

From Inside Insights to Market Moves: Employees' Role in Determining Equity Costs

Evans O. Boamah*
Warwick Business School, UK

First Draft: September 2024

Abstract

Using a dataset of over 1.7million employee business outlook ratings from the Glassdoor website, my study uncovers compelling evidence that firms receiving positive business outlook ratings from rank and file employees benefit from a lower cost of equity. This finding persists even after adjusting for other known determinants of equity costs. To strengthen the validity of these results, the analysis incorporates an entropy balance matched sample, a difference-in-differences approach, and instrumental variable regressions, all of which affirm the robustness of the findings against potential endogeneity issues. Moreover, the analysis reveals that a positive employee outlook rating correlates significantly with increased investor recognition. Notably, the impact of employee outlook ratings on the cost of equity capital becomes more pronounced as the level of information asymmetry increases, supporting the notion that anonymous disclosures by rank and file employees can play a critical role in reducing information asymmetry. Collectively, these findings indicate that employee outlook ratings not only lower perceived firm risk but also substantially reduce financing costs, highlighting the significant financial implications of internal employee perceptions on external financial metrics.

Keywords: employee outlook, Cost of Equity, social media, Information asymmetry, Investor recognition.

JEL classification: G30, G35, J24

*University of Warwick, UK Email: evans.boamah@wbs.ac.uk

1 Introduction

Rank-and-file employees in corporate firms possess critical insights that can be harnessed not only for internal decision-making processes but also for external applications such as investor relations and guiding shareholder investment decisions. With the increasing prevalence of social media, it has become increasingly difficult for firms to control the dissemination of sensitive corporate information. To address this, companies often implement strict measures aimed at preventing the leakage of sensitive data, but enforcing these policies proves challenging since many employee social media posts are made anonymously. Moreover, while firms generally focus on restricting the disclosure of material non-public information, these policies may overlook seemingly non-material details that, when combined with other pieces of information, can reveal significant insights. Consequently, employee activity on social media may unintentionally become a valuable source of information for capital markets.

Employees are among the most influential stakeholders of a firm, and when they are treated well, as reflected in their disclosures, their satisfaction is closely tied to various positive firm outcomes. Research has demonstrated that employee disclosures on social media are incrementally informative in predicting future operational performance (Huang et al., 2020). Employee opinions have also been found to be useful in forecasting growth in key income statement metrics and identifying transitory reporting items (Green et al., 2019). Additionally, employee disclosures can lead to improvements in a company's workplace practices (Dube and Zhu, 2021), and firms that experience increases in crowdsourced employer ratings tend to significantly outperform those with declining ratings Green et al. (2019). Furthermore, higher employee satisfaction is associated with greater stock price informativeness, particularly in terms of idiosyncratic volatility (Kyi et al., 2023). Also, employees' views can impact assessment of the CEO by the board of directors beyond firm financial performance and security analysts' recommendations (Wang et al., 2023).

Despite these findings, there is a notable gap in the literature regarding the impact of employee voluntary disclosures on a firm's cost of equity financing.

Exploring the information shared anonymously by rank-and-file employees on social media platforms is crucial for several reasons. First, research by [Bamber et al. \(2010\)](#) demonstrates that top executives exert unique and economically significant influence—known as manager-specific fixed effects—on their firms' voluntary disclosures, independent of other economic and firm-specific factors. However, if valuable information is also being transmitted to capital markets through the social media activity of rank-and-file employees, these traditional models may need to be revised to account for this alternative and less controlled flow of information. This suggests that employee-driven disclosures could have a greater impact on shaping market perceptions than previously recognized. Second, like [Jame et al. \(2016\)](#), who found that crowdsourced forecasts serve as a useful supplementary source of information in capital markets, employee disclosures on social media may similarly offer valuable insights. A unique and underexplored aspect of social media is its ability to expand the flow of information from companies to investors, enabling employees to share insights that extend beyond their immediate personal networks. This largely unregulated information flow presents challenges for corporate managers, who may find it difficult to monitor or control employee disclosures, raising the importance of understanding their role in capital markets.

In this study, I examine the relationship between rank-and-file employees' outlook ratings of their firm and the cost of equity financing. Employees possess direct, inside knowledge about their company's prospects, which not only impacts firm performance but also provides valuable signals regarding the firm's overall value—insights that are particularly relevant for investors. I hypothesize that firms whose rank-and-file employees express a positive outlook will experience a lower cost of equity for several reasons. First, employees' optimism can indicate strong internal operations and future profitabil-

ity, which lowers the perceived risk for investors. Second, a positive employee outlook reflects a healthy work environment and good corporate governance, both of which bolster investor confidence. Third, employee sentiment can serve as a leading indicator of firm performance that may not yet be fully captured in financial statements, offering investors early insights into the firm's future potential. Supporting evidence from recent studies further backs this hypothesis. For instance, [Truong et al. \(2021\)](#) research finds that favorable customer ratings of a company's products and services have a directional effect on the cost of equity. Similarly, [Cao et al. \(2015\)](#) uses the "America's Most Admired Companies" list as a proxy for company reputation and finds a reducing impact on the cost of equity financing. In a similar vein, I hypothesizes that positive employee outlooks may reduce the equity risk premium, resulting in lower overall equity financing costs for the firm.

To test my hypotheses, I utilize employee review data from the online platform Glassdoor, which launched in June 2008, to conduct the analyses. Glassdoor is one of the largest recruitment websites and a leading provider of job and company insights. The platform simplifies the job search process for applicants, amplifies employee voices, and provides avenues for employees to share their experiences. Through Glassdoor, current and former employees can offer opinions on employers, helping prospective job seekers make informed decisions. As of 2024, Glassdoor reports hosting over 180 million employee reviews across 2.5 million employer profiles¹. From this corpus dataset, I manually construct a sample of over 1.7 million employee reviews for 1,225 firms listed in the S&P 1,500 index over the period 2012 to 2018. On Glassdoor, current and former employees provide ratings of their company on a Likert scale from one to five, with the main assessment relating to an overall rating of their firm. Other areas of evaluation, for example, remuneration and business outlook, are also captured. Additionally, and most relevant to

¹See: [Glassdoor by the numbers](#).

this study, employees are asked to provide a business outlook for the firm. Finally, when submitting an overall company rating, employees are required to provide written views on the upsides (Pros) and downsides (Cons) of working at their company. I leverage these outlook predictions by employees to extract inside information on firms' outlook, beyond what could be gleaned from the simplified annual report and other corporate disclosures.

The dataset comprises 5,322 firm-year observations spanning from May 2012 to December 2018. Employing the method established by [Huang et al. \(2020\)](#), I classify each employee's forecast of their firm's business outlook over the next six months into one of three categories: "Positive," "Neutral," and "Negative." These are assigned values of 1, 0, and -1, respectively. I calculate the average of these individual predictions for each firm-year to generate the independent variable of interest. For my primary dependent variable—the cost of equity—I employ methodologies from [Jing et al. \(2023\)](#); [Truong et al. \(2021\)](#) and [Cao et al. \(2015\)](#). I derive my different measures of the implied cost of equity using models from [Easton \(2004\)](#), [Claus and Thomas \(2001\)](#), [Gebhardt et al. \(2001\)](#) and [Ohlson and Juettner-Nauroth \(2005\)](#). Additionally, following the approach of [Chen et al. \(2011\)](#) and [Hail and Leuz \(2006\)](#), I calculate a fifth measure by taking the mean of these four my measures.

I next examine the relationship between employees' predictions of their company's business outlook and the implied cost of equity capital. Across all five measures of a firm implied cost of equity, the coefficient for the Outlook variable is found to be negative and significant. This finding supports my argument that employees' positive predictions regarding their company's business outlook are associated with a reduction in the implied cost of equity capital. The coefficient of the Outlook variable ranges from -0.0043 to -0.0020 across all five estimates of the implied cost of equity capital. Specifically, a one standard deviation increase in employees' predictions of their company's business outlook corresponds to a decrease in the implied cost of equity capital ranging from 20 to 43 basis

points. Economically, given that the average market value of equity for my sample is \$23.89 billion, an average firm is likely to achieve savings ranging from \$47.78 million to \$102.73 million with a one standard deviation increase in employees' predictions of their company's business outlook when choosing to finance with equity instead of debt.

There are two primary concerns that might confound the findings of the main analyses. First, the presence of a firm on Glassdoor is not random, which introduces potential bias. Firms that are larger, more labor-intensive, or have greater growth opportunities are more likely to receive reviews on Glassdoor. This non-random presence on Glassdoor suggests that the firms under review might differ systematically from others in terms of unobserved firm and industry characteristics, which could bias my results. Second, although my analysis accounts for a range of variables known to influence a firm's implied cost of equity capital, it's possible that not all relevant factors are observed or measured. Consequently, the identified negative relationship between employee outlook and the implied cost of equity capital might be influenced by variations in these unobserved characteristics across firms and industries, rather than directly by the employees' outlook predictions. This implies that my findings could be reflecting underlying, unmeasured variables rather than a true effect of employee outlook on the cost of equity capital.

To mitigate the endogeneity concerns in this study, I implement three distinct tests. Firstly, I employ the entropy balancing matching method to create a balanced sample of firms, comparing those with high and low outlook ratings to ensure their comparability. This method helps adjust for any pre-existing differences between the groups, aiming to isolate the effect of the outlook ratings on the implied cost of equity. Secondly, I analyze the change in outlook ratings when a firm is first outlook reviewed on the Glassdoor website. By comparing these firms to those not yet reviewed on Glassdoor, I aim to control for the influence of potentially correlated omitted variables that could skew my understanding of the impact of Outlook ratings. Finally, I conduct a two-stage least squares (2SLS)

regression analysis. This method addresses potential endogeneity by using instrumental variables that are correlated with the potentially endogenous predictor (employee Outlook ratings) but uncorrelated with the error term in the regression equation modelling the implied cost of equity. These three tests consistently support the hypothesis that positive employee outlook ratings are associated with a reduced cost of equity, suggesting that my findings are robust and not merely artifacts of biased or incomplete data.

I next explore the channels through which company reputation influences the cost of equity. First, I examine whether employee positive outlook rating reduce the riskiness of the firm stock. I argue that, if employee positive outlook rating have valuable information that can reduce the implied cost of equity of a firm then these outlook ratings should first reduce the riskiness of the stock price of a firm. Using Beta, calculated by regressing daily individual stock returns on either the value-weighted or equal-weighted contemporaneous CRSP market returns, I find a negative relationship between employees' predictions of their company's business outlook and firm risk. These results indicate that positive employee predictions of their company's business outlook are associated with both lower firm-specific and systematic risk. Next, one potential mechanism through which employees' positive predictions of a firm's outlook can reduce the cost of equity is by increasing investor recognition. I find a positive and significant relationship between employees' positive predictions of their company's business outlook and the breadth of institutional holdings measured as the as the average of the quarterly data on the number of institutional shareholders from 13F filings at the end of the fiscal year ([Chen et al., 2002](#); [Lehavy and Sloan, 2008](#); [Cao et al., 2015](#)). Finally, if employee's positive business outlook rating of their firms reduces implied cost of equity by reducing information asymmetry among investors, I expect the effect of employee outlook ratings to be more pronounced in firms with greater information symmetry. When investors encounter high uncertainty about future earnings and the overall prospects of a firm, the business outlook ratings provided

by employees become a crucial indicator of firm quality, helping to mitigate issues of adverse selection. To gauge the extent of information asymmetry, I utilize the average daily bid-ask spread from the previous year (year t-1) as a proxy. My analysis reveals that the impact of employee business outlook ratings on the cost of equity capital intensifies as the level of information asymmetry increases. This finding suggests a monotonically increasing relationship, indicating that in environments with greater uncertainty, the insights from employee outlooks are particularly valuable in reducing the cost of equity by providing additional, trustworthy information to the market. This evidence underscores the practical relevance of employee perceptions as a meaningful metric for assessing firm quality under conditions of high informational asymmetry.

In this study, I perform a series of cross-sectional analyses to delve deeper into the variation and validate the negative effect of employees' business outlook ratings on the implied cost of equity. Specifically, I explore how this effect varies across different employee groups, focusing on whether there are differences between accounting and finance employees versus other types of employees. Given their access to sensitive financial data, accounting and finance employees may offer reviews that are perceived as more credible and informed. Therefore, it is hypothesized that their business outlook ratings could have a more pronounced effect on the implied cost of equity due to the quality and specificity of the information they can provide. In contrast, insights into the company's financial state might also permeate among non-finance employees through internal communication, potentially leading to similar effects across different employee groups. To test these hypotheses, I follow the methodology used by [Lee et al. \(2021\)](#) to specifically identify and analyze reviews from accounting and finance employees. I find that information value of employee predictions about their firm's business outlook varies depending on the employees' job functions. Specifically, reviews from accounting and finance employees convey more significant information to the market about a firm's riskiness than those from other

employees.

In the final analysis of my research, I introduce an alternative measure of business outlook to verify the robustness of my baseline analysis. Initially, I utilize the Fama-French 10 Industry classification to create an industry-adjusted measure of employee outlook at the firm-year level. This adjustment facilitates more accurate comparisons of employee outlook across different industries, ensuring that industry-specific factors do not skew the analysis. Next, following the methods established by [Jenter and Kanaan \(2015\)](#) and [Jenter and Lewellen \(2021\)](#), I further decompose the outlook ratings provided by rank-and-file employees into two components: firm-specific and industry-specific. This decomposition allows for the isolation of the industry outlook component, which represents the influence of industry-wide trends on a firm's employee outlook ratings. By employing these alternative measures in my analysis, I reinforce the findings from my initial outlook measure. The results consistently indicate that positive employee outlook ratings significantly correlate with lower implied costs of equity capital. This consistent finding across different measure of employee outlook ratings lends robust support to my baseline hypothesis, emphasizing the reliability of employee outlook ratings as a predictor of financial outcomes in firms.

The findings of this study make a significant contribution to the literature, primarily by enhancing my understanding of the impact of social media disclosures on firm outcomes. This research builds on the work of scholars ([Hales et al., 2018](#); [Dube and Zhu, 2021](#); [Green et al., 2019](#); [Chen et al., 2014](#); [Chemmanur et al., 2020](#); [Jame et al., 2016](#); [Blankespoor et al., 2014](#); [Tang, 2018](#); [Cao et al., 2015](#)), by providing novel empirical evidence that employees' social media engagement significantly influences the implied cost of equity. This underscores the informational role of social media in shaping investor perceptions and firm valuation. Further, this study enriches the discourse on the quality of information and its effect on the cost of equity.

Theoretical frameworks suggest that increased disclosure should reduce the cost of equity; however, empirical findings have been mixed. Previous studies (Botosan, 1997; Botosan and Plumlee, 2002; Francis et al., 2008) have shown limited support for this theory, suggesting that the motivations behind voluntary disclosures may not strictly be to reduce information asymmetry. Additionally, Kothari et al. (2009) highlight how the tone and content of media disclosures can directly impact the cost of equity capital, with positive news typically lowering it and negative news increasing it, due to changes in perceived risk. This aspect of tone influencing financial outcomes aligns with the theoretical model proposed by Johnstone (2016), which suggests that it is not merely the quantity of disclosures but their qualitative characteristics—particularly the positivity of the information—that influences the cost of capital. my findings corroborate Johnstone (2016)’s findings, demonstrating that the content of employee outlook ratings can indeed dictate the direction of a firm’s cost of equity. This suggests that positive employee disclosures can effectively lower a firm’s cost of equity, affirming the critical role of employee-generated content in financial markets. This insight not only contributes to the existing literature on financial disclosures but also highlights the evolving dynamics of how information is consumed and acted upon in the digital age.

The rest of the paper is organized as follows. I describe my data and empirical specification in Section 2. In Section 3, I present and discuss my results. I discuss the empirical channel in Section 4. In Sections 5 and 6, I discuss some cross-sectional test and other robustness analysis. Finally, I conclude in Section 7.

2 Measuring Employee Outlook review and the cost of Equity capital

2.1 Sample Construction

I begin my sample with all firms that appear in the S&P 1,500 list at least once during the period 2012 to 2018. Even though Glassdoor was launched in 2008, my sample starts in 2012 because that was the year Outlook rating reviews was added to the Glassdoor review list. I follow prior research (e.g., [Campbell and Shang \(2022\)](#)) and restrict the sample to firms with at least thirty Glassdoor reviews over the sample period. This criterion ensures that my measures derived from Glassdoor reviews is not influenced by firms with only a few reviews. I gathered firm financial data from the Compustat database and matched the sample observations with firm-year Glassdoor reviews. To ensure an accurate match, we manually searched each company name on the Glassdoor website to verify their name, industry, and logo.

2.2 The Cost of Equity Capital

Following the methodologies of [Jing et al. \(2023\)](#); [Truong et al. \(2021\)](#) and [Cao et al. \(2015\)](#), I calculate four different measures of the implied cost of equity using the approaches developed by [Easton \(2004\)](#), [Claus and Thomas \(2001\)](#), [Gebhardt et al. \(2001\)](#) and [Ohlson and Juettner-Nauroth \(2005\)](#). Each of these measures is derived by equating a firm's stock price to the discounted value of an analyst's forecast. I include all four measures in my analysis due to the lack of consensus on which method is superior. Additionally, following the approach of [Chen et al. \(2011\)](#) and [Hail and Leuz \(2006\)](#), I compute a fifth measure by taking the average of the four aforementioned measures (Details of how the four measures of implied cost of equity is computed is discussed in

appendix).

2.3 Employee Outlook Rating

To measure rank and file employees outlook rating of a firm, I collect employee reviews from the Glassdoor website. Glassdoor is one of the world's largest recruiting platforms, capturing voluntary and anonymous employee-generated reviews and insights on organizations. The company positions itself as a strong advocate for workplace transparency, aiming to break down barriers that contribute to pay gaps and other workplace disparities (Glassdoor 2023). Glassdoor's main product requires employees to give an overall rating of their company on a scale from one to five. Additionally, employees can rate the company on specific aspects such as compensation and benefits, culture and value, senior management, work/life balance, business outlook (employee predictions of their companies' business outlook), and CEO approval. Beyond numerical ratings, valuable insights can also be garnered from employee comments detailing the positives (Pros) and negatives (Cons) of working at a particular company. These comments not only offer incremental information about reviewers' experiences but also provide a clearer understanding of the reasons for the ratings awarded to companies. This source of rich online information can be easily infused into management's decision-making courtesy of the Review Intelligence (RI) product offered to employers by Glassdoor. In order to prevent self-promotion by firms on Glassdoor, Glassdoor requires an active email address verification or a valid social network account to authenticate the identity of the reviewer. The content of a review is also monitored using algorithm and staff to delete any fraudulent or invalid reviews.

I collected over 1.7 million Glassdoor reviews for 1,225 firms within the S&P 1500. Each review on Glassdoor contains details such as the date, time, employee title, employment status, city and state of the review, numerical ratings, and text fields (see Appendix for a sample review). To ensure an accurate measure of employees' outlook on the firm,

I excluded all reviews by former employees. This approach prevents my results from being skewed by the perspectives of individuals whose outlook might be based on past experiences rather than the current and future state of the firm (Green et al., 2019).

Following the approach used by Huang et al. (2020), I categorize each employee's prediction of their company's business outlook into three categories: "Positive," "Neutral," and "Negative," assigning them values of 1, 0, and -1, respectively. I then calculate the average of these individual outlooks for each firm-year to create the variable of interest, Outlook. I finally merge the firm year business outlook data with the implied cost of equity.

2.4 Research Design

I examine the effect of employee predictions of their companies' business outlook from Glassdoor.com on the implied cost of equity of the firm at the firm-year level using the regression model below:

$$Cost\ of\ Equity_{i,t} = \alpha + \beta_0 Outlook_{i,t} + \beta_1 X_{i,t} + \varepsilon_{i,t}, \quad (1)$$

The *Cost of Equity* represents the various measures of the implied cost of equity, calculated based on the methods developed by Easton (2004), Claus and Thomas (2001), Gebhardt et al. (2001) and Ohlson and Juettner-Nauroth (2005), each in excess of the risk-free rate (measured as the yield on 10-year Treasury bonds). Additionally, I include the average of these four measures as a fifth indicator of the implied cost of equity. *Outlook* is the average of business predictions issued by company employees during the firm year. Following Jing et al. (2023) and Truong et al. (2021), $X_{i,t}$ is a set of control variables used in the regression analysis. Finally, we control for year and firm fixed effects to account for macro-level cost of equity differences over time and alleviates any concern

of firm unobserved heterogeneity. All standard errors are clustered at the firm level to control for heteroskedasticity related to within-firm serial correlation.

Following [Jing et al. \(2023\)](#) and [Truong et al. \(2021\)](#), I control for all firm characteristics that are likely to predict the cost of equity of a firm: firm size measure as the natural logarithm of total asset; stock return the measured by the industry-adjusted annual stock return; the median analyst forecast of long-term growth (Long-term Growth); performance (ROA) measured as income before extraordinary items in year t scaled by total assets at the end of year $t - 1$; idiosyncratic risk (Volatility), estimated using the standard deviation of the residuals from regressing daily individual stock returns on contemporaneous CRSP value-weighted market returns over the fiscal year; analyst forecast dispersion (Dispersion), measured as the standard deviation of analysts' forecasts of the next year's earnings; firm leverage (Leverage) measured as the ratio of long-term debt over total asset; market to book (MTB) measured as the market value of equity scaled by the book value of equity; annual overall rating (Annual_Overall) measured as the average annual overall rating on Glassdoor; number of reviews measured as the natural logarithm of the number of firm reviews in a fiscal year; institutional holding (Inst_Own_Perc) measured as the percentage of shares owned by institutional holders at the end of the fiscal year.

3 Empirical results

3.1 Descriptive statistics

In [Table 1](#), I present the summary statistics of Glassdoor reviews for the firms in my sample. Panel A shows the number of reviews by firm year. During my sample period, 2017 had the highest number of reviews (301k), while 2012 had the lowest (88k). This lower number of reviews in 2012 is expected, as it was the year of inception. Similarly, given

Glassdoor’s rapid growth, the average number of reviews per firm year has increased from around 600 to over 2,000. According to the Fama-French 10 industry classification, the wholesale and retail sector has the highest number of reviews (561k), while the consumer durable sector has the fewest (27k).

[INSERT TABLE 1 HERE]

In Table 2, I report the descriptive statistics of all variables used in the study. In Panel A, I present the summary statistics of the different measures of firm implied cost of equity. R_{PEG} , R_{GLS} , R_{OJN} and R_{CT} are measured following Easton (2004), Gebhardt et al. (2001), Ohlson and Juettner-Nauroth (2005) and Claus and Thomas (2001) methods respectively. R_{AVG} is the average of all the four measures mentioned above. The average of the four measures, R_{AVG} , has a mean of 8.8% and a median of 8.3%. The Easton (2004), R_{PEG} , has a mean of 9.5% and a median of 9.1%. The R_{PEG} generate the highest average and median estimated implied cost of equity. The Gebhardt et al. (2001), R_{GLS} , provide a mean and median of 8% and 7.9% respectively. Also, the Ohlson and Juettner-Nauroth (2005) has a mean and median of 9.3% and 9% respectively. Finally, the Claus and Thomas (2001), R_{CT} , estimates a mean and median of 7.4% and 7.2% respectively. The summary statistics provided in this study are similar to those reported in the literature (Jing et al., 2023; Dhaliwal et al., 2006; Cao et al., 2015).

In Panel B of Table 2, I present the Pearson correlation matrix for the five estimates of the implied cost of equity. All five estimates exhibit a positive and significant correlation with one another. The lowest observed correlation is between R_{PEG} and R_{GLS} , at 54%. In contrast, the highest correlation is between the R_{PEG} and R_{OJN} estimates, with a value of 87%.

Panel C of Table 2 presents the descriptive statistics for Glassdoor outlook ratings and firm characteristics used to predict the cost of equity. The mean (median) outlook rating is 0.279 (0.287), suggesting that employees generally expect an improvement in firm

business outlook. This result aligns with findings reported by [Huang et al. \(2020\)](#) and is further supported by the positive change in return on assets. The standard deviation of the outlook variable is 0.326, indicating substantial variability in employee sentiment across firms. The average (median) overall rating for a firm is 3.28 (3.31), showing that the sample is balanced and not skewed toward either highly-rated or poorly-rated firms.

The average natural logarithm of the number of reviews per firm year is 3.98 (3.91), suggesting a relatively high level of employee engagement. On average, the sample comprises large firms, with a mean (median) natural logarithm of total assets of 8.69 (8.62). Other variables included in the study, such as long-term growth, bid-ask spread, dispersion, return, volatility, leverage, return on assets, market-to-book ratio, cash flow volatility, and the percentage of institutional holdings, have means of 12.2, 0.099, 0.20, 2.05, 0.015, 0.244, 0.066, 0.873, 0.026, and 0.831, respectively.

In Panel D of [Table 2](#), I present the mean implied cost of equity calculated using the five different estimates, grouped by quintiles of Outlook ratings. The results indicate that the cost of equity generally decreases as the firm’s outlook improves. The R_{PEG} estimate shows the largest difference between the lowest and highest quintiles, at 1.17%. In contrast, the R_{OJN} estimate exhibits the smallest difference between the highest and lowest quintiles, at 0.822%. This univariate analysis suggests an inverse relationship between employees’ outlook ratings of their firms and the cost of equity.

[INSERT [TABLE 2](#) HERE]

[Table 3](#) presents the Pearson correlation matrix for the variables used in the analysis. The results show a negative and significant correlation between firm outlook and the different estimates of firm-level cost of equity. This suggests that firms with positive outlook ratings from their employees on Glassdoor tend to have a lower cost of equity. Additionally, the outlook rating is positively correlated with firm size, return on assets, and long-term growth. Conversely, it is negatively correlated with firm leverage, bid-ask

spread, volatility, and market-to-book ratio.

[INSERT TABLE 3 HERE]

3.2 Employee Outlook Rating and Cost of Equity capital

In Table 4, I examine the relationship between employees' predictions of their company's business outlook and the implied cost of equity capital using equation 1. Each column presents regression results with a different estimate of the implied cost of equity as the dependent variable. Specifically, Columns 1, 2, 3, 4, and 5 use R_{PEG} , R_{OJN} , R_{GLS} , R_{CT} , and R_{AVG} , respectively, as the dependent variables. Across all five columns, the coefficient for the *Outlook* variable is found to be negative and significant. This finding supports my argument that employees' positive predictions regarding their company's business outlook are associated with a reduction in the implied cost of equity capital. The coefficient of the *Outlook* variable ranges from -0.0043 to -0.0020 across all five estimates of the implied cost of equity capital. Specifically, a one standard deviation increase in employees' predictions of their company's business outlook corresponds to a decrease in the average implied cost of equity capital by 36 basis points, 20 basis points, 41 basis points, 43 basis points, and 36 basis points in Columns 1, 2, 3, 4, and 5, respectively.

In Column 5 of Table 4, which uses the average of the R_{PEG} , R_{OJN} , R_{GLS} , and R_{CT} estimates of the implied cost of equity as the dependent variable, the coefficient of -0.0036 indicates that a one standard deviation increase in *Outlook* is associated with a 4.19% ($=0.0036/0.086$) decrease in a firm's cost of equity capital relative to the sample mean. Considering the range of the coefficient of the *Outlook* variable in the five columns, a one standard deviation increase in *Outlook* is associated with drop in implied cost of equity ranging from 2.33% to 5.00%.

Economically, given that the average market value of equity for my sample is \$23.89 billion, a 36 basis point decrease in the implied cost of equity translates into an average

savings of \$86 million for the typical firm when financing with equity. Considering the range of the coefficient of the *Outlook* variable, an average firm is likely to achieve savings ranging from \$47.78 million to \$102.73 million with a one standard deviation increase in employees' predictions of their company's business outlook when choosing to finance with equity instead of debt.

Regarding the control variables used in the regression analysis in Table 4, I find a positive and significant coefficient for firm size, leverage, spread, and dispersion. In contrast, there is a negative coefficient for long-term growth and institutional ownership. The results for all other control variables are consistent with those reported in previous studies. Using equation 1 and the different measures of the implied cost of equity, the R-squared values range from approximately 68% to 81%.

[INSERT TABLE 4 HERE]

4 Channel through which Outlook ratings affect Cost of equity

4.1 Does Employee Outlook Rating predict Firm Risk?

From the regression results based on equation 1, I find a significant negative association between employees' predictions of their company's business outlook and the firm's implied cost of equity capital. These results suggest that a firm's risk is reduced when employees have a positive outlook on the company's business prospects. According to prior literature, a firm's risk is reflected in the required rate of return (Lintner, 1965; Spiegel and Wang, 2005; Taylor and Verrecchia, 2015). Following Truong et al. (2021), I further investigate the relationship between firm risk (both firm-specific and systematic risk) and employees' predictions of their company's business outlook.

The study measures firm-specific risk using Beta, calculated by regressing daily individual stock returns on either the value-weighted or equal-weighted contemporaneous CRSP market returns. The standard deviation of the residuals from these regressions is used to measure systematic risk. In Table 5, I report the results of regressing *Outlook* on firm-specific and systematic risk. Columns 1 and 2 use Beta, generated from regressing firm returns on equal-weighted and value-weighted contemporaneous CRSP market returns, respectively, as the dependent variables. Columns 4 and 5 use the standard deviations of the residuals from the equal-weighted and value-weighted CRSP market return regressions as the dependent variables, respectively. In all columns, except for Column 2, I find a negative relationship between employees' predictions of their company's business outlook and firm risk (both firm-specific and systematic risk). These results indicate that positive employee predictions of their company's business outlook are associated with both lower firm-specific and systematic risk. One might argue that the link between outlook and equity cost is influenced by reduced specific and systematic firm risks. However, when these risks are accounted for in my baseline analysis, it appears that the impact of outlook on the cost of equity capital extends beyond its effect on firm risk.

[INSERT TABLE 5 HERE]

4.2 Does Employee Outlook Rating influence Investor recognition?

From the above analysis, I argue that the ratings provided by rank-and-file employees on recruitment websites like Glassdoor contain value-relevant information for the equity market. Specifically, the positive predictions of rank-and-file employees regarding their company's business outlook are linked to a lower cost of equity capital. In this section, I examine whether these positive predictions are also associated with increased investor recognition.

One potential mechanism through which employees' positive predictions of a firm's outlook can reduce the cost of equity is by increasing investor recognition. Similar to [Truong et al. \(2021\)](#), who found a positive association between customer satisfaction and a firm's cost of equity, I explore the investor recognition channel by examining the relationship between employee outlook ratings and the breadth of institutional shareholding. This channel is based on the [Merton et al. \(1987\)](#) model, which suggests that firms with higher investor recognition experience lower returns due to broader risk-sharing. The model assumes that investors include only firms they are familiar with in their portfolios, rather than investing based on information asymmetry between informed and uninformed investors.

While awareness may be comparable between firms with both positive and negative employee outlook predictions, the trading behavior and capital market outcomes may differ. In this context, firms with positive employee outlook predictions are more likely to be included in investors' portfolios, whereas firms with negative outlook predictions may be excluded. This is consistent with [Frieder and Subrahmanyam \(2005\)](#) who find that individual investors are more likely to hold shares in firms with higher brand visibility.

I construct the breadth of institutional shareholding as the average of the quarterly data on the number of institutional shareholders from 13F filings at the end of the fiscal year. I merge this data with annual implied cost of equity information and re-estimate the baseline regression, replacing the dependent variable in equation 1 with the natural logarithm of the number of institutional shareholders. The results are reported in [Table 6](#)

From [Table 6](#) I find a positive and significant relationship between employees' positive predictions of their company's business outlook and the breadth of institutional holdings. These findings support the argument that employees' optimistic outlooks enhance investor recognition, which is a channel through which firms can achieve a lower cost of equity.

[INSERT TABLE 6 HERE]

4.3 Does Information Asymmetry influence the effect of Outlook Rating on Cost of Equity?

In this section, I argue that optimistic employee predictions regarding a firm's outlook signal its quality and future prospects. Positive predictions, especially those made by insiders such as rank-and-file employees, provide valuable information that can reduce information asymmetry between the firm and its investors. This could also reduce information asymmetry between informed and uninformed investors. That being said, if employees' positive predictions of their company's business outlook affect cost of equity through reducing information asymmetry, I expect rank and file employees positive outlook rating to be more important for companies with greater information asymmetry. Following [Cao et al. \(2015\)](#); [Truong et al. \(2021\)](#); [Guo et al. \(2004\)](#) and [Leuz and Verrecchia \(2000\)](#), I use prior year daily bid-ask spread as a proxy for information asymmetry and partition the sample into terciles, with T1 (T3) having the lowest (highest) level of information asymmetry. To test this effect, I create a new variable, T1 (T3), which takes the value one if the firm year observation is in the T1 (T3) sample and zero otherwise. I interact this variable with my *Outlook* variable and re-estimate the model using equation 1. Panel A (B) reports the first (third) tercile interaction.

In the analysis presented in Panel A and Panel B of Table 7, I explore how the interaction between employee outlook ratings (*Outlook*) and varying levels of information asymmetry (T1 and T3) influences the implied cost of equity. From Panel A, the interaction term between *Outlook* and T1 shows a positive but statistically insignificant effect across all columns examining the implied cost of equity. This suggests that in environments characterized by lower levels of information asymmetry (T1), the additional predictive power of employee outlook ratings on the cost of equity is limited or negligible.

Conversely, in Panel B, the interaction term between *Outlook* and T3 (indicating higher levels of information asymmetry) is both negative and significant. This finding indicates that the influence of employees' outlook predictions on reducing the implied cost of equity becomes more pronounced under conditions of greater information asymmetry.

These results underscore the value of employee outlook ratings in mitigating information asymmetry. In contexts where external information is less available or reliable, the internal insights provided by employees become crucial. They not only offer a clearer picture of the firm's prospects but also significantly impact how the cost of equity is perceived by investors, reflecting a stronger reliance on internal, informed evaluations in decision-making processes under higher information asymmetry.

[INSERT TABLE 7 HERE]

4.4 Addressing endogeneity concerns

Considering that *Outlook* rating scores are only available for firms with ratings on Glassdoor, the observed negative relationship between employees' predictions of their company's business outlook and the firm's implied cost of equity capital may be biased. This potential bias arises because the presence of a firm on the Glassdoor website is not exogenous. For example, [Dube and Zhu \(2021\)](#) report that the likelihood and timing of a firm's reviews on Glassdoor are not random. Additionally, larger firms, labor-intensive firms, and firms with more growth opportunities are more likely to be reviewed on Glassdoor. This suggests that my inference could be biased to the extent that firms receiving employee reviews on Glassdoor may be correlated with omitted firm and industry-level characteristics.

Furthermore, although the analysis controls for a range of variables that can predict a firm's implied cost of equity capital, some unobserved factors, such as employee treatment and the level of information employees have about firm financials, may not be fully

accounted for. In line with this, the negative relationship observed between *Outlook* and the implied cost of equity capital could be driven by cross-sectional variations in some unobserved firm and industry characteristics, rather than by employees' predictions of their company's business outlook.

To address these endogeneity concerns, I employ three different tests. First, I use the entropy balancing matching method, which generates a balanced sample of firms with high and low Outlook ratings, ensuring comparability between these groups. Next, I model the change in Outlook when a firm is first reviewed on the Glassdoor website and compare this with firms that have not yet been reviewed by employees on Glassdoor. Finally, I conduct a two-stage least squares (2SLS) analysis to further mitigate endogeneity concerns and provide more robust estimates.

4.4.1 Entropy Balance matched sample analysis

There is a possibility of endogeneity arising when a variable is correlated with the error term, potentially due to factors such as omitted variables, measurement errors, selection bias, or reverse causality (Bose et al., 2021). To address this issue, I employ the entropy balancing technique developed by Hainmueller (2012). The entropy balancing technique is a quasi-matching approach that uses maximum entropy to ensure balance across all covariates by applying appropriate weights to each observation in the sample. This method optimizes the weights of control firms to match the covariate distributions of the treated firms, thereby reducing bias in observational studies and providing more reliable results.

This method addresses disparities in covariate representation between treatment and control units, reducing reliance on specific modeling assumptions and ensuring balanced improvements across all included covariates. By reweighting observations, entropy balancing ensures that the post-weighting distributional characteristics for treatment and

control units are identical. At the same time, it calculates precise weights for the control observations, maintaining sample integrity and covariate balance (Chapman et al., 2019). This reweighting procedure effectively eliminates endogeneity bias caused by latent variables that could otherwise distort the covariate distribution.

Specifically, I group my sample observations into high (treated) and low (control) employee predictions of their company’s business outlook base on the mean *Outlook* of the overall sample. The entropy balancing method is then applied to re-weight each observation in the control group so that the mean, variance, and skewness of all covariates are balanced across the treatment and control groups. After creating this balanced sample, I re-estimate the baseline regression and report the results in Table 8.

From Table 8, I find that the coefficient of the *Outlook* variable remains negative and significant. These results support my argument that employees’ positive predictions regarding their company’s business outlook are associated with a reduction in the implied cost of equity capital.

[INSERT TABLE 8 HERE]

4.4.2 Difference-in-Differences analysis

To address concerns of selection bias, I employ a difference-in-difference (DiD) analysis. This approach allows me to compare changes in a firm’s implied cost of equity before and after employees’ first predictions regarding their company’s business outlook. Although the Glassdoor outlook review feature was launched in 2012, not all firms received reviews that year. Specifically, 749 firms in my sample received reviews in the first year (2012), while 154 and 98 firms were reviewed in 2013 and 2014, respectively, with between 84 and 29 firms receiving reviews in subsequent years.

Given this staggered exposure of firms to Glassdoor Outlook reviews, I employ a generalized difference-in-difference research design to examine the changes in a firm’s

implied cost of equity after a Glassdoor Outlook review. This approach accounts for the timing of when each firm first received a review, allowing for a more precise estimation of the effect of employee predictions on the firm’s cost of equity. I use the equation below to test this relationship.

$$Cost\ of\ Equity_{i,t} = \alpha + \beta_0 PostGDO_{i,t} + \beta_1 X_{i,t} + \varepsilon_{i,t}, \quad (2)$$

where i indexes firm, t indexes year. *PostGDO* is a dummy variable equal to 1 in the year a firm receives its first Glassdoor outlook review and in all years after and zero otherwise. X is a battery of control variables used in the baseline equation 1. The sample period used for this analysis is from the 2008 (launch of Glassdoor) to 2018. The generalized DID estimator is essentially a weighted average of all possible standard DID estimates, comparing treated observations with control observations. The control group in this context includes firms that have already been reviewed in the past, those that have not yet been reviewed, and those that will never be reviewed by the end of the sample period (Bertrand and Mullainathan, 2003; Dube and Zhu, 2021; Huang et al., 2020). This approach allows for a comprehensive analysis by incorporating the varying timelines of when firms received their first employee Outlook reviews on Glassdoor, thus providing a more accurate estimate of the effect of these reviews on the firm’s implied cost of equity.

In Table 9, I report the results of the DiD analysis. The key variable of interest, *PostGDO*, is negative and significant across all columns of Table 9 except column 1, which uses the Easton (2004) estimate of the implied cost of equity. The results in columns 2, 3, 4, and 5 indicate that, on average, a firm experiences a reduction in the implied cost of equity following employees’ first predictions regarding their company’s

business outlook. These findings suggest that firms benefit from rank-and-file employee disclosures, as they appear to contribute to a decrease in the firm’s perceived risk and, consequently, the cost of equity.

[INSERT TABLE 9 HERE]

4.4.3 Two-Stage least square Instrumental Variable regression

The baseline results indicate a negative association between employees’ predictions regarding their company’s business outlook and the implied cost of equity. However, there is a concern that time-varying unobserved variables might influence both the firm-level implied cost of equity and employee outlook predictions. Additionally, firms with positive employee outlook predictions may naturally have a lower cost of equity, potentially due to good performance.

To address these concerns, I employ a two-stage least squares (2SLS) instrumental variable regression. In the first stage, I regress the *Outlook* variable on the chosen instrument along with a set of control variables. In the second stage, I re-estimate the baseline regression model, substituting the endogenous *Outlook* variable with the fitted values obtained from the first stage regression. This approach helps to mitigate the endogeneity issues and provides a more robust estimate of the relationship between employee outlook predictions and the firm’s implied cost of equity.

This approach requires that the instrument be correlated with firm-level *Outlook* but not with the residuals from the firm-level cost of equity regression. I use the Average Industry Outlook Rating as a potential instrumental variable for my estimation. The rationale is that the Average Industry Outlook Rating, calculated as the mean industry-by-year *Outlook*, should influence firm-level cost of equity only through its effect on firm-level *Outlook*. This makes it a suitable instrument for addressing the endogeneity concerns in my analysis, as it helps isolate the impact of employee outlook predictions on

the firm's implied cost of equity from other confounding factors.

For the Average Industry Outlook Rating to serve as an exogenous instrument, it must satisfy two key criteria: (1) Relevance: The Average Industry Outlook Rating must be correlated with the firm-level *Outlook* rating after controlling for a set of covariates. This ensures that the instrument has sufficient predictive power in the first-stage regression. Employees' predictions on the firm's cost of equity is more likely to be industry specific and this satisfies the relevance condition. (2) Exclusion: The Average Industry Outlook Rating should be uncorrelated with the error term in the second-stage regression, ensuring that it does not directly affect the firm's implied cost of equity except through its influence on the *Outlook* rating.

To construct this instrument, I calculate the Average Industry Outlook Rating using the Fama-French 10 industry classification, aggregated on an industry-by-year basis. Importantly, I exclude the focal firm's observation from the computation of the annual Average Industry Outlook Rating for each firm-year. This exclusion prevents the instrument from being contaminated by the focal firm's own outlook rating, thereby enhancing the validity of the instrument in addressing endogeneity concerns in the analysis.

In column 1 of Table 10, the first-stage regression results show a positive and significant coefficient for the Average Industry Outlook, indicating a strong relationship with firm-level *Outlook*. To validate the instrument, several tests were conducted: the Kleibergen-Paap LM statistic confirms the model is properly identified, while the Cragg-Donald Wald F statistic and Stock-Yogo identification test indicate the instrument's strength and robustness. The Hansen J statistic, with a p-value of 0.000, suggests no overidentification issues, and the F-statistic of 184.76 for excluded instruments further underscores the instrument's validity. These results collectively support the use of Average Industry Outlook as a strong and valid instrument in addressing endogeneity concerns.

In the second-stage analysis, I regress the various estimates of implied cost of equity

on the predicted firm *Outlook* obtained from the first-stage regression. The results in columns 2, 3, 4, 5, and 6 consistently show a negative relationship between the fitted values of a firm’s *Outlook* and its cost of equity. This indicates that positive employee predictions about their company’s business outlook are associated with a reduction in the firm’s implied cost of equity.

[INSERT TABLE 10 HERE]

5 Cross-sectional tests

5.1 Employee Characteristic

5.1.1 Job Function Analysis

In this section, I examine whether the effect of business outlook predictions differs between accounting and finance employees compared to other employees. It’s uncertain whether outlook ratings from accounting and finance staff will differ from those of other employees. On one hand, one could argue that accounting staff, with their access to the company’s financial data, might provide more credible and informed reviews. On the other hand, it is possible that rank-and-file employees share information among themselves, meaning that insights into the company’s financial state are not exclusive to accounting and finance staff, resulting in similar reviews across all employee groups. Following [Lee et al. \(2021\)](#), I split the sample into accounting and finance-related and non-accounting and finance-related groups, then re-estimate the baseline analysis using equation 1 and report results in Table 11.

Panel A of Table 11 represents the accounting and finance subsample, while Panel B represents the non-accounting and finance subsample. In both panels, columns 1, 2, 3, 4, and 5 use R_{PEG} , R_{OJN} , R_{GLS} , R_{CT} , and R_{AVG} , respectively, as the dependent variables. In Panel A, I find a significant negative relationship between *Outlook* and a firm’s implied

cost of equity in all columns except column 1. Conversely, the *Outlook* variable in Panel B remains insignificant across all columns. These results suggest that the information value of employee predictions about their firm’s business outlook varies depending on the employees’ job functions. Specifically, reviews from accounting and finance employees convey more significant information to the market about a firm’s riskiness than those from other employees.

[INSERT TABLE 11 HERE]

5.1.2 Employees Job Status

The distinction between full-time employees and other types of workers such as contractors, interns, and part-time staff extends beyond merely the hours they commit to a firm; it also encompasses various organizational aspects such as access to information. [Huang et al. \(2020\)](#) suggests that full-time employees generally have more comprehensive access to information compared to their part-time counterparts. This disparity can be attributed to several factors: full-time employees are often integrated into critical communication networks within the organization, receive extensive training, participate in key committees, and have a more constant presence in the workplace.

Given this enhanced access to information, it’s plausible to assert that the reviews and feedback provided by full-time employees could be more indicative of a firm’s prospects and thus, have a greater predictive power regarding the firm’s implied cost of equity. Conversely, it is possible that employees share information among themselves irrespective of their hours of work. Hence, valuable information about the firm is not exclusive to full-time staff only.

To test this cross-sectional analysis, I split the sample into full-time and other employee groups, then re-estimate the baseline analysis using equation 1 and report results in Table 12. Panel A of Table 12 represents the full-time subsample, while Panel B rep-

resents the other subsample. In both panels, columns 1, 2, 3, 4, and 5 use R_{PEG} , R_{OJN} , R_{GLS} , R_{CT} , and R_{AVG} , respectively, as the dependent variables. In Panel A, I find a significant negative relationship between *Outlook* and a firm’s implied cost of equity in all columns except column 2. Conversely, the *Outlook* variable in Panel B remains insignificant across all columns. These results suggest that the information value of employee predictions about their firm’s business outlook varies depending on the employees’ employment status. Specifically, reviews from full-time employees convey more significant information to the market about a firm’s riskiness than those from other employees. This enhanced predictive capability of full-time employees stems from their deeper insights and broader understanding of the company’s operations, strategies, and challenges, making their evaluations particularly valuable for investors and stakeholders trying to gauge the firm’s financial health and future performance.

[INSERT TABLE 12 HERE]

6 Additional Analysis

6.1 Alternative measures of Employee Outlook Rating

In this section, I assess the robustness of my main variable of interest, *Outlook*, by employing an alternative measure. First, I construct a firm-year level Outlook measure that is industry-adjusted, allowing for comparisons across firms within different industries. To achieve this, I utilize the Fama-French 10 Industry classification to stratify the sample and calculate the mean and standard deviation for each industry-year. The industry-adjusted firm-year outlook is then determined by subtracting the Fama-French 10 Industry-adjusted outlook from the firm-level *Outlook* and scaling the result by the standard deviation of the industry outlook rating. I then substitute the main variable of interest in equation 1 with the industry-adjusted outlook measure, re-estimate the base-

line model, and present the results in Table 13. From Panel A of Table..., I find that the coefficient of the industry-adjusted outlook measure is negative and significant, except in column 2 (R_{OJN}). These results are qualitatively similar to those reported in the baseline analysis.

Next, I follow the methodology of Jenter and Kanaan (2015); Jenter and Lewellen (2021) to decompose the outlook rating of rank-and-file employees into firm-specific and industry components. The industry outlook component reflects the portion of the firm's outlook influenced by its industry peers, while the firm-specific component represents the outlook of the firm independent of industry effects. To derive the firm-specific outlook, I regress the firm's annual outlook rating on the peer group's average annual outlook rating, using Fama and French's (1997) 10-industry classification to calculate the peer group's annual rating. The focal firm is excluded from the peer group average outlook calculation. The firm-specific outlook measure is the residual from this regression. I then replace the main variable of interest in equation 1 with this residual and re-estimate the baseline model. From Panel B of Table 13, I find that the coefficient of the firm-specific outlook measure is negative and significant across all columns.

These results support my baseline hypothesis and further confirm that employees' positive predictions regarding their company's business outlook are associated with a reduction in the implied cost of equity capital.

[INSERT TABLE 13 HERE]

7 Conclusion

In conclusion, this study has demonstrated that rank-and-file employees' social media disclosures, particularly those related to their business outlooks, significantly influence the cost of equity financing in their firms. Through the comprehensive analysis of over

1.7 million Glassdoor reviews spanning a period from 2012 to 2018, the findings reveal that positive employee outlooks correspond with a reduction in the implied cost of equity capital. The analyses underscore the importance of such employee-driven insights, which not only provide a granular view of internal corporate sentiment but also signal potential future profitability and firm stability to the market.

Importantly, the reduction in the cost of equity capital, observed through multiple methodological approaches, suggests that these insights are not merely noise but contain substantial information that is incrementally useful to investors and other market participants. The findings extend beyond the traditional financial metrics and highlight the value of qualitative, employee-generated data as a significant determinant of firm valuation. This study contributes to the broader discourse on how social media platforms, despite their informal nature, play a critical role in shaping investor perceptions and, by extension, firm value.

Given the robustness of these results across various models and tests for endogeneity, the research provides a compelling case for corporate managers to foster a culture of transparency and engagement. Encouraging honest feedback from employees and effectively managing their insights could enhance investor confidence and potentially lower the cost of capital. Furthermore, as firms navigate increasingly complex information environments, the insights gleaned from unstructured employee data could become a strategic asset in corporate governance and financial management.

Future research could explore the longitudinal effects of these disclosures and extend the analysis to different sectors and geographical regions. Additionally, investigating the role of specific social media platforms in mediating these effects could provide deeper insights into the mechanisms through which employee sentiment is translated into financial metrics. This would further clarify the pathways through which internal corporate culture impacts external financial outcomes.

References

- Bamber, L. S., Jiang, J., and Wang, I. Y. (2010). What's my style? the influence of top managers on voluntary corporate financial disclosure. *The accounting review*, 85(4):1131–1162.
- Bertrand, M. and Mullainathan, S. (2003). Enjoying the quiet life? corporate governance and managerial preferences. *Journal of political Economy*, 111(5):1043–1075.
- Blankespoor, E., Miller, G. S., and White, H. D. (2014). The role of dissemination in market liquidity: Evidence from firms' use of twitter™. *The accounting review*, 89(1):79–112.
- Bose, S., Minnick, K., and Shams, S. (2021). Does carbon risk matter for corporate acquisition decisions? *Journal of Corporate Finance*, 70:102058.
- Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *Accounting review*, pages 323–349.
- Botosan, C. A. and Plumlee, M. A. (2002). A re-examination of disclosure level and the expected cost of equity capital. *Journal of accounting research*, 40(1):21–40.
- Campbell, D. W. and Shang, R. (2022). Tone at the bottom: Measuring corporate misconduct risk from the text of employee reviews. *Management Science*, 68(9):7034–7053.
- Cao, Y., Myers, J. N., Myers, L. A., and Omer, T. C. (2015). Company reputation and the cost of equity capital. *Review of Accounting Studies*, 20:42–81.
- Chapman, K., Miller, G. S., and White, H. D. (2019). Investor relations and information assimilation. *The Accounting Review*, 94(2):105–131.
- Chemmanur, T. J., Rajaiya, H., and Sheng, J. (2020). How does online employee ratings affect external firm financing? evidence from glassdoor. *Evidence from Glassdoor (December 16, 2019)*.
- Chen, H., De, P., Hu, Y., and Hwang, B.-H. (2014). Wisdom of crowds: The value of stock opinions transmitted through social media. *The review of financial studies*, 27(5):1367–1403.
- Chen, J., Hong, H., and Stein, J. C. (2002). Breadth of ownership and stock returns. *Journal of financial Economics*, 66(2-3):171–205.
- Chen, K. C., Chen, Z., and Wei, K. J. (2011). Agency costs of free cash flow and the effect of shareholder rights on the implied cost of equity capital. *Journal of Financial and Quantitative analysis*, 46(1):171–207.

- Claus, J. and Thomas, J. (2001). Equity premia as low as three percent? evidence from analysts' earnings forecasts for domestic and international stock markets. *The journal of finance*, 56(5):1629–1666.
- Dhaliwal, D., Heitzman, S., and Zhen Li, O. (2006). Taxes, leverage, and the cost of equity capital. *Journal of Accounting Research*, 44(4):691–723.
- Dhaliwal, D., Judd, J. S., Serfling, M., and Shaikh, S. (2016). Customer concentration risk and the cost of equity capital. *Journal of Accounting and Economics*, 61(1):23–48.
- Dube, S. and Zhu, C. (2021). The disciplinary effect of social media: Evidence from firms' responses to glassdoor reviews. *Journal of Accounting Research*, 59(5):1783–1825.
- Easton, P. D. (2004). Pe ratios, peg ratios, and estimating the implied expected rate of return on equity capital. *The accounting review*, 79(1):73–95.
- Francis, J., Nanda, D., and Olsson, P. (2008). Voluntary disclosure, earnings quality, and cost of capital. *Journal of accounting research*, 46(1):53–99.
- Frieder, L. and Subrahmanyam, A. (2005). Brand perceptions and the market for common stock. *Journal of financial and Quantitative Analysis*, 40(1):57–85.
- Gebhardt, W. R., Lee, C. M., and Swaminathan, B. (2001). Toward an implied cost of capital. *Journal of accounting research*, 39(1):135–176.
- Green, T. C., Huang, R., Wen, Q., and Zhou, D. (2019). Crowdsourced employer reviews and stock returns. *Journal of Financial Economics*, 134(1):236–251.
- Guo, R.-J., Lev, B., and Zhou, N. (2004). Competitive costs of disclosure by biotech ipos. *Journal of Accounting Research*, 42(2):319–355.
- Hail, L. and Leuz, C. (2006). International differences in the cost of equity capital: Do legal institutions and securities regulation matter? *Journal of accounting research*, 44(3):485–531.
- Hainmueller, J. (2012). Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political analysis*, 20(1):25–46.
- Hales, J., Moon Jr, J. R., and Swenson, L. A. (2018). A new era of voluntary disclosure? empirical evidence on how employee postings on social media relate to future corporate disclosures. *Accounting, Organizations and Society*, 68:88–108.
- Huang, K., Li, M., and Markov, S. (2020). What do employees know? evidence from a social media platform. *The Accounting Review*, 95(2):199–226.
- Jame, R., Johnston, R., Markov, S., and Wolfe, M. C. (2016). The value of crowdsourced earnings forecasts. *Journal of Accounting Research*, 54(4):1077–1110.

- Jenter, D. and Kanaan, F. (2015). Ceo turnover and relative performance evaluation. *the Journal of Finance*, 70(5):2155–2184.
- Jenter, D. and Lewellen, K. (2021). Performance-induced ceo turnover. *The Review of Financial Studies*, 34(2):569–617.
- Jing, J., Myers, L. A., Ng, J., and Su, L. (2023). Customer referencing and capital market benefits: Evidence from the cost of equity. *Contemporary Accounting Research*, 40(2):1448–1486.
- Johnstone, D. (2016). The effect of information on uncertainty and the cost of capital. *Contemporary Accounting Research*, 33(2):752–774.
- Kothari, S. P., Li, X., and Short, J. E. (2009). The effect of disclosures by management, analysts, and business press on cost of capital, return volatility, and analyst forecasts: A study using content analysis. *The Accounting Review*, 84(5):1639–1670.
- Kyiu, A., Tawiah, B., and Boamah, E. O. (2023). Employees’ reviews and stock price informativeness. *Economics Letters*, 233:111406.
- Lamoreaux, P. T., Mauler, L. M., and Newton, N. J. (2020). Audit regulation and cost of equity capital: Evidence from the pcaob’s international inspection regime. *Contemporary Accounting Research*, 37(4):2438–2471.
- Lee, Y., Ng, S., Shevlin, T., and Venkat, A. (2021). The effects of tax avoidance news on employee perceptions of managers and firms: Evidence from glassdoor. com ratings. *The Accounting Review*, 96(3):343–372.
- Lehavy, R. and Sloan, R. G. (2008). Investor recognition and stock returns. *Review of Accounting Studies*, 13:327–361.
- Leuz, C. and Verrecchia, R. E. (2000). The economic consequences of increased disclosure. *Journal of accounting research*, pages 91–124.
- Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. In *Stochastic optimization models in finance*, pages 131–155. Elsevier.
- Merton, R. C. et al. (1987). A simple model of capital market equilibrium with incomplete information. *the Journal of Finance*.
- Ohlson, J. A. and Juettner-Nauroth, B. E. (2005). Expected eps and eps growth as determinantsof value. *Review of accounting studies*, 10:349–365.
- Spiegel, M. I. and Wang, X. (2005). Cross-sectional variation in stock returns: Liquidity and idiosyncratic risk.

- Tang, V. W. (2018). Wisdom of crowds: Cross-sectional variation in the informativeness of third-party-generated product information on twitter. *Journal of Accounting Research*, 56(3):989–1034.
- Taylor, D. J. and Verrecchia, R. E. (2015). Delegated trade and the pricing of public and private information. *Journal of Accounting and Economics*, 60(2-3):8–32.
- Truong, C., Nguyen, T. H., and Huynh, T. (2021). Customer satisfaction and the cost of capital. *Review of Accounting Studies*, 26:293–342.
- Wang, D., Zhu, Q., Avolio, B. J., Shen, W., and Waldman, D. (2023). Do employees' views matter in corporate governance? the relationship between employee approval and ceo dismissal. *Strategic Management Journal*, 44(5):1328–1354.

Table 1: Review Statistics

This table offers a comprehensive overview of the summary statistics for employee reviews posted on the Glassdoor website, segmented by year and industry from 2012 to 2018. In Panel A, the table displays the annual aggregation of the number of reviews submitted on Glassdoor, providing insights into trends or fluctuations in employee feedback over time. Panel B of the table organizes the reviews based on the Fama-French 10 Industry classification, offering a sector-wise breakdown that helps analyze how employee feedback varies across different industries.

Year	Freq.	Mean Number of Reviews per firmyear	No Firm-year
2012	88,261	633	749
2013	121,200	886	769
2014	196,970	1218	802
2015	324,007	2194	781
2016	345,621	2065	793
2017	349,484	2070	745
2018	301,088	1772	683
Total	1,726,631	10,838	5,322

Fama-French 10 Industry	Freq.	Percent	Cum.
Consumer NonDurables	56,385	3.27	3.27
Consumer Durables	27,522	1.59	4.86
Manufacturing	121,073	7.01	11.87
Oil, Gas, Coal	29,461	1.71	13.58
Business Equipment	330,422	19.14	32.71
Telephone and Television	74,744	4.33	37.04
Wholesale and Retail	561,324	32.51	69.55
Healthcare	93,450	5.41	74.97
Utilities	19,672	1.14	76.11
Other	412,578	23.89	100
Total	1,726,631		

Table 2: Summary Statistics

This table presents summary statistics for estimates of the implied equity cost of capital, Employee Outlook rating, and control variables in the sample period 2012–2018. The sample comprises of 5322 firm-year. Panels A and B present summary statistics and the correlation matrix for the implied cost of equity estimates, respectively. Panel C presents summary statistics for all other variables used in the study. Panel D presents the mean of the different measures of implied cost of equity by quintiles. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively

Panel A: Implied Cost of Equity							
	Mean	SD	P10	P25	Median	P75	P90
r_mpeg	0.095	0.030	0.064	0.078	0.091	0.108	0.131
r_ojn	0.093	0.028	0.065	0.077	0.090	0.105	0.125
r_gls	0.080	0.028	0.047	0.063	0.079	0.095	0.111
r_ct	0.074	0.032	0.038	0.056	0.072	0.089	0.111
r_avg	0.086	0.026	0.058	0.071	0.083	0.098	0.115

Panel B: Correlation Matrix of Implied Cost of Equity					
	(1)	(2)	(3)	(4)	(5)
(1) r_mpeg	1				
(2) r_ojn	0.87***	1			
(3) r_gls	0.54***	0.64***	1		
(4) r_ct	0.63***	0.74***	0.76***	1	
(5) r_avg	0.86***	0.93***	0.83***	0.89***	1

Firm Characteristics							
	Mean	SD	P10	P25	Median	P75	P90
Annual_Outlook	0.279	0.326	-0.125	0.067	0.287	0.500	0.667
Annual_Overall	3.279	0.527	2.600	2.974	3.309	3.632	3.922
Num_Rev	3.982	1.624	1.792	2.773	3.912	5.088	6.180
Lt_growth	12.265	16.244	-4.354	4.171	12.188	17.546	29.956
Annual_spread	0.099	0.037	0.061	0.073	0.091	0.117	0.149
Dispersion	0.200	0.245	0.035	0.063	0.124	0.213	0.422
return	2.054	0.354	1.636	1.804	2.007	2.262	2.537
volatility	0.015	0.006	0.009	0.011	0.013	0.018	0.023
Leverage	0.244	0.177	0.002	0.095	0.234	0.362	0.489
ROA	0.066	0.052	0.011	0.027	0.055	0.091	0.134
Firmsize	8.698	1.660	6.529	7.520	8.615	9.840	10.909
MTB	0.873	0.764	0.284	0.450	0.713	0.982	1.444
CF_vol	0.026	0.024	0.006	0.011	0.022	0.030	0.052
Inst_Own_Perc	0.831	0.144	0.650	0.763	0.844	0.924	0.985

Implied Cost of Equity by Quintiles of firm Outlook Rating						
	Q1	Q2	Q3	Q4	Q5	Difference
r_mpeg	0.101	0.096	0.094	0.094	0.090	0.0117***
r_ojn	0.097	0.094	0.093	0.093	0.089	0.0082***
r_gls	0.084	0.082	0.080	0.078	0.074	0.0100***
r_ct	0.078	0.077	0.075	0.074	0.067	0.0101***
r_avg	0.090	0.087	0.086	0.084	0.080	0.0100***

Table 3: Correlation Matrix

The table presents correlation results for the variables used in this study. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) r_mpeg	1								
(2) r_ojn	0.87***	1							
(3) r_gls	0.54***	0.64***	1						
(4) r_ct	0.63***	0.74***	0.76***	1					
(5) r_avg	0.86***	0.93***	0.83***	0.89***	1				
(6) Annual_Outlook	-0.12***	-0.09***	-0.12***	-0.09***	-0.12***	1			
(7) Annual_Overall	-0.06***	-0.04***	-0.07***	-0.04***	-0.06***	0.69***	1		
(8) Num_Rev	-0.07***	-0.04***	-0.01	0.02	-0.02*	0.03**	0.16***	1	
(9) Lt_growth	-0.09***	-0.08***	-0.03**	-0.04***	-0.06***	0.13***	0.01	-0.06***	1
(10) Annual_spread	0.26***	0.29***	0.26***	0.21***	0.28***	-0.03**	-0.05***	-0.17***	0.12***
(11) Dispersion	0.25***	0.30***	0.26***	0.24***	0.29***	0.05***	0.07***	0.01	0.02*
(12) return	0.28***	0.28***	0.29***	0.23***	0.30***	-0.04***	-0.07***	-0.18***	0.12***
(13) volatility	0.23***	0.23***	0.24***	0.17***	0.25***	-0.06***	-0.09***	-0.19***	0.12***
(14) Leverage	0.09***	0.11***	0.06***	0.08***	0.09***	-0.05***	-0.04***	0.08***	-0.02
(15) ROA	-0.19***	-0.14***	-0.08***	-0.17***	-0.16***	0.16***	0.11***	0.04***	0.23***
(16) Firmsize	0.03**	0.06***	0.05***	0.13***	0.08***	0.09***	0.22***	0.48***	-0.13***
(17) MTB	0.19***	0.20***	0.23***	0.29***	0.26***	-0.11***	-0.06***	-0.03**	-0.15***
(18) CF_vol	0.08***	0.08***	0.04***	0.01	0.06***	0.03**	0.01	-0.14***	0.09***
(19) Inst_Own_Perc	0.03**	0.02	0.08***	0.05***	0.05***	-0.10***	-0.12***	-0.06***	0.08***

Correlation Matrix Cont...

The table presents correlation results for the variables used in this study. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(10) Annual_spread	1									
(11) Dispersion	0.15***	1								
(12) return	0.86***	0.14***	1							
(13) volatility	0.83***	0.13***	0.93***	1						
(14) Leverage	-0.08***	0.07***	-0.11***	-0.09***	1					
(15) ROA	0.03*	-0.01	0.02*	0.02*	-0.17***	1				
(16) Firmsize	-0.4***	0.12***	-0.46***	-0.51***	0.18***	-0.26***	1			
(17) MTB	-0.04***	0.05***	-0.06***	-0.09***	-0.11***	-0.46***	0.36***	1		
(18) CF_vol	0.25***	0.06***	0.27***	0.28***	-0.06***	0.22***	-0.28***	-0.15***	1	
(19) Inst_Own_Perc	0.12***	0.05***	0.18***	0.12***	0.06***	-0.03**	-0.22***	-0.06***	0.01	1

Table 4: Employee Outlook Review and Cost of Equity

This table reports the effect of Employee outlook rating and the implied cost of equity. The dependent variable is *Outlook*. Implied cost of equity is estimated using models from [Easton \(2004\)](#), [Claus and Thomas \(2001\)](#), [Gebhardt et al. \(2001\)](#) and [Ohlson and Juettner-Nauroth \(2005\)](#). Additionally, following the approach of [Chen et al. \(2011\)](#) and [Hail and Leuz \(2006\)](#), I calculate a fifth measure by taking the mean of these measures. All continuous variables are winsorized at the 1% level. Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
Annual_Outlook	-0.0036** (-2.10)	-0.0020* (-1.78)	-0.0041*** (-3.50)	-0.0043*** (-3.10)	-0.0036*** (-3.50)
Annual_Overall	-0.0009 (-0.83)	-0.0009 (-1.06)	0.0004 (0.60)	0.0005 (0.53)	-0.0002 (-0.27)
Num_Rev	-0.0000 (-0.01)	0.0004 (0.43)	0.0005 (0.70)	-0.0008 (-0.68)	0.0001 (0.12)
Lt_growth	-0.0001** (-2.31)	-0.0001*** (-4.22)	-0.0001*** (-2.95)	-0.0001*** (-3.52)	-0.0001*** (-4.09)
Annual_spread	0.0757*** (4.20)	0.0821*** (5.04)	0.0429*** (2.83)	0.0550*** (2.96)	0.0648*** (4.47)
Dispersion	0.0054** (2.08)	0.0053** (2.14)	0.0005 (0.23)	0.0015 (0.63)	0.0037** (2.04)
return	0.0019 (0.42)	-0.0007 (-0.17)	0.0041 (1.13)	0.0030 (0.83)	0.0015 (0.52)
volatility	-0.0412 (-0.17)	-0.0777 (-0.32)	-0.1131 (-0.55)	-0.0603 (-0.28)	-0.0589 (-0.34)
Leverage	0.0147** (2.15)	0.0225*** (3.89)	0.0201*** (3.69)	0.0164*** (2.94)	0.0196*** (4.55)
ROA	-0.0514*** (-3.82)	-0.0030 (-0.28)	0.0981*** (7.26)	0.0241** (2.07)	0.0158* (1.90)
Firmsize	0.0056*** (2.60)	0.0046** (2.40)	0.0124*** (7.05)	0.0069*** (3.58)	0.0072*** (4.69)
MTB	0.0016** (2.44)	0.0012** (1.98)	0.0024*** (4.77)	0.0031*** (4.90)	0.0021*** (4.25)
CF_vol	-0.0085 (-0.43)	-0.0030 (-0.18)	-0.0020 (-0.12)	-0.0057 (-0.32)	-0.0058 (-0.45)
Inst_Own_Perc	-0.0151** (-2.32)	-0.0116* (-1.83)	-0.0067 (-1.41)	-0.0102* (-1.84)	-0.0110** (-2.48)
_cons	0.0497** (2.55)	0.0531*** (3.05)	-0.0495*** (-3.17)	0.0079 (0.46)	0.0171 (1.26)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes
N	5167	5167	5167	5167	5167
R-sq	0.6825	0.7262	0.8136	0.7724	0.8079

Table 5: Employee Outlook and firm Risk

This table presents results of regression tests relating beta and idiosyncratic volatility to employee outlook ratings and controls. Beta Value-Weighted is estimated by regressing daily individual stock returns over the fiscal year on contemporaneous CRPS value-weighted market returns, and Beta Equal-Weighted is estimated by regressing daily individual stock returns over the fiscal year on contemporaneous CRSP equal-weighted market returns. Idiosyncratic Volatility is the standard deviation of the residuals from regressing daily individual stock returns of the fiscal year on the contemporaneous CRSP equal or value-weighted market returns. . Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

	$_b_ewretd$	$_b_vwretd$	$vwretd_idio_risk$	$ewretd_idio_risk$
	(1)	(2)	(3)	(4)
Annual_Outlook	-0.1929*** (-2.78)	-0.0707 (-0.87)	-0.0483*** (-3.78)	-0.0363*** (-2.95)
Annual_Overall	-0.0223 (-0.46)	-0.0409 (-0.73)	0.0191** (2.08)	0.0172* (1.93)
Num_Rev	0.0502 (1.30)	0.0506 (1.13)	0.0064 (0.85)	0.0060 (0.81)
Lt_growth	-0.0025** (-2.10)	-0.0025* (-1.87)	-0.0000 (-0.23)	0.0000 (0.22)
Dispersion	0.0326 (0.35)	0.0710 (0.68)	0.0846*** (5.41)	0.0809*** (5.32)
Leverage	0.0413 (0.15)	0.1391 (0.46)	0.0763 (1.61)	0.0977** (2.08)
ROA	0.0142 (0.02)	0.1323 (0.19)	-0.1524 (-1.38)	-0.1269 (-1.15)
Firmsize	-0.1004 (-1.22)	-0.1156 (-1.20)	-0.0347** (-2.35)	-0.0300** (-2.09)
MTB	0.0153 (0.56)	-0.0126 (-0.42)	0.0082 (1.58)	0.0043 (0.91)
CF_vol	1.1857 (1.49)	0.9784 (0.97)	-0.0625 (-0.37)	-0.0570 (-0.34)
Inst_Own_Perc	0.5448* (1.69)	0.1280 (0.35)	0.0474 (0.90)	0.0464 (0.92)
$_cons$	1.2874* (1.69)	1.9352** (2.08)	-0.0147 (-0.11)	-0.0473 (-0.35)
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
N	4814	4814	4814	4814
R-sq	0.3471	0.2705	0.6534	0.6401

Table 6: Employee Outlook Investor recognition

This table presents results of effect of employee outlook rating on the breadth of institutional shareholders recognition. regression tests of measures of investor recognition on industry adjusted customer. The breadth of institutional shareholding is measured as the average of the quarterly data on the number of institutional shareholders from 13F filings at the end of the fiscal year. Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

	Institutional Holders (1)	Institutional Holders (2)
Annual_Outlook	0.0676*** (6.32)	0.0390*** (4.10)
Annual_Overall		-0.0102 (-1.47)
Num_Rev		0.0092 (1.23)
Lt_growth		0.0020*** (7.55)
Annual_spread		-0.0736 (-0.78)
Dispersion		0.0126 (0.83)
return		0.2533*** (5.82)
volatility		-17.0922*** (-6.89)
Leverage		-0.2227*** (-4.14)
ROA		1.1779*** (11.15)
Firmsize		0.2772*** (14.02)
MTB		-0.0195*** (-4.08)
CF_vol		0.0077 (0.05)
_cons	5.8700*** (1930.10)	3.1624*** (19.49)
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
N	4783	4783
R-sq	0.9687	0.9789

Table 7: Employee Outlook Rating conditional on information asymmetry

This table presents the effect of employee outlook ratings on the implied cost of equity capital that is conditional on information asymmetry. Information asymmetry is proxied by the annual average daily bid-ask spread from the prior year. T3 (T1) indicates the tercile of firms with the highest (lowest) bid-ask spread. Implied cost of equity is estimated using models from [Easton \(2004\)](#), [Claus and Thomas \(2001\)](#), [Gebhardt et al. \(2001\)](#) and [Ohlson and Juettner-Nauroth \(2005\)](#). Additionally, following the approach of [Chen et al. \(2011\)](#) and [Hail and Leuz \(2006\)](#), I calculate a fifth measure by taking the mean of these measures. All continuous variables are winsorized at the 1% level. Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

1st Tercile Effect					
	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
1.T1	-0.0033*** (-3.03)	-0.0028*** (-2.80)	-0.0002 (-0.23)	-0.0016* (-1.77)	-0.0019*** (-2.64)
Annual_Outlook	-0.0040** (-2.08)	-0.0025* (-1.65)	-0.0040*** (-3.04)	-0.0044*** (-2.78)	-0.0038*** (-3.29)
1.T1#c. Annual_Outlook	0.0019 (0.95)	0.0021 (1.16)	0.0000 (0.02)	0.0006 (0.35)	0.0011 (0.83)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	5167	5167	5167	5167	5167
R-sq	0.6823	0.7262	0.8134	0.7723	0.8076
Panel B: 3rd Tercile Effect					
	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
1.T3	0.0034*** (2.61)	0.0031*** (2.69)	0.0009 (0.98)	0.0019 (1.52)	0.0024*** (2.74)
Annual_Outlook	-0.0034** (-1.98)	-0.0004 (-0.26)	-0.0029*** (-2.58)	-0.0024* (-1.70)	-0.0024** (-2.30)
1.T3#c. Annual_Outlook	0.0003 (0.13)	-0.0036* (-1.75)	-0.0028* (-1.69)	-0.0047** (-2.10)	-0.0027* (-1.70)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	5167	5167	5167	5167	5167
R-sq	0.6824	0.7262	0.8136	0.7725	0.8077

Table 8: Entropy: Employee Outlook Review and Cost of Equity

This table reports the effect of Employee outlook rating and the implied cost of equity using entropy balance matching method. The dependent variable is *Outlook*. Implied cost of equity is estimated using models from Easton (2004), Claus and Thomas (2001), Gebhardt et al. (2001) and Ohlson and Juettner-Nauroth (2005). Additionally, following the approach of Chen et al. (2011) and Hail and Leuz (2006), I calculate a fifth measure by taking the mean of these measures. All continuous variables are winsorized at the 1% level. Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
Annual_Outlook	-0.0050** (-2.03)	-0.0032* (-1.80)	-0.0033** (-2.28)	-0.0040** (-2.19)	-0.0040*** (-2.85)
Annual_Overall	0.0001 (0.08)	-0.0004 (-0.37)	0.0003 (0.35)	0.0001 (0.07)	0.0001 (0.10)
Num_Rev	0.0011 (0.85)	0.0008 (0.83)	0.0009 (1.05)	0.0011 (1.03)	0.0011 (1.27)
Lt_growth	-0.0001 (-1.40)	-0.0001*** (-3.10)	-0.0001*** (-2.60)	-0.0001*** (-3.38)	-0.0001*** (-3.50)
Annual_spread	0.0804*** (3.55)	0.1009*** (4.60)	0.0608*** (3.96)	0.0586*** (2.89)	0.0757*** (4.44)
Dispersion	0.0092** (2.42)	0.0068** (2.56)	-0.0004 (-0.17)	0.0021 (0.71)	0.0049** (2.46)
return	0.0047 (0.60)	-0.0023 (-0.35)	0.0025 (0.58)	0.0025 (0.54)	0.0012 (0.28)
volatility	-0.1702 (-0.39)	0.1381 (0.38)	-0.0934 (-0.38)	-0.0445 (-0.18)	-0.0102 (-0.05)
Leverage	0.0050 (0.65)	0.0085 (1.11)	0.0196*** (3.36)	0.0126** (1.98)	0.0125*** (2.62)
ROA	-0.0491** (-2.51)	-0.0017 (-0.11)	0.0923*** (6.30)	0.0265** (2.23)	0.0163* (1.80)
Firmsize	0.0010 (0.41)	0.0019 (0.87)	0.0110*** (5.13)	0.0056** (2.13)	0.0047*** (2.61)
MTB	0.0032*** (3.72)	0.0021*** (3.34)	0.0026*** (4.70)	0.0038*** (5.74)	0.0029*** (5.40)
CF_vol	-0.0215 (-0.76)	-0.0038 (-0.17)	0.0233 (1.13)	0.0273 (0.93)	0.0047 (0.29)
Inst_Own_Perc	-0.0124* (-1.66)	-0.0104 (-1.61)	-0.0121** (-2.31)	-0.0217*** (-3.54)	-0.0143*** (-3.01)
_cons	0.0770*** (3.31)	0.0740*** (3.50)	-0.0363* (-1.90)	0.0209 (0.95)	0.0355** (2.21)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes
N	5167	5167	5167	5167	5167
R-sq	0.7168	0.7643	0.8433	0.8032	0.8365

Table 9: Difference in Difference Analysis

This table reports the effect of Employee first outlook rating and the implied cost of equity. The dependent variable, PostOutlook, is constructed as a dummy variable that takes the value of one in the year when a firm receives its first review on the platform and for all subsequent years, and zero for all years prior to the first review. Implied cost of equity is estimated using models from [Easton \(2004\)](#), [Claus and Thomas \(2001\)](#), [Gebhardt et al. \(2001\)](#) and [Ohlson and Juettner-Nauroth \(2005\)](#). Additionally, following the approach of [Chen et al. \(2011\)](#) and [Hail and Leuz \(2006\)](#), I calculate a fifth measure by taking the mean of these measures. All continuous variables are winsorized at the 1% level. Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
PostOutlook	-0.0021 (-1.15)	-0.0046*** (-2.68)	-0.0031*** (-2.72)	-0.0034** (-2.23)	-0.0035*** (-2.75)
return	0.0023 (1.47)	0.0017 (1.03)	0.0011 (1.22)	0.0017 (1.61)	0.0019* (1.88)
volatility	0.0484 (0.64)	-0.0982 (-1.48)	0.0088 (0.26)	0.0234 (0.64)	-0.0266 (-0.65)
Leverage	0.0176** (2.34)	0.0207** (2.53)	0.0217*** (4.09)	0.0223*** (3.73)	0.0209*** (4.22)
ROA	-0.0525*** (-3.73)	0.0004 (0.03)	0.1215*** (8.93)	0.0388*** (3.34)	0.0304*** (3.12)
Firm size	0.0038 (1.45)	0.0015 (0.55)	0.0051*** (2.72)	-0.0006 (-0.30)	0.0027 (1.52)
MTB	0.0179*** (6.88)	0.0135*** (4.58)	0.0267*** (12.89)	0.0279*** (9.62)	0.0212*** (10.45)
CF_vol	0.0195 (0.82)	-0.0108 (-0.44)	-0.0298* (-1.74)	-0.0340* (-1.74)	-0.0150 (-0.90)
Inst_Own_Perc	-0.0027 (-0.37)	-0.0129 (-1.34)	-0.0113** (-2.17)	-0.0132** (-2.08)	-0.0097* (-1.74)
_cons	0.0419* (1.87)	0.0752*** (2.95)	0.0086 (0.53)	0.0562*** (3.09)	0.0430*** (2.80)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes
N	3941	4034	4049	4045	4049
R-sq	0.6658	0.6777	0.8412	0.8041	0.8066

Table 10: Instrumental Variable Analysis

The table presents the first and second state-to-stage least square regression results. Column 1 presents the first stage regression while columns 2,3,4,5&6 present the second stage regression. In column1, the key independent variable is the Average Industry Outlook Rating, calculated as the mean industry-by-year *Outlook*. The predicted values from the first stage regression is used as the key independent variable in the second stage analysis. Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

	First Stage		Second Stage				
	Annual_Outlook (1)		r_mpeg (2)	r_ojn (3)	r_gls (4)	r_ct (5)	r_avg (6)
Avg_Ind_Outlok	0.3831*** (6.22)						
Pred Annual_Outlook			-0.0414*** (-4.06)	-0.0361*** (-3.81)	-0.0790*** (-3.83)	-0.0720*** (-3.71)	-0.0561*** (-4.66)
Annual_Overall	0.3944** (20.93)		0.0148*** (3.47)	0.0134*** (3.54)	0.0293*** (3.14)	0.0276*** (3.24)	0.0209*** (3.80)
Num_Rev	-0.0175 (-3.38)		-0.0016** (-2.27)	-0.0011** (-2.29)	-0.0014** (-2.09)	-0.0012 (-1.34)	-0.0013** (-2.15)
Lt_growth	0.0021** (5.35)		-0.0001 (-1.41)	-0.0001 (-1.40)	0.0001 (0.93)	0.0001 (1.09)	0.0000 (0.32)
Annual_spread	-0.1542 (-0.78)		0.0669** (2.13)	0.0851** (2.10)	0.0331 (1.33)	0.0223 (0.72)	0.0542* (1.79)
Dispersion	0.0008*** (0.0042)		0.0239*** (4.69)	0.0258*** (6.35)	0.0217*** (6.01)	0.0215*** (5.14)	0.0225*** (6.07)
return	0.0422* (1.77)		0.0382*** (4.90)	0.0368*** (5.01)	0.0371*** (5.01)	0.0467*** (7.40)	0.0397*** (5.93)
volatility	-3.2129* (-1.86)		-1.2480*** (-3.27)	-1.2533*** (-3.24)	-0.9910*** (-2.86)	-1.4831*** (-5.92)	-1.2612*** (-4.03)
Leverage	-0.0425** (-2.45)		0.0170*** (5.34)	0.0193*** (6.18)	0.0119*** (2.96)	0.0168*** (3.77)	0.0162*** (4.95)
ROA	0.3465*** (3.70)		-0.0327*** (-2.85)	0.0044 (0.37)	0.0770*** (4.19)	0.0313* (1.74)	0.0196 (1.56)
Firmsize	0.0029 (0.86)		0.0012 (1.50)	0.0016* (1.78)	0.0020*** (3.10)	0.0027*** (3.67)	0.0019*** (2.81)
MTB	-0.0129** (-2.55)		0.0048*** (5.15)	0.0056*** (5.00)	0.0074*** (7.03)	0.0100*** (7.04)	0.0069*** (6.61)
CF_vol	-0.0431 (-0.33)		0.0703*** (3.04)	0.0673*** (2.66)	-0.0035 (-0.18)	0.0254 (0.75)	0.0399* (1.93)
Inst_Own_Perc	-0.0404 (-1.42)		-0.0093 (-1.42)	-0.0087 (-1.34)	0.0027 (0.56)	-0.0003 (-0.05)	-0.0035 (-0.67)
_cons	-1.0943 (-18.80)		-0.0167 (-1.14)	-0.0242** (-1.98)	-0.0925*** (-3.67)	-0.1120*** (-5.06)	-0.0609*** (-3.67)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5322		5322	5322	5322	5322	5322
R-sq	0.7116		0.1526	0.1829	-0.1254	0.0175	0.0961
Hansen J Statistics					0.000		
KLP LM statistic					38.732		
Wald Fstatistic					184.76		

Table 11: Reviewer Job Function

This table reports the effect of Employee outlook rating and the implied cost of equity across different employee job functions. The dependent variable is *Outlook*. Implied cost of equity is estimated using models from [Easton \(2004\)](#), [Claus and Thomas \(2001\)](#), [Gebhardt et al. \(2001\)](#) and [Ohlson and Juettner-Nauroth \(2005\)](#). Additionally, following the approach of [Chen et al. \(2011\)](#) and [Hail and Leuz \(2006\)](#), I calculate a fifth measure by taking the mean of these measures. All continuous variables are winsorized at the 1% level. Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

Panel A: Accounting & Finance Employee Sample					
	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
AccFin_annual_outlook	-0.0014 (-1.53)	-0.0017** (-2.02)	-0.0014** (-2.19)	-0.0022** (-2.44)	-0.0016** (-2.54)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	3381	3381	3381	3381	3381
R-sq	0.6722	0.7163	0.8202	0.7851	0.8063
Panel B: Non Accounting & Finance Employee Sample					
	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
NonAccFin_annual_outlook	-0.0024 (-1.49)	-0.0012 (-0.90)	-0.0038 (-1.28)	-0.0036 (-1.56)	-0.0029 (-1.50)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	5159	5159	5159	5159	5159
R-sq	0.6824	0.7263	0.8135	0.7726	0.8078

Table 12: Reviewer Employment Status

This table reports the effect of Employee outlook rating and the implied cost of equity across different employee employment status. The dependent variable is *Outlook*. Implied cost of equity is estimated using models from Easton (2004), Claus and Thomas (2001), Gebhardt et al. (2001) and Ohlson and Juettner-Nauroth (2005). Additionally, following the approach of Chen et al. (2011) and Hail and Leuz (2006), I calculate a fifth measure by taking the mean of these measures. All continuous variables are winsorized at the 1% level. Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

Panel A: Fulltime Employee Sample					
	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
Fulltime_Outlook	-0.0026* (-1.74)	-0.0019 (-1.60)	-0.0042*** (-4.27)	-0.0039*** (-3.26)	-0.0033*** (-3.70)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	5112	5112	5112	5112	5112
R-sq	0.6821	0.7241	0.8131	0.7723	0.8066
Panel B: Non Fulltime Employee Sample					
	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
NonFulltime_Outlook	-0.0013 (-1.10)	0.0009 (0.93)	-0.0003 (-0.41)	0.0003 (0.30)	-0.0002 (-0.34)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	4598	4598	4598	4598	4598
R-sq	0.6833	0.7316	0.8177	0.7830	0.8134

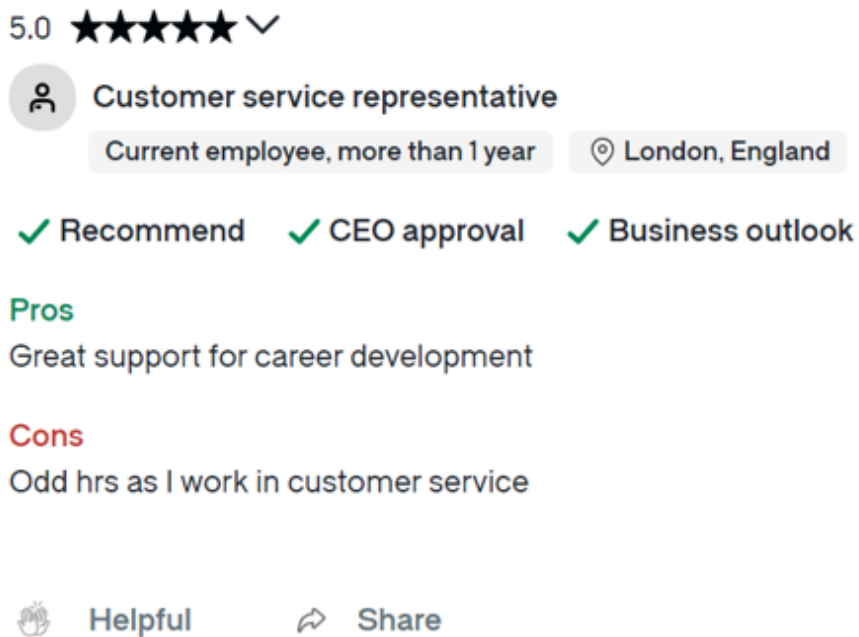
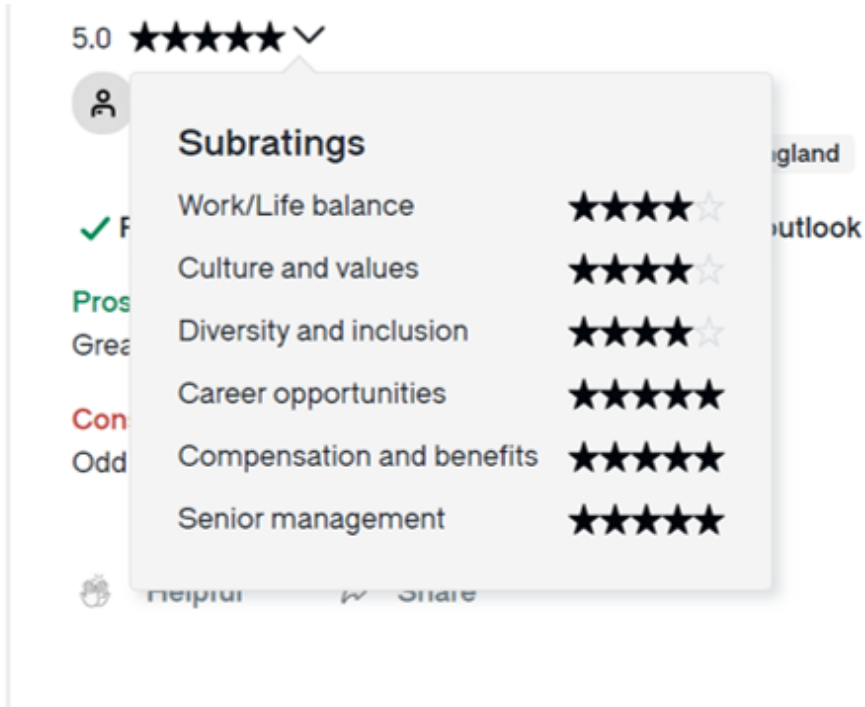
Table 13: Other Measures of Business Outlook

This table reports the effect of Employee outlook rating and the implied cost of equity using alternative measures of business outlook rating. Implied cost of equity is estimated using models from [Easton \(2004\)](#), [Claus and Thomas \(2001\)](#), [Gebhardt et al. \(2001\)](#) and [Ohlson and Juettner-Nauroth \(2005\)](#). Additionally, following the approach of [Chen et al. \(2011\)](#) and [Hail and Leuz \(2006\)](#), I calculate a fifth measure by taking the mean of these measures. All continuous variables are winsorized at the 1% level. Standard errors clustered by firm are shown in parentheses, with 1%, 5%, and 10% levels of statistical significance denoted by ***, **, and *, respectively.

Industry Adjusted Outlook Measure					
	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
Ind_AdjOutlook	-0.0010* (-1.81)	-0.0004 (-0.83)	-0.0010*** (-2.79)	-0.0012** (-2.54)	-0.0009*** (-2.78)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	5167	5167	5167	5167	5167
R-sq	0.6823	0.7261	0.8133	0.7722	0.8076
Panel B: Residual Measure					
	r_mpeg (1)	r_ojn (2)	r_gls (3)	r_ct (4)	r_avg (5)
residuals	-0.0035** (-2.02)	-0.0016 (-1.20)	-0.0035*** (-3.05)	-0.0043*** (-3.13)	-0.0033*** (-3.22)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	5167	5167	5167	5167	5167
R-sq	0.6824	0.7261	0.8134	0.7724	0.8078

Appendices

A Sample Glassdoor Review



A Cost of capital estimates

I follow previous research to estimate the cost of equity capital, implementing four methodologies as outlined by [Dhaliwal et al. \(2006\)](#), [Dhaliwal et al. \(2016\)](#) and [Lamoreaux et al. \(2020\)](#). Each method is based on the specific assumptions presented in the original studies that developed these measures. The following variables are used across the four cost of capital models.

P_t represents the stock price of a firm at time t . I use the price available in the fourth month after the latest fiscal year-end to ensure that analysts have access to the previous year's information. B_t denotes a company's book value of equity at time t .

R_{CT} — [Claus and Thomas \(2001\)](#):

$$P_t = B_t + \sum_{i=1}^5 \left(\frac{EPS_{t+i} - R_{CT} \times B_{t+i-1}}{(1 + R_{CT})^i} \right) + \left(\frac{EPS_{t+5} - R_{CT} \times B_{t+4}}{(R_{CT} - g_l) \times (1 + R_{CT})^5} \right) \times (1 + g_l)$$

Future earnings are sourced from I/B/E/S. I utilize forecasts for the third year and the long-term earnings growth rate to estimate forecasts for the fourth and fifth years. The terminal value, as per [Claus and Thomas \(2001\)](#), assumes that long-term abnormal earnings will grow at the risk-free rate minus 3 percent (g_l). Future book values of equity are calculated based on the clean surplus assumption, where $B_{t+1} = B_t + EPS_{t+1} - DPS_{t+1}$.

R_{PEG} — [The modified price-earnings growth from Easton \(2004\)](#) as detailed by [Hail and Leuz \(2006\)](#):

$$P_t = \frac{EPS_{t+2} + R_{PEG} \times DPS_{t+1} - EPS_{t+1}}{R_{PEG}^2}$$

Future earnings are obtained from I/B/E/S and Dividends (DPS) are computed as the dividend payout ratio times the earnings per share forecast.

R_{OJN} — [Ohlson and Juettner-Nauroth \(2005\)](#):

$$R_{OJN} = A + \sqrt{A^2 + \left(\frac{EPS_{t+1}}{P_t} \right) \times (g_2 - g_1)}$$

where $A = 0.5 \times \left(g_1 + \frac{DPS_{t+1}}{P_t} \right)$.

Forecasted earnings are sourced from I/B/E/S, with g_2 representing the average growth rate of EPS_{t+1} and EPS_{t+2} . The terminal value in [Ohlson and Juettner-Nauroth \(2005\)](#) is similar to that in [Claus and Thomas \(2001\)](#), where the long-term growth rate (g_1) is assumed to be the risk-free rate minus 3 percent. Dividends (DPS) are calculated as the dividend payout ratio multiplied by the earnings per share forecast.

R_{GLS} — [Gebhardt et al. \(2001\)](#):

$$P_t = B_t + \sum_{i=1}^{T-1} \left(\frac{(FROE_{t+i} - R_{GLS}) \times B_{t+i-1}}{(1 + R_{GLS})^i} \right) + \left(\frac{(FROE_{t+T} - R_{GLS}) \times B_{t+T-1}}{R_{GLS} \times (1 + R_{GLS})^{T-1}} \right)$$

Future earnings for the first three years are based on analysts' forecasts from I/B/E/S. Following [Gebhardt et al. \(2001\)](#), we assume that a company's future ROE (FROE) will gradually decline to the industry-based ROE, calculated using a 10-year historical industry median, from the fourth to the seventh year. Consistent with [Dhaliwal et al. \(2016\)](#) and [Lamoreaux et al. \(2020\)](#), I assume that $T = 12$ and set the industry ROE equal to the risk-free rate if the industry rate is missing or falls below the risk-free rate. Like [Claus and Thomas \(2001\)](#); [Gebhardt et al. \(2001\)](#) calculate future book value of equity using the clean surplus assumption.