.028	0.025
	(0.118)	(0.061)	(0.148)	(0.213)
Treat*Post* Human Capital	**0.335*** **	**0.379*** **	**0.255*** **	**0.290*** **
	(0.002)	**(0.002)**	**(0.000)**	**(0.001)**
Controls	Yes	Yes	Yes	Yes
Observations	8,376	12,533	8,376	12,533
R-squared	0.851	0.843	0.852	0.844
Year Fixed Effects	Included	Included	Included	Included
Event Fixed Effects	Included	Included	Included	Included
Firm Fixed Effects	Included	Included	Included	Included

Table 7
Treatment effect conditional on financially constrained firms.

I use two common measures of financial constraints, namely KZ Index and WW Index, to capture financially constrained firms. A firm is considered constrained if it ranks in the top tercile of the KZ Index (*High KZ*) and the WW Index (*High WW*) constrained measures. All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at event level. Robust p-value in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

	One-year post-merger window	Two-years post-merger window	One-year post-merger window	Two-years post-merger window
	High KZ		***High WW***	
VARIABLES	***Emp Index***	***Emp Index***	***Emp Index***	***Emp Index***
*Treat * Post*	0.191***	0.193***	0.139**	0.129*
	(0.008)	(0.003)	(0.020)	(0.061)
*Treat * Financial Constraints*	0.023	-0.024	0.007	0.037
	(0.771)	(0.782)	(0.966)	(0.836)
*Post * Financial Constraints*	0.167	0.349**	-0.151***	-0.197***
	(0.422)	(0.021)	(0.000)	(0.000)
Treat*Post* Financial Constraints	**-0.165****	**-0.165***	**-0.155****	**-0.142**
	(0.032)	**(0.081)**	**(0.016)**	**(0.126)**
Controls	Yes	Yes	Yes	Yes
Observations	8,040	11,946	7,768	11,602
R-squared	0.850	0.842	0.852	0.844
Year Fixed Effects	Included	Included	Included	Included
Event Fixed Effects	Included	Included	Included	Included
Firm Fixed Effects	Included	Included	Included	Included

Table 8
Treatment effect conditional on missing annual earnings (EPS) forecast.

I interact the variable of interest with an indicator variable for firms missing earnings forecast (i.e., actual EPS < analysts' consensus EPS) during the year before the merger event, t-1 (*Misser*). All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at event level. Robust p-value in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

	One-year post-merger window	Two-years post-merger window
	Misser	
VARIABLES	***Emp Index***	***Emp Index***
*Treat*Post*	0.081	0.064
	(0.134)	(0.193)
Treat Misser*	0.056	-0.011
	(0.634)	(0.918)
Post Misser*	0.055***	0.009
	(0.003)	(0.610)
Treat*Post*Misser	**0.185****	**0.201****
	(0.034)	**(0.010)**
Controls	Yes	Yes
Observations	8,376	12,533
R-squared	0.851	0.843
Year Fixed Effects	Included	Included
Event Fixed Effects	Included	Included
Firm Fixed Effects	Included	Included

Table 9
This table shows the effect of improved employee treatment, due to an exogenous drop in analyst coverage, on firms' financial performance using a difference-in-difference estimation, where the exogenous drop comes from brokerages house mergers. I use two proxies of firms' financial performance: Industry-adjusted Net Cash Flow - Operating Activities "*Ind Adj CFO*" and Industry-adjusted ROA "*Ind Adj ROA*". All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at event level; Robust p-value in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

Panel A: One Year post-merger window

	One-year post-merger window				
			2SLS		
			1st Stage	*2nd Stage*	
VARIABLES	***Ind. Ad. CFO***	***Ind. Adj. ROA***	***Emp Index***	***Ind. Ad. CFO***	***Ind. Adj. ROA***
Emp Index	**0.000**	**-0.001**			
	(0.867)	**(0.293)**			
Emp Index *predicted*				**-0.000**	**0.013**
				(0.985)	**(0.328)**
*Treat * Post (DID effect)* *I.V.*			0.360***		
			(0.004)		
Treat			0.121		
			(0.633)		
Market Value	0.003***	-0.000	0.504***	0.003	-0.007
	(0.001)	(0.938)	(0.000)	(0.645)	(0.338)
ROA	0.270**	1.118***	0.167**	0.270**	1.116***
	(0.018)	(0.000)	(0.030)	(0.020)	(0.000)
LEV	-0.042***	0.037**	-0.022	-0.042***	0.038**
	(0.002)	(0.016)	(0.875)	(0.002)	(0.015)
Cash	0.010	0.069***	0.300**	0.010	0.064***
	(0.368)	(0.000)	(0.019)	(0.390)	(0.000)
Payout	0.151***	-0.042	1.084***	0.152***	-0.056
	(0.003)	(0.611)	(0.000)	(0.001)	(0.541)
Tobin Q	0.004*	-0.007*	-0.126***	0.004	-0.005
	(0.052)	(0.079)	(0.001)	(0.208)	(0.129)
R&D	-0.147**	0.342**	2.986***	-0.146*	0.302**
	(0.018)	(0.025)	(0.000)	(0.096)	(0.038)
Capital Expenditure	0.146***	-0.105	-0.081	0.146***	-0.104
	(0.007)	(0.126)	(0.873)	(0.006)	(0.127)
Capital Intensity	0.025***	0.013	0.805***	0.025***	0.002
	(0.001)	(0.276)	(0.005)	(0.002)	(0.839)
AD	-0.097***	-0.139***	4.346***	-0.095**	-0.197***
	(0.000)	(0.007)	(0.000)	(0.013)	(0.000)
Sales Growth	-0.030***	0.002	-0.712**	-0.030***	0.011

	(0.000)	(0.903)	(0.043)	(0.002)	(0.429)
Labor Intensity	0.051	0.405***	-0.137	0.051	0.397***
	(0.645)	(0.004)	(0.901)	(0.634)	(0.005)
Inst Inv %	0.021***	0.001	-0.889***	0.021*	0.013
	(0.000)	(0.812)	(0.000)	(0.063)	(0.341)
Observations	8,038	8,376	8,376	8,038	8,376
R-squared	0.330	0.648	0.315	0.330	0.648
Year Fixed Effect	Included	Included	Included	Included	Included
Event Fixed Effect	Included	Included	Included	Included	Included
Industry Fixed Effect	Included	Included	Included	Included	Included

Panel B: Two Years post-merger window

	Two-years post-merger window				
			2SLS		
			1st Stage	*2nd Stage*	
VARIABLES	***Ind. Ad. CFO***	***Ind. Adj. ROA***	***Emp Index***	***Ind. Ad. CFO***	***Ind. Adj. ROA***
Emp Index	**0.000**	**-0.000**			
	(0.867)	**(0.530)**			
Emp Index *predicted*				**0.000**	**0.007**
				(0.975)	**(0.491)**
*Treat * Post (DID effect)* *I.V.*			0.369***		
			(0.006)		
Treat			0.082		
			(0.736)		
Market Value	0.003***	-0.000	0.513***	0.003	-0.004
	(0.000)	(0.828)	(0.000)	(0.543)	(0.476)
ROA	0.365***	1.075***	-0.030	0.365***	1.076***
	(0.006)	(0.000)	(0.747)	(0.006)	(0.000)
LEV	-0.028**	0.027**	-0.090	-0.028**	0.028**
	(0.042)	(0.044)	(0.279)	(0.036)	(0.045)
Cash	0.018	0.069***	0.282***	0.018	0.066***
	(0.148)	(0.000)	(0.001)	(0.185)	(0.000)
Payout	0.140***	-0.005	0.929***	0.140***	-0.012
	(0.001)	(0.945)	(0.000)	(0.000)	(0.875)
Tobin Q	0.001	-0.005	-0.117***	0.001	-0.004
	(0.444)	(0.137)	(0.000)	(0.586)	(0.151)
R&D	-0.102	0.297**	2.153***	-0.102	0.280**
	(0.152)	(0.031)	(0.000)	(0.227)	(0.030)
Capital Expenditure	0.157***	-0.072	-0.176	0.157***	-0.071
	(0.000)	(0.197)	(0.586)	(0.000)	(0.196)
Capital Intensity	0.017***	0.004	0.611**	0.017***	-0.000
	(0.000)	(0.678)	(0.021)	(0.004)	(0.971)

AD	-0.132***	-0.157***	4.107***	-0.133***	-0.189***
	(0.001)	(0.001)	(0.000)	(0.009)	(0.000)
Sales Growth	-0.034***	-0.002	-0.633**	-0.034***	0.003
	(0.000)	(0.870)	(0.016)	(0.000)	(0.844)
Labor Intensity	0.031	0.234*	-0.158	0.031	0.231*
	(0.700)	(0.094)	(0.796)	(0.696)	(0.091)
Inst Inv %	0.025***	0.006**	-0.765***	0.025***	0.012
	(0.000)	(0.033)	(0.000)	(0.005)	(0.158)
Observations	11,984	12,533	12,533	11,984	12,533
R-squared	0.369	0.670	0.333	0.369	0.670
Year Fixed Effect	Included	Included	Included	Included	Included
Event Fixed Effect	Included	Included	Included	Included	Included
Industry Fixed Effect	Included	Included	Included	Included	Included

Table 10
This table shows the effect of improved employee treatment, due to an exogenous drop in analyst coverage, on firms' innovation outcomes using a difference-in-difference estimation, where the exogenous drop comes from brokerage house mergers. I use two measures to capture innovation outcomes, *Ln(Pat)* and *Ln(Cit)*, which represent the natural logarithm of 1 plus the count of patents (patent citations), respectively. All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at event level. Robust p-value in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

Panel A: One Year post-merger window

	One-year post-merger window				
			2SLS		
			1st Stage	*2nd Stage*	
VARIABLES	***Ln(Pat)***	***Ln(Cit)***	***Emp Index***	***Ln(Pat)***	***Ln(Cit)***
Emp Index	**0.169*** **	**0.213*** **			
	(0.000)	**(0.000)**			
Emp Index *predicted*				**1.832*** **	**2.498*** **
				(0.000)	**(0.000)**
*Treat * Post (DID effect)* *I.V.*			0.362***		
			(0.004)		
Treat			0.122		
			(0.628)		
Market Value	0.413***	0.680***	0.504***	-0.470***	-0.533**
	(0.000)	(0.000)	(0.000)	(0.008)	(0.047)
ROA	0.429***	0.491*	0.168**	0.191	0.162
	(0.007)	(0.083)	(0.029)	(0.136)	(0.484)
LEV	0.240	0.183	-0.022	0.282	0.241
	(0.163)	(0.551)	(0.878)	(0.106)	(0.432)
Cash	-0.302**	-0.059	0.298**	-0.867***	-0.835***
	(0.014)	(0.733)	(0.021)	(0.000)	(0.000)
Payout	0.710*	1.135**	1.086***	-1.049**	-1.284*
	(0.056)	(0.021)	(0.000)	(0.033)	(0.099)
Tobin Q	-0.100***	-0.112***	-0.126***	0.123**	0.196**
	(0.000)	(0.002)	(0.001)	(0.020)	(0.021)
R&D	6.036***	10.437***	2.990***	1.012	3.533
	(0.000)	(0.000)	(0.000)	(0.529)	(0.220)
Capital Expenditure	0.603**	1.218**	-0.077	0.702**	1.353**
	(0.019)	(0.039)	(0.880)	(0.015)	(0.030)
Capital Intensity	0.045	-0.263	0.805***	-1.329***	-2.150***
	(0.608)	(0.178)	(0.005)	(0.000)	(0.000)
AD	2.162***	3.370***	4.344***	-4.993***	-6.464***
	(0.004)	(0.004)	(0.000)	(0.002)	(0.004)
Sales Growth	-1.108***	-1.792***	-0.707**	0.060	-0.187
	(0.001)	(0.001)	(0.043)	(0.874)	(0.774)

Labor Intensity	-3.933	-15.239***	-0.140	-5.029*	-16.732***
	(0.166)	(0.009)	(0.898)	(0.077)	(0.005)
Inst Inv %	-0.628***	-0.739**	-0.889***	0.890***	1.346**
	(0.002)	(0.013)	(0.000)	(0.009)	(0.014)
Observations	8,376	8,376	8,376	8,376	8,376
R-squared	0.629	0.613	0.315	0.629	0.615
Year Fixed Effects	Included	Included	Included	Included	Included
Event Fixed Effects	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included

Panel B: Two Years post-merger window

	Two-years post-merger window				
			2SLS		
			1st Stage	*2nd Stage*	
VARIABLES	***Ln(Pat)***	***Ln(Cit)***	***Emp Index***	***Ln(Pat)***	***Ln(Cit)***
Emp Index	**0.184*** **	**0.243*** **			
	(0.000)	**(0.000)**			
Emp Index *predicted*				**2.067*** **	**2.863*** **
				(0.000)	**(0.000)**
*Treat * Post (DID effect)* *I.V.*			0.371***		
			(0.006)		
Treat			0.083		
			(0.732)		
Market Value	0.369***	0.610***	0.513***	-0.644***	-0.798**
	(0.000)	(0.000)	(0.000)	(0.004)	(0.018)
ROA	0.465***	0.464	-0.029	0.566***	0.603*
	(0.004)	(0.141)	(0.755)	(0.001)	(0.068)
LEV	0.121	0.020	-0.089	0.300***	0.269
	(0.246)	(0.909)	(0.281)	(0.006)	(0.102)
Cash	-0.303	0.004	0.281***	-0.901***	-0.826***
	(0.108)	(0.987)	(0.001)	(0.000)	(0.000)
Payout	0.757***	0.977***	0.930***	-0.932***	-1.374**
	(0.006)	(0.004)	(0.000)	(0.008)	(0.037)
Tobin Q	-0.088***	-0.097***	-0.117***	0.144***	0.227***
	(0.000)	(0.002)	(0.000)	(0.004)	(0.003)
R&D	5.279***	9.058***	2.155***	1.161	3.327*
	(0.000)	(0.000)	(0.000)	(0.303)	(0.095)
Capital Expenditure	0.625***	1.511***	-0.174	0.937***	1.946***
	(0.003)	(0.001)	(0.592)	(0.000)	(0.000)
Capital Intensity	0.062	-0.206	0.611**	-1.117***	-1.846***

	(0.342)	(0.161)	(0.021)	(0.000)	(0.000)
AD	2.169***	3.781***	4.105***	-5.476***	-6.859***
	(0.001)	(0.000)	(0.000)	(0.002)	(0.005)
Sales Growth	-0.915***	-1.362**	-0.630**	0.267	0.283
	(0.006)	(0.016)	(0.016)	(0.542)	(0.711)
Labor Intensity	-4.817***	-16.059***	-0.160	-5.692***	-17.269***
	(0.004)	(0.000)	(0.793)	(0.002)	(0.000)
Inst Inv %	-0.484***	-0.542**	-0.765***	0.999***	1.521**
	(0.006)	(0.029)	(0.000)	(0.008)	(0.011)
Observations	12,533	12,533	12,533	12,533	12,533
R-squared	0.598	0.584	0.333	0.598	0.584
Year Fixed Effects	Included	Included	Included	Included	Included
Event Fixed Effects	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included

Table 11

This table shows the effect of analysts' coverage on alternative measures of employee treatment using a difference-in-difference estimation, where the exogenous shock comes from brokerage house mergers. For each merge, I consider a one-year window before the merger (pre-merger window) and one-year and two-years windows after the merger (post-merger windows). All variables are defined in Appendix B. Standard errors are robust to heteroscedasticity and clustered at event level. Robust p-value in parentheses. ***, **, and * indicate statistical; significance levels of 1%, 5%, and 10%, respectively.

	One-year post-merger window	Two-years post-merger window	One-year post-merger window	Two-years post-merger window
VARIABLES	***Emp Index Net***		***Best100***	
Treat * Post (DID Effect)	**0.110****	**0.111****	**0.014***	**0.011***
	(0.037)	**(0.029)**	**(0.067)**	**(0.054)**
Market Value	0.125**	0.103***	0.020**	0.014**
	(0.010)	(0.002)	(0.032)	(0.035)
ROA	0.184	-0.028	0.050*	0.031
	(0.101)	(0.703)	(0.058)	(0.157)
LEV	0.236	0.051	0.011	0.010
	(0.141)	(0.632)	(0.720)	(0.465)
Cash	-0.502**	-0.281	-0.048	-0.023
	(0.027)	(0.121)	(0.435)	(0.500)
Payout	0.651*	0.517***	-0.042	-0.011
	(0.059)	(0.007)	(0.404)	(0.623)
Tobin Q	-0.058	-0.063*	-0.003	-0.001
	(0.288)	(0.055)	(0.535)	(0.758)
R&D	-0.661	-0.450	0.112	0.064*
	(0.594)	(0.574)	(0.240)	(0.068)
Capital Expenditure	-0.074	-0.400	0.241**	0.162*
	(0.899)	(0.319)	(0.014)	(0.059)
Capital Intensity	-0.209	0.051	0.131	0.099*
	(0.441)	(0.804)	(0.169)	(0.064)
AD	0.933	0.679	0.272	0.182
	(0.219)	(0.260)	(0.106)	(0.219)
Sales Growth	0.040	0.063	-0.046**	-0.037**
	(0.805)	(0.569)	(0.035)	(0.025)
Labor Intensity	29.973*	24.207**	0.681	0.492
	(0.053)	(0.021)	(0.285)	(0.295)
Inst Inv %	-0.256**	-0.178**	-0.007	-0.004
	(0.018)	(0.019)	(0.684)	(0.687)
Observations	8,376	12,533	7,294	11,358
R-squared	0.806	0.789	0.691	0.689
Year Fixed Effects	Included	Included	Included	Included
Event Fixed Effects	Included	Included	Included	Included
Firm Fixed Effects	Included	Included	Included	Included

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