Human Capital Disclosure in Corporate Earnings Call

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Abstract

Using a sample of 225,719 earnings call transcripts from 2008 to 2024, we systematically study the reasons for managers to bring up human capital issues in earnings conference call, an event centered on firms financial performance, and the consequence of such disclosure. For determinants, we find that the likelihood of human capital disclosures in earnings calls increases as firms receive less favorable employee evaluations and peer firm disclosures in one month prior to the earnings call. For consequences, we first document market reaction on both the tone and length of human capital disclosure in earnings calls. Second, we find decreased employees' review scores and increased turnover rate in the subsequent month. Third, firms' future ESG ratings related to human capital issues improve with human capital disclosure. Collectively, our findings suggest that human capital disclosures attract attention from both investors and other stakeholders, such as employees and ESG rating agencies. This indicates that managers strategically incorporate human capital information in earnings calls and recognize employees as an important audience alongside investors.

1 Introduction

Human capital is an indispensable component of firms (Zingales, 2000). In Gary S. Becker's 2002 paper "*The Age of Human Capital*", he emphasizes that "*Human capital is of great importance in the modern economy.*"(Becker, 2002) Despite its growing recognition, human capital disclosure remains insufficient. In 2017, the Human Capital Management Coalition (the HCM Coalition) petitioned the SEC to mandate issuers to disclose their human capital management policies, practices and performance. As stated in the petition, "*investors do not currently have the ability to obtain comparable human capital data from U.S. issuers.*"[1] Subsequently, the SEC has implemented several regulatory measures, such as requiring firms to disclose CEO pay ratios beginning in 2017, with further amendments to the disclosure framework in 2020.

Academic researchers have also demonstrated significant interest in human capital disclosures. For decades, studies have focused on specific, predominantly voluntary human capital practices, such as employee satisfaction (Edmans, 2011), turnover rates (Hancock et al., 2013), and racial diversity (Richard et al., 2017). However, these methods of measuring human capital are tenuous at best (Batish et al., 2021). Following regulatory changes, a new wave of research has emerged, examining the effects of human capital disclosure in the mandatory filings (e.g., Pan et al. (2022); Cheng and Zhang (2024); Jennnings et al. (2024)). As suggested by (Batish et al., 2021), while newly issued reports that satisfy new disclosure requirements, are substantially longer than historical disclosure, they are characterized by a general lack of informativeness. Given these limitations in both voluntary and mandatory disclosure channels, our study turns to corporate earnings calls as an alternative venue for examining human capital disclosure.

Corporate earnings calls serve as a key channel for external stakeholders to interact with management and inquire about matters of interest, and they are significantly examined as informative events for the market (Frankel et al. (1999); Bowen et al. (2002); Kimbrough (2005)). These calls enable both managers and analysts to voluntarily disclose information beyond what is available in official filings (Matsumoto et al., 2011). Prior research extensively adopts textual analysis to earnings call transcripts and documents linguistic characteristics result in significant market reaction (e.g., Lee (2016); Bushee et al. (2018); Chen et al. (2018); Eisfeldt and Papanikolaou (2013); Call et al. (2024)). Meanwhile, earnings call could contain information of certain topics such as corporate

[1]Please refer this link to get full content of petition: https://www.sec.gov/files/rules/petitions/2017/petn4-711.pdf

culture (Li et al., 2021).

Given investors' growing demand for human capital disclosure, both executives and analysts frequently engage in related discussions during earnings calls. For example, in Era Group Inc.'s Q3 2015 earnings call, executive Chris Bradshaw emphasized: "*Safety is the foundation of everything we do at Era, and we strive to maintain the highest standards of safety performance, operational excellence and people management.*" This statement directly addresses workforce environment considerations. Similarly, in American Electric Power Company's Q2 2020 call, analyst Sophie Karp inquired about employee retirement plans, noting: "*I know you had a significant portion of your workforce projected to retire within approximately 5-7 years.*"[2]

Corporate earnings calls offer participants considerable flexibility, which may incentivize managers to strategically address human capital-related topics. As (Jennnings et al., 2024) document, investors do not interpret human capital information in a uniform manner. Therefore, the effects of voluntary human capital disclosure during earnings calls may vary across different stakeholder groups, including stock market investors, current employees, and commercial institutions. In addition, stakeholders may react differently to linguistic characteristics. This study aims to investigate within different stakeholders on the determinants and the outcomes of human capital discussion features in corporate earnings calls.

In order to extract voluntary human capital disclosure, we utilize the human capital lexicon from the E&S dictionary developed by (Lin et al., 2024) and apply a keyword-based text extraction method to analyze earnings call transcripts from 2008Q1 to 2024Q4. Human capital disclosures are identified as text segments containing at least one dictionary keyword. Our analysis reveals that approximately 40% of earnings calls included human capital discussions prior to 2020, with the highest frequency occurring in first-quarter calls. Notably, human capital discussions surged beginning in 2020Q2 (around 64% of earnings call that quarter), probably due to two social events: the death of George Floyd and Covid-19 pandemic. While post-2020 levels declined from the peak, they remained substantially higher than pre-2020 baselines. Furthermore, these human capital discussions predominantly appear in the labor-intensive industry (e.g., manufacturing), and occur largely during presentations rather than Q&A sessions.

To further measure human capital discussion features, we develop (1) the disclosure tone, generated using FinBERT (Huang et al., 2023), and (2) the disclosure length, calculated as the logarithm

[2]Please refer more examples in Table A.1 in Appendix.

of raw word count. A large portion of human capital discussions are in the positive tone.

After obtaining the measures of human capital disclosure in earnings calls, we first investigate on the relationship between these measures and firm's non-financial performance characteristics. Employees are the most primary stakeholders of human capital information, and their work life is strongly associated with human capital practice and management. Therefore, we analyze whether employee review scores influence disclosure patterns. Our findings indicate that managers are more likely to address human capital topics when firms received less favorable employee recommendation scores in the preceding month. On the other hand, we also examine how focal firms respond when industry peers discuss human capital topics in earnings calls held in the month preceding the focal firm's earnings call and observe the significant and positive association. To restrict sample to earnings calls containing human capital discussions, we document no significant relationship between peer firm behavior/employee reviews and either discussion tone or length. Overall, both employee evaluations and peer firm disclosures significantly increase the likelihood of human capital discussions in earnings calls.

Second, we examine the effects of human capital disclosure across three dimensions: (1) investor response, (2) employee reaction, and (3) ESG rating performance. For investor response, we use cumulative abnormal returns during a three-day event window surrounding earnings calls as proxy. The findings suggest that while investors clearly recognize human capital disclosures, their reactions exhibit significant heterogeneity. Investors attach much importance on discussion tone, followed by disclosure length. Next, we explore on future employee rating activity and turnover rates, as proxy for employees' response, and find the employee score is worse after managers' human capital discussion in earnings call. In addition, employees concern about tone of such discussion, especially for non-positive ones. For employee turnover, employee inflow and outflow overall are negatively affected by human capital discussion, respective, but the effect on outflow is substantially stronger. This finding holds only within senior employee group, the impact on inflow of junior employee group is insignificant. Notably, senior employees exhibit less sensitivity to both tone and length than their junior counterparts. These results collectively highlight that human capital discussion substantively influence employee perceptions and mobility decisions.

Finally, we examine human capital rating performance from MSCI in the following month. Human capital discussions positively influence future human capital theme rating, implying that rating agencies incorporate earnings call disclosures into their evaluation processes. However, they

seem overlook discussion tone and length.

In sum, our findings suggest that human capital disclosures elicit responses from both traditional financial market participants and other stakeholders, especially employees. This indicates that managers strategically incorporate human capital information in earnings calls and recognize employees as an important audience alongside investors.

This study contributes to the accounting literature in two important ways. First, we enrich the measurement of voluntary human capital disclosure. Prior research has adopted two main approaches: (1) examining specific human capital metrics (e.g., gender diversity), and (2) developing comprehensive measures from 10-K filings (e.g., Zhang (2022); Haslag et al. (2022); Arif et al. (2022)). We extend this literature by constructing a novel measure from earnings calls and systematically examining both the determinants and consequences of such disclosures. Our results demonstrate the validity of this approach, thereby enhancing understanding of voluntary human capital disclosure.

Second, our study contributes to the literature on earnings calls and textual analysis in accounting by demonstrating their broader informational value. While prior research using earnings call transcripts has primarily focused on specific information content (e.g., Bushee et al. (2018); Chen et al. (2018); Li et al. (2021)), our findings reveal two key insights: (1) earnings calls convey substantive information beyond mere linguistic features and thematic content, and (2) employees constitute an important audience alongside traditional investor. These results significantly expand our understanding of earnings calls' informational role.

In the next section, we discuss the prior literature and hypothesis development. In Section III, we describe the methodology. Section IV presents empirical results and additional analysis. Section V presents robustness check results, and the final section concludes.

2 Literature Review

2.1 Investor and human capital disclosure

Human capital has become an indispensable component of firms' operations (Zingales (2000); Becker (2002); Eisfeldt and Papanikolaou (2013)) and an important source of firms' intangible capital (Sun and Xiaolan (2019); Regier and Rouen (2023)). Such value-relevant information is supposed to be subject to market force and thus be voluntarily disclosed regardless of regulation (Grossman

and Stiglitz, 1980). However, investors view existing disclosure on human capital insufficient. In response to significant demand, firms provide such information through both voluntary and mandatory channels.

The first research stream examines the mandatory disclosure rules. Researchers have found that investors incorporate pay ratio information into valuation assessments (Pan et al. (2022); Cheng and Zhang (2024)). Jennnings et al. (2024) conduct an experiment among professional investors, showing that turnover metric shift the average firm risk assessment among investors and all metrics except employee expenditures increases the dispersion of risk assessments. On the other hand, there is evidence suggesting that mandatory disclosure influences voluntary disclosure practices. For example, LaViers et al. (2024) find that firms increased voluntary disclosure in the SEC filings concurrent with the mandatory disclosure. This strategy partially attenuates the negative reactions from investors. Conversely, Carter et al. (2025) observe reduced human capital management discussions in earnings calls after the implementation.

The second stream analyzes the voluntary disclosure. While some researchers examined specific human capital metrics (e.g., Edmans (2011); Hancock et al. (2013); Richard et al. (2017)), others focus on comprehensive measure of human capital disclosure. Zhang (2022) constructs a measure of human capital called transparency score using word2vec analysis of 10-K filings. The findings reveal that operational-oriented disclosures boost shareholder value while social-oriented disclosures enhance social performance ratings. Haslag et al. (2022) examine incentives for voluntary human capital disclosure provided in the 10-K filings. Different from Zhang (2022), this study mainly focuses on employee turnover to capture the flow of human capital and provides evidence on the informativeness of voluntary human capital disclosure.

Overall, these studies highlight the substantial demand of investors and the significant reaction from investors. We conjecture that if human capital disclosure in earnings call provide material incremental information, rational investors should also incorporate into their valuation models.

2.2 Employees and human capital disclosure

Besides traditional equity investors, employees are important stakeholders who are directly affected by firms' human capital performance. Recent research demonstrates how employees utilize human capital disclosures in their career decisions. Choi et al. (2023) provide evidence that potential

employees prefer firms with better human capital metrics, e.g., high diversity scores. In addition, firms in industries characterized by higher jobseeker responsiveness to diversity information tend to voluntarily disclose diversity metrics in their 10-Ks under these new disclosure requirements. Dehaan et al. (2023) study whether firms' public financial reports cause their employees to reevaluate their jobs and consider leaving and find current employees use this information to inform job search decisions. Furthermore, as part of human capital management, executive activism directly affect employee satisfaction (Mkrtchyan et al., 2024). Collectively, these studies highlight that employees increasingly recognize the importance of firms' human capital disclosure and rely on relevant information for their career plannings. Therefore, managers have compelling incentives to discuss human capital during earnings calls to attract prospective talents and to retain existing employees.

3 Methodology

3.1 Data and sample

We download U.S. firms' earnings call transcript from Capital IQ. Table 1, Panel A describes the sample construction process. The initial sample consists of 350,902 earnings call transcripts, spanning from 2008Q1 to 2024Q4. We lose 125,183 observations due to missing link with Compustat data and CRSP data. The final observation of available earnings call transcripts is 225,719. Panel B presents the sample distribution across calendar years. The fewer observations in early sample years probably due to data availability of Capital IQ. On average, there are 39.84% of earnings calls discuss human capital every year. From 2011 to 2018, the number of transcripts remains relatively stable. After 2019, the observations on average increase by more than 1,000. The most observations are in 2022, followed by 2023, and then 2021. The possible explanation for this phenomenon is the occurrence of serious social events e.g., the death of George Floyd and Covid-19.

In addition to our primary data sources, we supplement our analysis with employee review ratings and turnover data from Revelio Labs, and ESG ratings from MSCI. We also obtain earnings forecast data from I/B/E/S, used for control variables.

3.2 Construction of measure of human capital discussion

In order to extract human capital discussion, we apply the "human capital" lexicon from the E&S dictionary developed by Lin et al. (2024). They use annual reports of firms in 30 international countries / regions between 2001 and 2020. Given that ESG reports serve as a primary channel for voluntary human capital disclosure beyond mandatory 10-K filings (Bourveau et al., 2022), this lexicon ought to include all relevant keywords. We then employ keyword-searching approach to extract target sentences and their corresponding segments from sample earnings calls transcripts. Specifically, a human capital-related sentence should contain at least one predefined keyword from dictionary, and its corresponding segment comprises a brunch of sentences sharing the same speaker within that discussion. An earnings call transcript is considered to contain human capital discussion if it includes at least one such human capital-related sentence. Additionally, for each identified segment, we record the details including the position within the call structure, speaker's name and identity.

Figure 1 straightforwardly provides details of the time-varying trend at the quarterly level. Prior to 2020, the discussions increase at a steady pace. However, starting at the second quarter in 2020, the appearance of human capital discussions sharply increased. While post-2020 levels declined from the peak, they remained substantially higher than pre-2020 baselines. Notably, first-quarter calls consistently feature the highest discussion frequency (indicated by green bars), except during 2020. Overall, these patterns suggest that human capital discussion always exists in the earnings call, and participants of earnings call are purposefully engaging in discussions about this type of non-financial information.

Figure 2 presents the frequency and proportion of human capital discussion by Fama-French 12-industry, respectively. Industry labels are provided below the figure for reference. The bar chart reveals significant cross-industry variation in discussion frequency, measured by the total count of earnings call transcripts referencing human capital within each industry. We observe that the "Business equipment" sector demonstrates the highest absolute count of human capital discussions, followed by "Financial services." Labor-intensive sectors, (e.g., Manufacturing and Retail), consistently surpass the sample average in discussion frequency, while technology-driven industries (e.g., Energies) show relatively limited engagement with human capital topics. The right pie chart shows the relative proportion, calculated as the ratio of human capital transcripts to the total num-

ber of earnings call transcripts per industry, scaled by the total of those ratios. The variation is narrower, ranging from 6.68% to 9.81%. "Wholesale, Retail, and Some Services" leads at 9.81%, with "Other" (9.78%) and "Business equipment" (9.59%) industries close behind. These patterns collectively suggest that while absolute discussion volume correlates with industry labor intensity, normalized engagement levels remain relatively stable across sectors.

Figure 3 illustrates the intensity of human capital discussion in earnings call. The color gradient, varying from light to dark, signifies the intensity of human capital discussions, and intensity is calculated as the number of human capital discussions in a given section divided by the total number of earnings calls containing human capital discussions in that quarter. As shown, human capital discussions predominantly occur during presentations rather than Q&A sessions. The presentation segment shows peak intensity during 2020Q1-Q3, coinciding with major social events. Interestingly, Q&A engagement peaked later, in 2021Q3, suggesting analysts' delayed response to these developments.

To measure the features of human capital disclosure, we also develop (1) the disclosure tone, generated using FinBERT (Huang et al., 2023), and (2) the disclosure length, calculated as the logarithm of raw word count of human capital-related segments. Table 2 presents summary statistics for earnings call features and firm characteristics (the detail of variable definitions present in the Table A.2). Panel A shows that 40.4% of earnings calls in the full sample contain human capital discussion. Focusing on discussion tone, the positive median value indicates that a large portion of such discussions are in the positive tone. Panel B shows the pairwise correlations, revealing that human capital discussion generally is positively related to accounting-based firm performance and analyst effect, but negatively associated with market-based quarterly abnormal return.

4 Empirical Results

In this section, we first investigate on the relationship between human capital discussion and potential determinants including firm characteristics. This analysis aims to enhance our understanding the incentive of managers to involve in such discussion. Next, we explore the impact of these disclosures on three dimensions: equity market reactions, employee responses, and ESG ratings. In the end, we conduct robustness check to further support our findings.

4.1 Determinants of human capital disclosure

Employees are the most important stakeholders of human capital information. The practice and management of human capital are highly associated with employees' work life. We therefore conjecture that employee satisfaction, measured through review scores, might influence firms' human capital disclosures. Furthermore, drawing on herding theory (Banerjee (1992); Bikhchandani et al. (1992)), we posit that peer firm behavior serves as another determinant, as managers are likely to emulate human capital discussions initiated by industry peers in prior earnings calls.

To examine whether employee review scores and peer behavior are related to the likelihood of managers discussing human capital in earnings calls, we estimate the following regression specification at the transcript level:

$$\begin{aligned} Human_capital = \alpha + \beta * \{Emp_score_pre \text{ or } Peer_hc\} + \gamma * \{Controls\} \\ + Year * quarter\ FE + Firm\ FE + \epsilon \end{aligned} \tag{1}$$

where dependent variable is primarily human capital, which is an indicator equals 1 if the earnings call contains at least one human capital-related sentence, and the key independent variables include: (1) Emp_score_pre: the average "recommend to friend" sentiment score from current employee reviews in the one-month window preceding the earnings call, and (2) $Peer_hc$: the industry-peer average human capital disclosure (based on two-digit SIC codes) sharing the same window with employee review score. In addition, our regression model controls for (1) market-based firm performance: quarterly market-adjusted return ($R_\{-92, -2\}$); (2) accounting-based firm performance: ROA, $ln(Asset)$, and M/B; (3) analyst effect: the number of analysts followed ($Numest$), earnings surprise (ES), and an indicator whether firm's earnings beat the consensus forecast ($Meet$); and (4) call characteristics: $Tone_full_text$ and $Length_full_text$. Lastly, we include year-quarter and firm fixed effects to account for time-varying unobservable factors that affect managers' awareness of human capital information and time-invariant industry factors on managers' discussions of human capital.

Table 3, Panel A summarize the statistics for key independent variables. In the month preceding the focal firm's earnings call, the average employee rating score is 3.9, and approximately 42% peer firms discuss human capital topics during this period. Panel B presents the regression results. The dependent variable in Columns (1) to (3) is human capital. We find that the existence of human

capital discussion in the peers' earnings call, held a month before the focal firm's earnings call, is significantly and positively associated with the appearance of such discussion in the focal firms' earnings call. This suggests that managers have "social learning" behavior, and they value human capital information importantly.[3] However, higher average employee recommendation scores from the previous month significantly decrease the likelihood of human capital discussions, which implies that managers prioritize human capital topics when current employees' opinion on firms' workplace conditions is less favorable. The regressions in the remaining columns use the subsample restricted to earnings calls containing human capital discussions. We find no significant relationship between peer firm behavior/employee reviews and either discussion tone (Columns (4) to (6)) or length (Columns (7) to (9)). This null result may stem from measurement timing: typical earnings call preparation periods (4-6 weeks) precede our measurement window, suggesting transcripts were likely finalized beforehand. Supporting this interpretation, untabulated analyses, using a 90-day pre-call window, additionally reveal significant associations between peer discussions/employee reviews and discussion length.

Overall, the results indicate that managers weigh both employee sentiment score and peer firm actions when deciding to disclose human capital information. Focal firms' human capital discussions positively correlate with peers' discussions, while higher employee recommendation scores reduce discussion likelihood.

4.2 Outcomes of human capital disclosure

4.2.1 Investor reaction

In section 2, we discussed that if human capital discussions during earnings calls contain material information, rational investors should incorporate such information into their decision-making processes. In this section, we test this mechanism explicitly. We conduct an event study relating three-day cumulative abnormal returns (CAR) around earnings call dates to measures of human capital discussion. Our regression model controls for similar variables with Model (1). The baseline specification is as follow:

[3] In untabulated analysis, using [-90, -1] as windows to calculate average employee sentiment scores and peer firm behavior, we still find a significant relation to human capital discussion.

$$Car[-1,+1] = \alpha + \beta * Human_capital + \gamma * \{Controls\} + Year * quarter\ FE + Firm\ FE + \epsilon \quad (2)$$

Table 4, Panel A provides statistics for dependent variables. The mean of CAR is -0.026%. Panel B presents the regression results. We first investigate on the direction of stock price change. Column (1) shows statistically insignificant market reactions to general human capital disclosures. However, Column (2) reveals that discussion tone significantly affects market reactions, particularly for non-positive tones. Columns (3) further suggests that, longer discussion is negatively associated with stock return. Column (4) further underscores investors' greater attention to linguistic features of managerial discussions.

In sum, investors recognize and respond to human capital information in earnings calls, though reactions vary substantially and primarily focus on linguistic feature. Discussion tone is the most valued among investors, and length follows.

4.2.2 Employee response

Employee review scores exhibit a significant association with the appearance of human capital disclosure. This suggests that managers may strategically emphasize human capital topics to improve future workforce satisfaction metrics performance. Given that human capital practices directly affect employee working conditions, effective disclosures may improve workforce retention and recruitment outcomes. Therefore, we conjecture that human capital discussions in earnings calls significantly influence subsequent employee responses and estimate the following regression model using alternatively future employee review scores and turnover rates as dependent variables:

$$\begin{aligned} Emp_score_post\ or\ Turnover = \alpha + \beta * Human_capital + \gamma * \{Controls\} \\ + Year * quarter\ FE + Firm\ FE + \epsilon \end{aligned} \quad (3)$$

Table 5 presents the regression analysis when dependent variables are related to employee rating activity. Panel A displays summary statistics of dependent variable measured during the 30-day period after the earnings call, and we observe that both its mean and median are lower than those in the previous month. Panel B further reports the regression results. Columns (1) shows significantly negative relationship between human capital discussions with future "recommend to friend" scores. While discussion tone negatively affects future rating score performance (Column (2)), discussion

length shows insignificant relationship (Column (3)).

In sum, human capital discussion has limit ability to improve the performance of satisfaction metrics. Instead, the employee score is worse after managers' human capital discussion in earnings call. In addition, employees concern about tone of such discussion, especially for non-positive ones.

Table 6 presents the regression results when dependent variable is future employee turnover (inflows and outflows). Panel A provides summary statistics, while Panel B reports regression results using firm-level employee turnover measures. Column (1) and (5) suggests that employee inflow and outflow overall are negatively affected by human capital discussion, respective, but the effect on outflow is substantially stronger. Interestingly, potential employees demonstrate positive responsiveness to discussion tone (Column (2)) yet show diminished interest when discussions become protracted (Column (3)). In contrast, current employees appear particularly discouraged by negative human capital discussions (Column (6)) but remain indifferent to discussion length (Column (7)). Next, we group employees by their seniority and define junior employees as if their seniority is under manager level. Relatively, senior employees are at or upper than manager level. Panels C and D presents regression results using data of junior and senior employee group, respectively. Although only senior-level candidates are attracted by human capital discussions overall, they exhibit less sensitivity to both tone and length than their junior counterparts. Regarding outflows, both employee groups demonstrate increased turnover, though junior employees display greater sensitivity to discussion tone than senior employees.

Overall, these findings indicate that human capital discussions in earnings calls elicit significant employee responses, as evidenced by decreased employees rating score and increased turnover rates. These results highlight that such disclosures meaningfully influence employee perceptions and mobility decisions.

4.2.3 ESG rating change

ESG ratings serve as critical references for stakeholders evaluating firm performance (e.g., Heinkel et al. (2001); Lins et al. (2017)). A rater's overall view of a firm influences the measurement of specific categories (Berg et al., 2022). Existing literature identifies human capital disclosure as a key component of the Social dimension in ESG reporting. Consequently, beyond employee response, managers may have additional incentives to discuss human capital to achieve better ESG ratings. We therefore hypothesize that human capital discussions in earnings calls positively influence future

ESG rating scores and use Human Capital Theme Score from MSCI as dependent variables. The regression specification is as follow:

$$Hc_rating = \alpha + \beta * Human_capital + \gamma * \{Controls\} + Year * quarter\ FE + Firm\ FE + \epsilon \quad (4)$$

Table 7 presents the results of Model (4). Summary statistics are illustrated in Panel A. The average of rating score is 3.872. Panel B presents the regression results. Columns (1) suggests that human capital discussions positively influence future human capital theme rating, implying that rating agencies incorporate earnings call disclosures into their evaluation processes. However, they seem overlook discussion features, evidenced by insignificant coefficients on discussion tone and length in Column (2) and (3), respectively.

5 Robustness Tests

In this section, we conduct robustness checks to validate our earlier findings. In previous sections, we find that less favorable historical employee review scores increase the likelihood of human capital discussions in earnings calls, and such discussions subsequently influence future employee rating activity. However, these results potentially conflate responses from current employees. To consider the effects attributable to former employees, we reconstruct our sample by including reviews from former employees.

Table 8 presents the re-estimated results using this refined dataset. Panel A presents summary statistics, and the scores are on average lower after including former employees' opinions. The following panels presents the regression results using new data. The key findings remain largely robust, confirming the stability of our primary conclusions.

Overall, the comparability of results across specifications demonstrates that the inclusion of former employees does not materially alter our core findings. This robustness check strengthens our confidence in the study's primary conclusions regarding the relationship between human capital disclosures and employee sentiment metrics.

6 Conclusion

This study provides a comprehensive examination of human capital disclosure practices in corporate earnings calls, investigating both their determinants and multi-stakeholder consequences. Through systematic analysis of earnings call transcripts, we observe that managers weigh both employee sentiment score and peer firm actions when deciding to disclose human capital information. Furthermore, we establish three key findings regarding the impact of human capital discussions on: (1) equity market participants, (2) workforce dynamics, and (3) commercial rating outcomes.

First, we document heterogeneous market reactions to human capital disclosures, with particular sensitivity to discussion tone and length. These findings suggest investors incorporate qualitative aspects of human capital communication into valuation assessments. Second, our results demonstrate that human capital disclosures significantly influence subsequent employee satisfaction metrics and turnover behavior, revealing the importance of these communications in workforce management. Third, this study provides evidence on a positive association between human capital disclosure and future ESG rating outcomes, highlighting the strategic value of these communications for ESG management. Finally, through robust empirical design, we ensure the reliability of our conclusions. The consistent results across alternative specifications strengthen confidence in our findings.

This study establishes the significance of human capital disclosure in the modern economy and further substantiate the informational value of earnings calls. Our findings particularly highlight employees as a key stakeholder group in these corporate communications.

Appendix

Table A.1: Examples of Human Capital Discussion from Earnings Call

This table presents several examples of human capital discussion in earnings call. The details include firm name, speakers' identity, and earnings call date. The highlighted phrases in the text are the keywords using for extraction.

Firm	Human capital discussion	Speaker	Date
Changyou.com Limited	These put us in a good position to make investment for the long term, including talent acquisition and technology that are needed to enhance our competitive position and capture the growth opportunity in the online games industry.	Alex Ho - Executives	4/29/2013
Era Group Inc.	Safety is the foundation of everything we do at Era, and we strive to maintain the highest standards of safety performance, operational excellence and people management.	Chris Bradshaw - Executives	8/5/2015
Frank's International N.V.	Management's first priority is our employees' well-being and there's no better way to demonstrate this than to continually emphasize workplace safety.	Michael Kearney - Executives	2/27/2018
American Electric Power Company, Inc.	I know you guys had a pretty decent chunk of your workforce that was on track to retire within the next, let's call it, 5, 7 years maybe.	Sophie Karp - Analysts	5/6/2020
Canadian Solar Inc.	Shawn, I'm just curious for your high-level views on some of the recent headlines that have come out about potential forced labor being used for silicon production in Xinjiang province.	Mark W. Strouse - Analysts	3/18/2021
AMC Networks Inc.	We'll have access to the best talent, most valuable IP and strong global program, enabling us to extend our leadership position in targeted streaming.	Matthew Blank - Executives	2/16/2022
Cabot Corporation	This newly established list recognizes the top 1,000 companies in the U.S. that not only celebrate diversity but implement policies that cultivate inclusive workplaces.	Sean Keohane - Executives	2/10/2023
Accenture plc	Our success is reflected in the top score on the Human Rights Campaign Corporate Equality Index in the U.S. for the 16th consecutive year for leading equitable workplace policies, practices and benefits for LGBTQ+ people.	Julie T. Sweet - Executives	12/19/2023

Table A.2: Variable Definition

Variables	Definition	Source
Human capital	1 if the earnings call transcript contains at least one human capital-related sentence, 0 otherwise	Keyword Dictionary
Tone_hc	1 if the tone of the segment about human capital is positive, 0 if neutral, and -1 if negative	FinBERT
Length_hc	The word count of human capital discussion as a percentage of total earnings call transcript words	Compustat
Tone_full_text	1 if the tone of the earnings call transcript is positive, 0 if neutral, and -1 if negative	FinBERT
Length_full_text	The total word count of earnings call full transcripts (in thousands)	Compustat
Car[-1,1]	The cumulative abnormal return of the window [-1,1] around the earnings call date	CRSP
Employee review scores		
Emp_score_{pre or post}	10 * (The average of recommend to friend sentiment scores during a defined window before (or after) the earnings call)	Revelio Labs
Employee turnover		
Inflow	The ratio of the number of employee inflow over the total number of employees during a defined window before (or after) the earnings call	Revelio Labs
Outflow	The ratio of the number of employee outflow over the total number of employees during a defined window before (or after) the earnings call	Revelio Labs
Inflow_{junior or senior} *	The value of Inflow for junior (seniority is 1 or 2 or 3) or senior (seniority is 4 or 5 or 6 or 7) employees	Revelio Labs
Outflow_{junior or senior} *	The value of Outflow for junior (seniority is 1 or 2 or 3) or senior (seniority is 4 or 5 or 6 or 7) employees	Revelio Labs
Peer event		
Peer_hc	The average value of Human capital variable of firms that share same two-digit SIC code and of dates that are during the 90-days window before (or after) the earnings call date	Keyword Dictionary
ESG Rating		
Hc_rating	The weighted average of the Key Issue Scores that fall under the Human Capital Theme: Labor Management, Health and Safety, Human Capital Development, and Supply Chain Labor Standards; the end date of rating is within the next month of earnings call date	MSCI

(Cont.) Table A.2: Variable Definition

Variables	Definition	Source
Firm Characteristics		
R_{-92,-2}	Market-adjusted returns cumulated during a window [-92, -2] relative to the earnings call date	*CRSP*
ROA	Net income before extraordinary items scaled by the total assets	Compustat
ln(Assets)	The natural logarithm of total assets	Compustat
M/B	The book-to-market ratio computed as the market capitalization scaled by the book value of equity	Compustat
Numest	The number of analysts that follow the firm	IBES
ES	The difference between the actual value of EPS and the forecast value (mean)	IBES
Meet	1 if the firm beats the earnings forecast, 0 otherwise	IBES

* *The description of each seniority: 1: entry, 2: junior, 3: associate, 4: manager, 5: director, 6: executive, 7: senior executive.*

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Figure 1: Time-varying Discussion on Human Capital

This figure depicts the trend of human capital discussion in the earnings call during the period from calendar 2008Q1 to 2024Q4. The columns represent the number of earnings call transcripts containing at least one human capital-related sentence (left y-axis), with green bars indicating Q1 calls and blue bars representing all other quarters. The dots show the ratio of human capital discussion, calculated as the proportion of earnings call transcripts mentioning human capital relative to the total number of transcripts in each quarter (right y-axis).

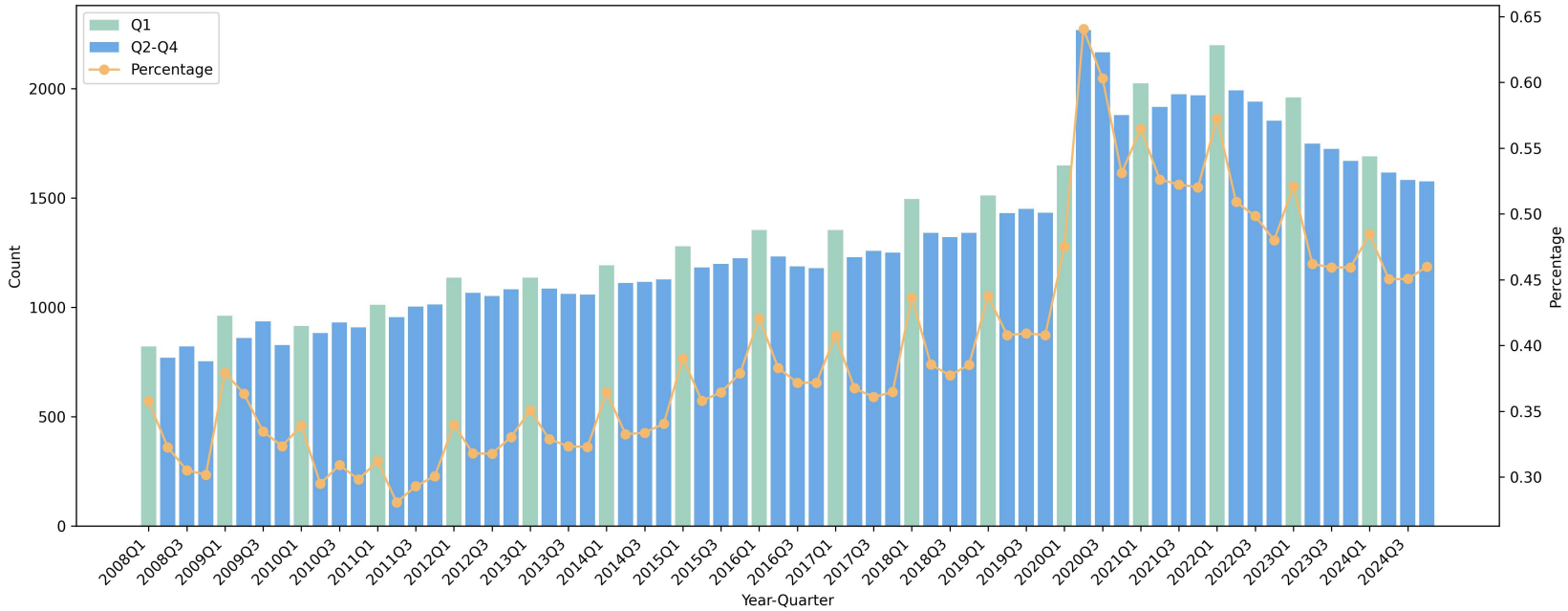
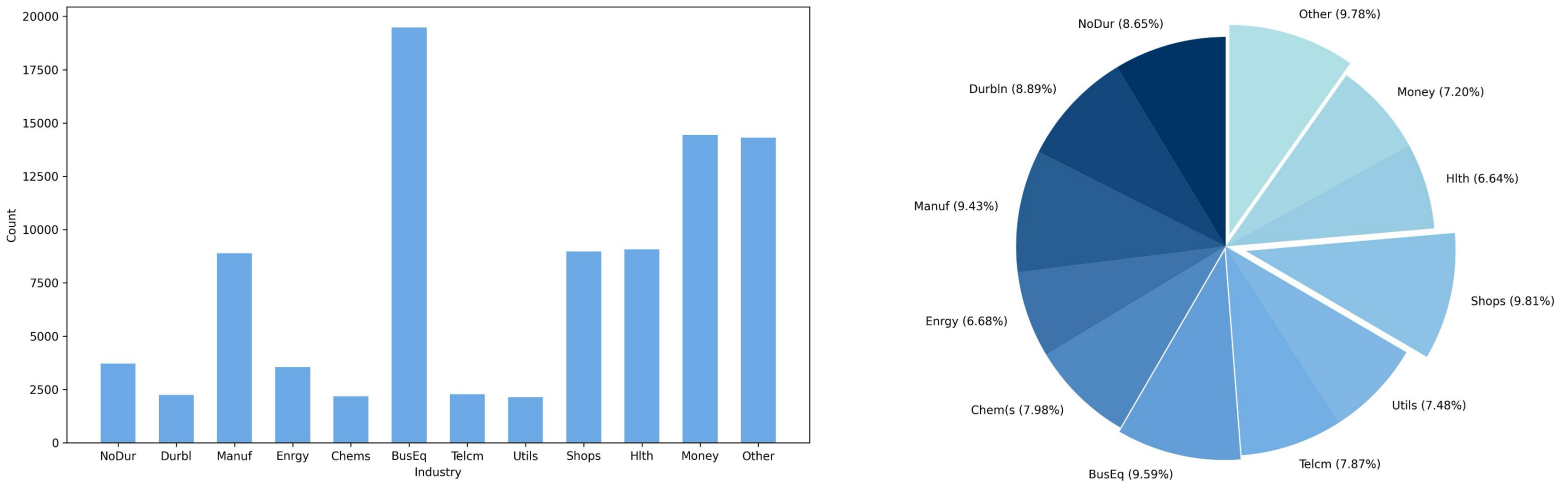


Figure 2: The Frequency and Proportion of Discussion on Human Capital by Industry

This figure illustrates the frequency and proportion of human capital discussions across the Fama-French 12-industry classification. The bar chart indicates the total count of earnings call transcripts referencing human capital within each industry. The pie chart shows the relative proportion, calculated as the ratio of these transcripts to the total number of earnings call transcripts per industry, scaled by the total of those ratios. Industry labels are provided below the figure for reference.



Industry	**Full name**
NoDur	Consumer Nondurables – Food, Tobacco, Textiles, Apparel, Leather, Toys
Durbl	Consumer Durables – Cars, TVs, Furniture, Household Appliances
Manuf	Manufacturing – Machinery, Trucks, Planes, Off Furn, Paper, Com Printing
Enrgy	Oil, Gas, and Coal Extraction and Products
Chems	Chemicals and Allied Products
BusEq	Business Equipment – Computers, Software, and Electronic Equipment
Telcm	Telephone and Television Transmission
Utils	Utilities
Shops	Wholesale, Retail, and Some Services (Laundries, Repair Shops)
Hlth	Healthcare, Medical Equipment, and Drugs
Money	Finance
Other	Other – Mines, Constr, BldMt, Trans, Hotels, Bus Serv, Entertainment

Figure 3: The Intensity of Discussion on Human Capital by Time and Locations

The heatmap depicts the distribution of discussion on human capital in earnings calls across different sections. The sample spans over 220,000 earnings call transcripts from 2008Q1 to 2024Q4. The horizontal axis indicates the four quarters of each year, and the vertical axis displays the three earnings call sections: Presentation, Questions and Answers. The color gradient, varying from light to dark, signifies the intensity of human capital discussions. Intensity is calculated as the number of human capital discussions in a given section divided by the total number of earnings calls containing human capital discussions in that quarter.

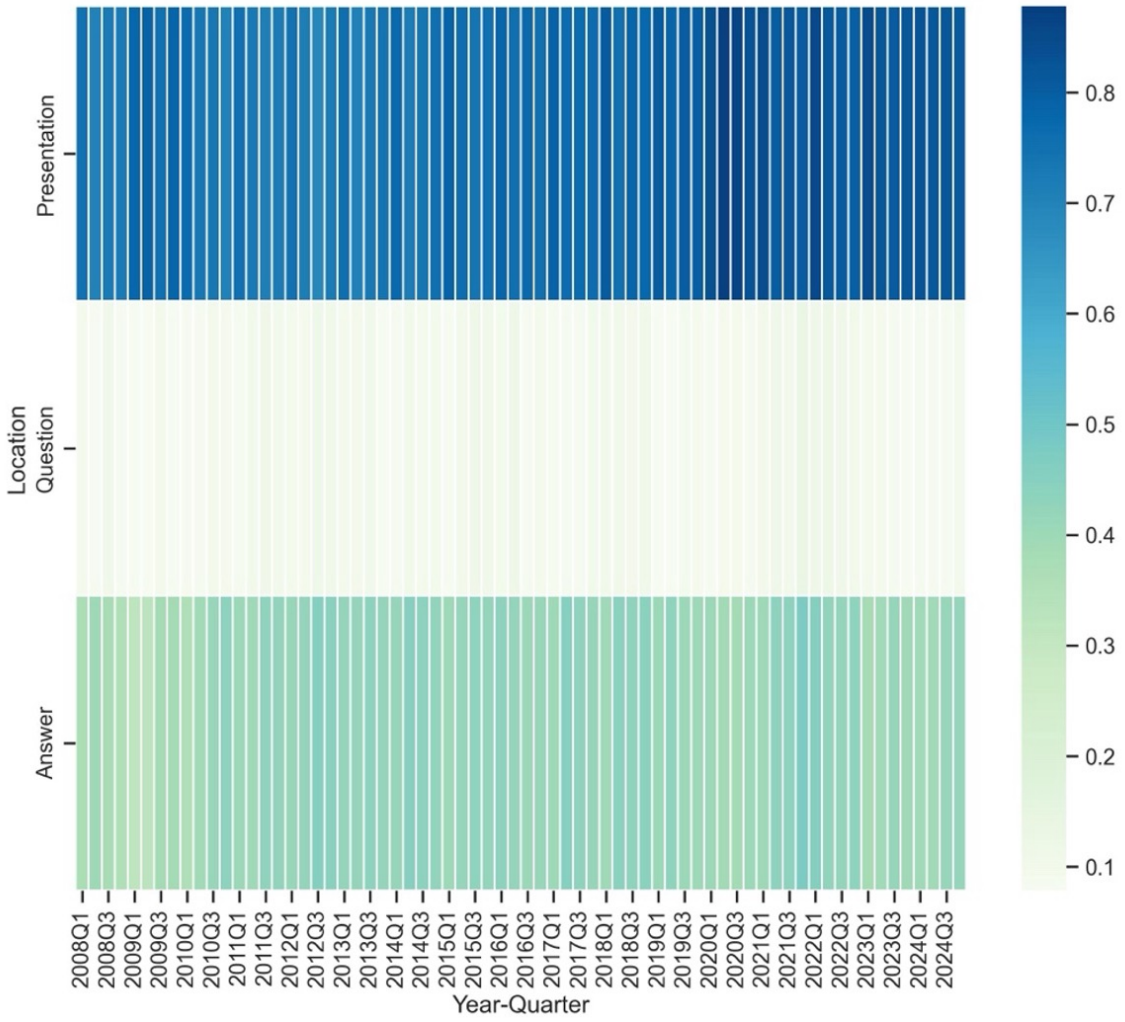


Table 1: Sample Selection and Descriptive Data

Panel A describes the sample construction process. Panel B exhibits the evolution of three metrics: (1) the annual volume of earnings call transcripts (serving as denominator), (2) the absolute count of transcripts containing human capital (HC) references (numerator), and (3) the derived HC discussion proportion rate (ratio of metric 2 to metric 1).

Panel A: Sample attribution	
Description	No. of Obs.
Transcripts that are from USA firms and the period is from 2008 to 2024	350,902
Merging with Compustat	-99,186
Merging with CRSP	-25,997
Final Sample	225,719

Panel B: Sample distribution across period

Year	No. of obs.	No. of HC obs.		% of HC obs.
2008	9869	3166		0.3208
2009	10248	3582		0.3495
2010	11738	3634		0.3096
2011	13430	3982		0.2965
2012	13279	4336		0.3265
2013	13098	4340		0.3313
2014	13271	4548		0.3427
2015	13103	4885		0.3728
2016	12799	4952		0.3869
2017	13583	5091		0.3748
2018	13886	5499		0.3960
2019	14020	5826		0.4155
2020	14142	7963		0.5631
2021	14793	7884		0.5330
2022	15509	7985		0.5149
2023	14936	7103		0.4756
2024	14015	6465		0.4613
Total	225719	91241	Average	0.3984

Table 2: Summary Statistics

This table provides descriptive statistics. Panel A summarizes statistics for variables measuring characteristics of human capital discussion and firm performance. All variables are winsorized at 1

Panel A: Variable statistics						
Variables	Obs.	Mean	Std.Dev.	Min	Median	Max
Human_capital	225719	0.404	0.491	0	0	1
Tone_hc	225719	0.308	0.493	-1	0	1
Length_hc	225719	8.089	13.45	0	0	56.48
Tone_full_text	225714	0.215	0.420	-1	0	1
Length_full_text	225719	6.783	2.419	1.821	6.755	12.99
R_{-92,-2}	218461	0.001	0.258	-0.796	0.001	0.885
ROA	221451	-0.006	0.057	-0.306	0.006	0.094
ln(Assets)	221593	7.353	2.078	2.734	7.352	12.71
M/B	216692	3.195	6.232	-21.54	1.998	38.67
Numest	206934	8.203	6.485	1	6	30
ES	205451	-0.017	0.689	-4.750	0.018	2.750
Meet	225719	0.672	0.469	0	1	1

(Cont.) Table 2: Summary Statistics

Panel B: Pairwise correlation												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Human_capital	1											
(2) Tone_hc	0.759	1										
(3) Length_hc	0.730	0.630	1									
(4) Tone_full_text	0.028	0.070	0.008	1								
(5) Length_full_text	0.206	0.158	0.070	0.054	1							
(6) R_-92,-2	-0.009	0.016	-0.017	0.044	0.003	1						
(7) ROA	0.054	0.051	0.023	0.096	0.150	0.017	1					
(8) ln(Assets)	0.106	0.108	0.031	0.185	0.438	-0.000	0.362	1				
(9) M/B	0.046	0.043	0.034	-0.008	0.095	-0.011	-0.009	-0.055	1			
(10) Numest	0.105	0.010	0.012	0.088	0.524	-0.001	0.177	0.504	0.127	1		
(11) ES	0.017	0.033	0.008	0.047	0.026	0.068	0.060	0.051	0.016	0.057	1	
(12) Meet	0.029	0.060	0.026	0.079	0.012	0.099	0.048	0.027	0.030	0.124	0.382	1

Table 3: Determinants of Managers Discussing Human Capital in Earnings Call

This table examines the determinants of managers discussing human capital in earnings calls. The sample period spans 2008Q1 to 2024Q4, with sample size constrained by the availability of employee review scores from Revelio Lab. The dependent variables, *Human capital*, is an indicator that takes the value of one if human capital is discussed in earnings call, and zero otherwise; *Tone_hc*, measures the discussion tone; *Length_hc*, is the length of discussion. The interested independent variables are $Peer_hc$ and *Emp_score_pre*, respectively presenting peer firms' behavior and employees' opinion within a 30-day window before current earnings call. To make coefficient comparable, the value of indicator variables (*Human capital*, *Peer_hc*, *Tone_hc*, and *Tone_full_text*) are multiplied by 100. The control variables include market-based firm performance, accounting-based firm performance, analyst effect, and call characteristics. The model incorporates year-quarter and firm fixed effects, with standard errors clustered at the firm level (reported in parentheses). Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and * respectively. Complete variable definitions and data sources are provided in the Appendix.

Panel A: Variable statistics

Variables	Obs.	Mean	Std.Dev.	Min	Median	Max
Peer_hc	196905	42.423	12.561	0	41.379	100
Emp_score_pre	59135	3.881	6.787	-10	6	10

Panel B: Determinants of human capital discussion

	Human_capital			*Tone_hc*			*Length_hc*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Peer_hc	0.090***		0.104***	-0.036		-0.017	0.010		0.026***
	(0.015)		(0.026)	(0.025)		(0.034)	(0.006)		(0.010)
Emp_score_pre		-0.062**	-0.062**		0.062	0.062		-0.013	-0.013
		(0.031)	(0.031)		(0.048)	(0.048)		(0.012)	(0.012)
R_{-92,-2}	-1.032**	0.083	0.065	9.856***	9.390***	9.405***	-1.033***	-1.185***	-1.206***
	(0.433)	(0.920)	(0.920)	(0.799)	(1.318)	(1.317)	(0.206)	(0.367)	(0.368)
ROA	-4.911	13.303*	-12.726*	-11.529**	-15.999*	-15.470*	-4.301***	-3.892	-3.803
	(3.310)	(7.560)	(7.569)	(5.770)	(9.106)	(9.125)	(1.657)	(3.093)	(3.100)

(Cont.) Panel B: Determinants of human capital discussion

	Human_capital			*Tone_hc*			*Length_hc*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(Assets)	0.926**	0.894	0.923	-1.094*	-1.811*	-1.817*	0.597***	0.872**	0.869**
	(0.431)	(0.824)	(0.824)	(0.588)	(0.945)	(0.945)	(0.208)	(0.375)	(0.375)
M/B	0.003	0.035	0.035	0.049*	0.068*	0.068*	0.003	0.018	0.018
	(0.015)		(0.026)	(0.025)		(0.034)	(0.006)		(0.010)
Numest	-0.176***	-0.056	-0.054	-0.090	-0.201	-0.201	-0.264***	-0.248***	-0.249***
	(0.066)	(0.111)	(0.111)	(0.086)	(0.127)	(0.127)	(0.031)	(0.049)	(0.049)
ES	-0.097	-0.278	-0.261	0.565	0.449	0.450	0.007	0.278	0.283
	(0.181)	(0.486)	(0.485)	(0.396)	(0.797)	(0.797)	(0.098)	(0.185)	(0.185)
Meet	0.006	0.527	0.480	6.418***	6.535***	6.538***	-0.356***	-0.308*	-0.317*
	(0.254)	(0.521)	(0.521)	(0.483)	(0.803)	(0.803)	(0.113)	(0.185)	(0.185)
Tone_full_text	-0.006*	-0.006	-0.006	0.106***	0.099***	0.099***	-0.005***	-0.004**	-0.004**
	(0.003)	(0.006)	(0.006)	(0.006)	(0.010)	(0.010)	(0.001)	(0.002)	(0.002)
Length_full_text	3.318***	3.689***	3.684***	-0.984***	-0.591**	-0.594**	-1.090***	-0.846***	-0.847***
	(0.092)	(0.168)	(0.168)	(0.150)	(0.243)	(0.243)	(0.045)	(0.077)	(0.077)
N	196905	59135	59093	80284	30714	30692	80284	30714	30692
Year*Quar FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.269	0.263	0.264	0.184	0.177	0.177	0.353	0.395	0.395
Adj.R2	0.243	0.224	0.224	0.123	0.109	0.109	0.305	0.344	0.344

Table 4: Stock Market Reaction to Human Capital Discussion in Earnings Call

This table examines how investors in the stock market react to human capital discussion in earnings calls. The sample consists of 197,354 observations spanning from 2008Q1 to 2024Q4. Panel A presents the summary statistics for the dependent variables. Panel B examines the stock market reaction to human capital discussion. The dependent variables, $Car[-1,1]$, is the cumulative abnormal return of the window [-1,1] around the earnings call date. The control variables in all regressions include market-based firm performance, accounting-based firm performance, analyst effect, and call characteristics. The model incorporates year-quarter fixed effect, with standard errors clustered at the firm level (reported in parentheses). Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and * respectively. Complete variable definitions and data sources are provided in the Appendix.

Panel A: Variable statistics						
Variables	Obs.	Mean	Std.Dev.	Min	Median	Max
Car[-1,1]	197354	-0.026	6.529	-22.623	-0.033	22.413

Panel B: Market reaction to human capital discussion				
	Car[-1,1]			
	(1)	(2)	(3)	(4)
Human_capital	-0.044	-0.348***	0.047	-0.230***
	(0.032)	(0.050)	(0.043)	(0.055)
Tone_hc		0.401***		0.439***
		(0.051)		(0.052)
Length_hc			-0.005***	-0.007***
			(0.002)	(0.002)
R_{-92,-2}	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	2.518***	2.503***	2.528***	2.516***
	(0.437)	(0.437)	(0.437)	(0.437)
ln(Assets)	0.041***	0.040***	0.041***	0.039***
	(0.011)	(0.011)	(0.011)	(0.010)
M/B	0.004	0.004	0.004	0.004
	(0.003)	(0.003)	(0.003)	(0.003)
Numest	-0.008***	-0.009***	-0.008***	-0.009***
	(0.003)	(0.003)	(0.003)	(0.003)
ES	0.172***	0.172***	0.171***	0.171***
	(0.034)	(0.033)	(0.034)	(0.033)
Meet	1.290***	1.276***	1.291***	1.276***
	(0.045)	(0.045)	(0.045)	(0.045)
Tone_full_text	0.317***	0.300***	0.316***	0.297***
	(0.033)	(0.033)	(0.033)	(0.033)

(Cont.) Panel B: Market reaction to human capital discussion				
	Car[-1,1]			
	(1)	(2)	(3)	(4)
Length_full_text	-0.023***	-0.022***	-0.025***	-0.024***
	(0.008)	(0.008)	(0.008)	(0.008)
N	197358	197358	197358	197358
Year*Quar FE	Yes	Yes	Yes	Yes
R2	0.014	0.015	0.014	0.015
adj. R2	0.014	0.014	0.014	0.014

Table 5: The Impact of Human Capital Discussions on Employee Review Score

This table examines how employees review score changes in accordance with human capital discussion in earnings calls. The sample period spans 2008Q1 to 2024Q4, with sample size constrained by the availability of employee review scores from Revelio Lab. Panel A presents the summary statistics for the dependent variables. Panel B examines the relationship between future employee review scores and human capital discussion. The dependent variable is *Emp_score_post*, proxy for the average of recommend to a friend sentiment scores during the next month following earnings call date. The control variables in all regressions include market-based firm performance, accounting-based firm performance, analyst effect, and call characteristics. The model incorporates year-quarter and firm fixed effects, with standard errors clustered at the firm level (reported in parentheses). Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and * respectively. Complete variable definitions and data sources are provided in the Appendix.

Panel A: Variable statistics

Variables	Obs.	Mean	Std.Dev.	Min	Median	Max
Emp_score_post	59320	2.706	6.024	-10	3.333	10

Panel B: Effect on future employee review

	Emp_score_post			
	(1)	(2)	(3)	(4)
Human_capital	-0.114*	-0.188**	-0.064	-0.139
	(0.063)	(0.095)	(0.079)	(0.100)
Tone_hc		0.094		0.113
		(0.084)		(0.086)
Length_hc			-0.003	-0.004
			(0.003)	(0.003)
R_{-92,-2}	0.664***	0.660***	0.663***	0.657***
	(0.140)	(0.140)	(0.140)	(0.140)
ROA	7.340***	7.346***	7.332***	7.338***
	(1.238)	(1.238)	(1.238)	(1.238)
ln(Assets)	-0.394***	-0.393***	-0.393***	-0.392***
	(0.109)	(0.109)	(0.109)	(0.109)
M/B	0.011***	0.011***	0.011***	0.011***
	(0.004)	(0.004)	(0.004)	(0.004)
Numest	0.004	0.004	0.004	0.004
	(0.013)	(0.013)	(0.013)	(0.013)
ES	0.065	0.065	0.065	0.065
	(0.074)	(0.074)	(0.074)	(0.074)
Meet	0.190**	0.186**	0.189**	0.185**
	(0.074)	(0.074)	(0.074)	(0.074)
Tone_full_text	0.128*	0.123*	0.127*	0.122
	(0.075)	(0.075)	(0.075)	(0.075)

(Cont.) Panel B: Effect on future employee review				
	Car[-1,1]			
	(1)	(2)	(3)	(4)
Length_full_text	0.061***	0.061***	0.060***	0.060***
	(0.023)	(0.023)	(0.023)	(0.023)
N	59320	59320	59320	59320
Year*Quar FE	Yes	Yes	Yes	Yes
R2	0.014	0.015	0.014	0.015
adj. R2	0.145	0.145	0.145	0.145

Table 6: The Impact of Human Capital Discussions on Employee Turnover

This table examines how employee turnover varies in accordance with human capital discussion in earnings calls. The sample period spans 2008Q1 to 2024Q4, with sample size constrained by the availability of employee turnover from Revelio Lab. Panel A presents the summary statistics for the dependent variables. The value of all turnover variables is multiplied by 100. Panel B examines the relationship between firm-level employee turnover within 30 days post-earnings call and human capital discussion. The dependent variables are $Inflow$ and $Outflow$, respectively representing new hires as a percentage of total workforce and departures as a percentage of total workforce. Panel C focuses on junior employees, defined as a group of employees whose seniority is under manager. The dependent variables are $Inflow_junior$ and $Outflow_junior$, respectively representing inflow and outflow of junior employees within 30 days post-earnings call. Panel D focuses on senior employee, defined as a group of employees whose seniority is or beyond manager. The dependent variables are $Inflow_senior$ and $Outflow_senior$, respectively representing inflow and outflow of senior employees within 30 days post-earnings call. To make coefficient comparable, the value of variables $Tone_hc$ are scaled by 100. The control variables in all regressions include market-based firm performance, accounting-based firm performance, analyst effect, and call characteristics. The model incorporates year-quarter and firm fixed effects, with standard errors clustered at the firm level (reported in parentheses). Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and * respectively. Complete variable definitions and data sources are provided in the Appendix.

Panel A: Variable statistics

Variables	Obs.	Mean	Std.Dev.	Min	Median	Max
Inflow	127740	1.455	1.099	0	1.211	6.171
Outflow	127740	1.326	0.971	0	1.127	5.496
Inflow_junior	127677	1.048	0.834	0	0.867	4.535
Outflow_junior	127677	0.961	0.740	0	0.812	4.088
Inflow_senior	127689	0.397	0.468	0	0.264	2.800
Outflow_senior	127689	0.358	0.419	0	0.239	2.448

Panel B: Effect on future employee turnover (overall)

	Inflow				*Outflow*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Human_capital	0.016***	0.002	0.029***	0.015	0.024***	0.040***	0.018***	0.033***
	(0.006)	(0.008)	(0.008)	(0.009)	(0.005)	(0.008)	(0.007)	(0.008)
Tone_hc		0.018**		0.023***		-0.021***		-0.023***
		(0.008)		(0.008)		(0.007)		(0.007)
Length_hc			-0.074**	-0.090**			0.035	0.051*
			(0.035)	(0.035)			(0.029)	(0.030)
R_{-92,-2}	0.202***	0.202***	0.202***	0.201***	-0.171***	-0.170***	-0.171***	-0.169***
	(0.014)	(0.015)	(0.014)	(0.015)	(0.013)	(0.013)	(0.013)	(0.013)
ROA	0.978***	0.977***	0.976***	0.974***	-0.888***	-0.887***	-0.887***	-0.885***
	(0.131)	(0.131)	(0.131)	(0.131)	(0.122)	(0.122)	(0.122)	(0.122)
ln(Assets)	0.103***	0.103***	0.103***	0.103***	0.171***	0.171***	0.170***	0.170***
	(0.013)	(0.013)	(0.013)	(0.013)	(0.011)	(0.011)	(0.011)	(0.011)
M/B	0.006***	0.006***	0.006***	0.006***	0.001	0.001*	0.001	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Numest	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
ES	0.015**	0.015**	0.015***	0.015***	0.004	0.004	0.004	0.004
	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)
Meet	0.002	0.001	0.002	0.001	-0.026***	-0.026***	-0.026***	-0.026***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)
Tone_full_text	0.035***	0.034***	0.035***	0.034***	-0.008	-0.007	-0.008	-0.007
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)

(Cont.) Panel B: Effect on future employee turnover (overall)								
	Inflow				*Outflow*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Length_full_text	0.015***	0.015***	0.015***	0.015***	-0.004*	-0.004*	-0.004*	-0.004*
N	127740	127740	127740	127740	127740	127740	127740	127740
Year*Quar FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.427	0.427	0.427	0.427	0.380	0.380	0.380	0.380
adj. R2	0.412	0.412	0.412	0.412	0.363	0.363	0.363	0.363

Panel C: Effect on future employee turnover (junior)								
	Inflow_junior				*Outflow_junior*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Human_capital	0.006	-0.006	0.015***	0.004	0.014***	0.026***	0.011**	0.022***
	(0.005)	(0.006)	(0.006)	(0.007)	(0.004)	(0.006)	(0.005)	(0.006)
Tone_hc		0.015***		0.019***		-0.016***		-0.017***
		(0.006)		(0.006)		(0.005)		(0.006)
Length_hc			-0.055**	-0.068***			0.019	0.031
			(0.026)	(0.026)			(0.023)	(0.023)
N	127677	127677	127677	127677	127677	127677	127677	127677
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*Quar FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.404	0.404	0.404	0.404	0.362	0.362	0.362	0.362
adj. R2	0.387	0.388	0.388	0.388	0.345	0.345	0.345	0.345

Panel D: Effect on future employee turnover (senior)								
	Inflow_senior				*Outflow_senior*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Human_capital	0.008***	0.005	0.012***	0.008**	0.011***	0.014***	0.008***	0.012***
	(0.002)	(0.003)	(0.003)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)
Tone_hc		0.005		0.006*		-0.004		-0.005*
		(0.003)		(0.003)		(0.003)		(0.003)
Length_hc			-0.018	-0.023			0.013	0.017
			(0.014)	(0.014)			(0.012)	(0.012)
N	127689	127689	127689	127689	127689	127689	127689	127689
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year*Quar FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.417	0.417	0.417	0.417	0.392	0.392	0.392	0.392
adj. R2	0.401	0.401	0.401	0.401	0.376	0.376	0.376	0.376

Table 7: The Impact of Human Capital Discussions on ESG Rating Score

This table examines how yearly ESG rating score changes in accordance with human capital discussion in earnings calls. The sample period spans 2008 to 2024, with sample size constrained by the availability of rating scores from MSCI. Panel A presents the summary statistics for the dependent variables. Panel B examines the relationship between *humancapitaltheme* rating score and human capital discussion. To make coefficient comparable, the value of variables, *Tone_hc* is scaled by 100. The control variables in all regressions include market-based firm performance, accounting-based firm performance, analyst effect, and call characteristics. The model incorporates year-quarter and firm fixed effects, with standard errors clustered at the firm level (reported in parentheses). Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and * respectively. Complete variable definitions and data sources are provided in the Appendix.

Panel A: Variable statistics

Variables	Obs.	Mean	Std.Dev.	Min	Median	Max
Hc_rating	78481	3.872	2.014	0.010	3.900	8.500

Panel B: Effect on workforce score

	Hc_rating			
	(1)	(2)	(3)	(4)
Human_capital	0.029**	0.032*	0.034*	0.036*
	(0.015)	(0.019)	(0.019)	(0.021)
Tone_hc		-0.003		-0.002
		(0.018)		(0.018)
Length_hc			-0.032	-0.030
			(0.087)	(0.088)
Social_incident	-0.085***	-0.085***	-0.085***	-0.085***
	(0.025)	(0.025)	(0.025)	(0.025)
R_{-92,-2}	0.331	0.332	0.330	0.330
	(0.250)	(0.250)	(0.250)	(0.250)
ROA	-0.195***	-0.195***	-0.195***	-0.195***
	(0.048)	(0.048)	(0.048)	(0.048)
ln(Assets)	-0.003	-0.003	-0.003	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)
M/B	0.016***	0.016***	0.016***	0.016***
	(0.006)	(0.006)	(0.006)	(0.006)
Numest	-0.085***	-0.085***	-0.085***	-0.085***
	(0.025)	(0.025)	(0.025)	(0.025)
ES	-0.009	-0.009	-0.009	-0.009
	(0.016)	(0.016)	(0.016)	(0.016)
Meet	0.029**	0.029**	0.029**	0.029**
	(0.014)	(0.014)	(0.014)	(0.014)

(Cont.) Panel B: Effect on workforce score				
	Hc_rating			
	(1)	(2)	(3)	(4)
Tone_full_text	0.052**	0.052**	0.052**	0.052**
	(0.021)	(0.021)	(0.021)	(0.021)
Length_full_text	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
N	78481	78481	78481	78481
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R2	0.579	0.579	0.579	0.579
adj. R2	0.557	0.557	0.557	0.557

Table 8: Robustness check

This table presents the robustness check, replacing employee review scores with scores from both current and former employees. Panel A presents the summary statistics for the dependent variables. Panel B examines the relationship between human capital discussion and previous review score from current and former employees. The dependent variables, *Human_capital*, is an indicator that takes the value of one if human capital is discussed in earnings call, and zero otherwise; *Tone_hc*, measures the discussion tone; *Length_hc*, is the length of discussion. The interested independent variables are *Peer_hc* and *Emp_score_pre*, respectively presenting peer firms' behavior and both current and former employees' opinion during the period between last and current earnings call. To make coefficient comparable, the value of indicator variables (*Human_capital*, *Peer_hc*, *Tone_hc*, and *Tone_full_text*) are multiplied by 100. Panel C examines the relationship between employee review score during a specific future window and human capital discussion. The dependent variable *Emp_score_post*, is the average of recommend to a friend sentiment score during the next month following earnings call date. The control variables in all regressions include market-based firm performance, accounting-based firm performance, analyst effect, and call characteristics. The model incorporates year-quarter and firm fixed effects, with standard errors clustered at the firm level (reported in parentheses). Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and * respectively. Complete variable definitions and data sources are provided in the Appendix.

Panel A: Variable statistics						
Variables	Obs.	Mean	Std.Dev.	Min	Median	Max
Emp_score_pre	71247	2.107	6.807	-10	3.333	10
Emp_score_post	71712	2.095	6.824	-10	3.333	10

Panel B: Determinants measured including former employees' review score						
	Human_capital		*Tone_hc*		*Length_hc*	
	(1)	(2)	(3)	(4)	(5)	(6)
Emp_score_pre	-0.049*	-0.048*	0.028	0.028	-0.007	-0.006
	(0.028)	(0.028)	(0.044)	(0.044)	(0.011)	(0.011)
Peer_hc		0.109***		-0.012		0.025***
		(0.025)		(0.033)		(0.009)
R_{-92,-2}	-0.837	-0.858	9.321***	9.343***	-1.151***	-1.165***
	(0.817)	(0.817)	(1.217)	(1.216)	(0.328)	(0.328)
ROA	-17.294***	-16.743**	-13.546	-13.092	-2.272	-2.159
	(6.529)	(6.536)	(8.517)	(8.532)	(2.703)	(2.707)
ln(Assets)	1.275*	1.294*	-1.777**	-1.781**	0.996***	0.992***
	(0.752)	(0.752)	(0.873)	(0.873)	(0.342)	(0.342)
M/B	0.022	0.022	0.071*	0.071*	0.014	0.014
	(0.035)	(0.035)	(0.038)	(0.038)	(0.014)	(0.014)

(Cont.) Panel B: Determinants measured including former employees' review score						
	Human_capital		*Tone_hc*		*Length_hc*	
	(1)	(2)	(3)	(4)	(5)	(6)
Numest	-0.098	-0.096	-0.227*	-0.227*	-0.255***	-0.256***
	(0.103)	(0.103)	(0.120)	(0.120)	(0.045)	(0.045)
ES	-0.365	-0.355	0.512	0.513	0.082	0.085
	(0.441)	(0.440)	(0.671)	(0.671)	(0.161)	(0.161)
Meet	0.221	0.175	6.506***	6.505***	-0.254	-0.262
	(0.472)	(0.471)	(0.739)	(0.740)	(0.168)	(0.168)
Tone_full_text	-0.005	-0.005	0.094***	0.093***	-0.004**	-0.004**
	(0.006)	(0.006)	(0.009)	(0.009)	(0.002)	(0.002)
Length_full_text	3.726***	3.719***	-0.804***	-0.807***	-0.859***	-0.860***
	(0.155)	(0.155)	(0.229)	(0.229)	(0.071)	(0.071)
N	71247	71204	35932	35908	35932	35908
Year*Quar FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.260	0.261	0.173	0.173	0.388	0.388
Adj.R2	0.224	0.225	0.108	0.108	0.339	0.339

Panel C: Effect on employee review measured including former employees' review score				
	Emp_score_post			
	(1)	(2)	(3)	(4)
Human_capital	-0.107*	-0.177**	-0.044	-0.117
	(0.057)	(0.083)	(0.074)	(0.090)
Tone_hc		0.090		0.112
		(0.073)		(0.074)
Length_hc			-0.004	-0.004
			(0.003)	(0.003)
R_{-92,-2}	0.633***	0.629***	0.631***	0.626***
	(0.121)	(0.121)	(0.121)	(0.121)
ROA	8.152***	8.154***	8.137***	8.137***
	(1.046)	(1.046)	(1.046)	(1.046)
ln(Assets)	-0.254***	-0.254***	-0.254***	-0.253**
	(0.098)	(0.098)	(0.098)	(0.098)
M/B	0.010**	0.010**	0.010**	0.010**
	(0.004)	(0.004)	(0.004)	(0.004)
Numest	-0.002	-0.002	-0.003	-0.003
	(0.011)	(0.011)	(0.011)	(0.011)

(Cont.) Panel C: Effect on employee review measured including former employees' review score				
	Emp_score_post			
	(1)	(2)	(3)	(4)
ES	0.014	0.013	0.014	0.013
	(0.060)	(0.060)	(0.060)	(0.060)
Meet	0.193***	0.190***	0.192***	0.189***
	(0.065)	(0.065)	(0.065)	(0.065)
Tone_full_text	0.101	0.097	0.100	0.095
	(0.067)	(0.067)	(0.067)	(0.067)
Length_full_text	0.048**	0.048**	0.046**	0.046**
	(0.020)	(0.020)	(0.020)	(0.020)
N	71712	71712	71712	71712
Year*Quar FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
R2	0.205	0.205	0.205	0.205
adj. R2	0.166	0.166	0.166	0.166