Corporate Sustainability and Stock Returns:

Evidence from Employee Buy-in to Senior Management

Kyle Welch & Aaron Yoon*

Abstract

Corporate commitment to ESG, often established by senior managers, has increased dramatically in recent years. We examine the relationship between firm ESG performance and shareholder value under various levels of employee ratings of senior management. Using calendar-time portfolio stock returns and firm-level panel regressions, we find that firms with high ratings on both ESG and employee opinions of senior management provide significantly higher future stock returns than those with low ratings on both. These firms also outperform the firms with high ESG or high employee opinions alone. We note that ESG (or social) rating and employee opinions of senior management have little correlation, which suggests that the two are not related signals. Overall, our results suggest that ESG enhances firm value when there is employee buy-in to senior managers and have implications for asset managers who integrate ESG factors and firm managers who make ESG investments and manage human capital.

Keywords: Sustainability; ESG; CSR; Human Capital; Investment Performance

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*Kyle T. Welch is an Assistant Professor at George Washington University. Aaron S. Yoon is an Assistant Professor at Kellogg School of Management at Northwestern University. We thank Alex Edmans, Robert Eccles, Caroline Flammer, Ian Gow, John Hoepnner, Ravi Jagannathan, Soohun Kim, Robert Korajczyk, Stanmir Markov, Andreas Neuhierl, George Serafeim, Beverly Walther, Tensie Whelan, and seminar participants at the 19th International Conference on Credit Risk Evaluation, Early Insights in Accounting Webinar, Government Investment Corporation of Singapore, Morgan Stanley, Northwestern University, S&P Global, Seoul National University, and SK Group SUPEX Council Meeting for helpful comments and discussions. We are grateful to Glassdoor.com for providing access to their data. All errors are our sole responsibility. Corresponding author: Aaron Yoon. Aaron.yoon@kellogg.northwestern.edu

I. INTRODUCTION

Trillions in investment capital has already committed to incorporating environmental, social, and corporate governance (ESG) into investment decisions and many corporate executives have also committed to embracing ESG into their decision making process.[1,2] Such dramatic rise in ESG is interesting because ESG is often perceived to contradict the fiduciary duty of those who are making ESG commitments (Schanzenbach and Sitkoff, 2020). Not surprisingly, firm engagements in ESG have often faced skepticism and portrayed as serving self-interested managers (Cheng, Hong, and Shue, 2014; Di Giuli and Kostovetsky, 2014). In addition, the evidence on whether and when ESG leads to enhanced shareholder value is relatively small (e.g., Khan, Serafeim, and Yoon, 2016), perhaps because firm ESG investments are hard to quantify, often non-financial, subjective, and correlated with other firm dimensions (Berg, Kolbel, Rigobon, 2019). However, we know that firm investment policies are a key determinant of value, which begs the question of whether and how firm ESG investments may be related to shareholder value.

In this paper, we examine ESG's link to shareholder value under various levels of employee opinions of senior management (i.e., employee buy-in).[3] Prior literature has shown that clarity on the sense of purpose from leaders is important to firm financial performance and also senior managers play an important role in shaping organizational outcomes (Hambrick and Mason, 1984; Bertrand and Schoar, 2003; Gartenberg, Pratt, and Serafeim, 2019). We view that this would also hold for firm ESG investments, because ESG is often an initiative led by senior managers of the

[1] Investment managers that signed the UN Principles for Responsible Investments had over $110 trillion asset under management in 2020. This is roughly three times larger than the total US market capitalization. Additionally, BlackRock CEO Larry Fink sent a letter to investors in January 2020 detailing his plans to incorporate ESG as a new standard for investing.

[2] In August 2019, the Business Roundtable that represents nearly 200 CEOs of America's biggest companies claimed the end to shareholder primacy and called for the role of a corporation to be redefined, suggesting that a large number of firms view sustainability issues as strategically important.

[3] In this draft, we use employee buy-in and employee opinions of senior management interchangeably.

firm. Moreover, the role of employees in effective execution of ESG would be important because there is an increasing view that human capital is a source for improved quality and innovation rather than an expendable resource or commodity (Zingales, 2000; Edmans, 2011). If so, employee buy-in to senior managers could be related to how effective firm managers can shift the organization and employees to better execute ESG initiatives.

In order to empirically examine our research question, we use ESG data obtained from MSCI ESG Ratings as a signal of firm ESG performance and employee ratings on senior management from Glassdoor as a signal of employee buy-in to senior management. Our data contains 976,125 employee reviews of 9,740 firm-years during the period between 2011 and 2018. We examine future shareholder value implications of our signals by testing for one-year-ahead abnormal stock return performance.[4] We first note that firm ESG rating (and Social rating by itself) exhibits very little correlation with employee opinions on senior management (or even just the opinion on the firm), which suggests that the two are very different signals. Interestingly, this is contrary to a common misperception that ESG, or at least firm social investments (i.e. the "S" of ESG), would be empirically related to how employees perceive senior management and the firm—our data presents no such relationship.

In our first test, we consider ESG and employee opinions of senior management as separate signals and create a long short portfolio to place our paper within the existing literature that conducted similar exercises. When we use ESG as the only signal, results indicate that both equal- and value-weighted portfolio of firms with high ESG performance do not outperform the portfolio of firms with low ESG performance. This is consistent with the notion suggested by prior literature that readily available ESG measures are not a pertinent signal to identify alpha when used alone

[4] Please see Appendix Figure 1. This signal is different from employees' rating on firm, which has been used by recent papers such as Green et al. (2019) as a proxy for employee satisfaction on the firm.

(Margolis and Walsh, 2003). Next, we use employees' opinions of senior management as the only signal to create portfolios and find that long/short portfolio generates an annual equal–weighted (value-weighted) alpha of 2.62% (2.37%). We view this result similar in spirit to with papers such as Gartenberg et al. (2019) that document firms with high purpose exhibiting higher future accounting and stock market performance.

In our main test, we take firms that are in the top quartile of both ESG and employee buy-in (i.e., opinions of senior managers) and compare them with firms that are in the bottom for both signals. An equal-weighted (value-weighted) portfolio of firms with high ESG performance and employee opinions of senior management significantly outperform the portfolio of firms with low ratings on both topics by 6.50% (6.64%). These results are confirmed using firm-level panel regressions that account for a host of additional firm characteristics and fixed effects. In addition, we conduct a series of tests to confirm that our results are robust to alternative factor models and portfolio construction rules.

We then compare the firms with high ESG and high buy-in to several different groups of firms using the two as signals. For example, the equal-weighted (value-weighted) portfolio of firms with high ESG performance and employee buy-in outperform the firms with low ESG performance and high employee buy-in by 3.87% (4.01%), the firms with high ESG performance and low employee buy-in by 6.98% (6.67%), and the firms with high ESG alone by 3.92% (3.85%). Most importantly, these firms outperform the firms with high employee buy-in alone by 2.53% and 2.75% when using equal-weighted and value-weighted approaches, respectively. Overall, this set of results suggests that firms with high employee opinions of senior management (or buy-in) and high ESG outperform other firms in different categories, and that employee buy-in to senior managers is an important condition for ESG to enhance shareholder value.

Finally, we examine the firm operating performance and its relation to ESG and employee buy-in to see if firm value is driven (in-part) by improved accounting performance. Specifically, we compare the portfolio of firms with high ESG performance and high employee buy-in to firms with low ratings on both metrics. Consistent with the stock return analysis, we find that firms in the long portfolio exhibit significantly higher future Sales and ROE growth than firms in the short portfolio. This result is robust to using different firm-level controls and fixed effects. Overall, we view our results to suggest the following: firms with high ESG performance and employee buy-in not only exhibit better future stock returns than firms with low performance in both metrics, but also exhibit better top and bottom line accounting performance.

We note that there are a few caveats to our findings. First, we caution the readers that we are not claiming that ESG causes employee buy-in or vice versa. We also note that these two measures have a low correlation. Second, we cannot rule out the possibility of a correlated omitted variable that positively influences employee buy-in, ESG, future equity values, and future accounting performance that is unobserved by the market. Notwithstanding, we note that our research design mitigates a number of concerns about endogeneity by using empirical approaches from the return predictability literature: (i) the returns tests are predictive rather than contemporaneous regressions; (ii) the portfolio tests control for conventional risk factors, allowing attribution of the alpha related to ESG and employee opinion of senior management, which is standard in the asset pricing literature; (iii) the portfolio tests are supplemented by firm-level return prediction regressions saturated with controls for known return predictors, and a host of firm characteristics.

We believe our study makes the following important contributions to the existing literature. First, our paper adds to the stream of literature that debates shareholder implications of firm ESG

investments. ESG has grown remarkably in recent years and there is a tremendous interest from firms, investors, and regulators. However, we do not know as much about whether and how firm ESG investments lead to shareholder value, arguably because ESG is often hard to define, quantify, and measure (Berg et al., 2019). In our paper, we examine organizational environments in which ESG may predict future stock returns: when employees are bought-in to senior management visions. We view our efforts similar in spirit to Khan, Serafeim, and Yoon (2016) that found sector-level materiality focus as a key determinant for ESG to enhance shareholder value. We view our findings sensible as firm ESG policies are often initiated by the senior management.

Second, our paper adds to the literature that examines the impact of employee opinions of senior management on shareholder return. For example, Gartenberg et al., (2019) find that firms with high clarity from senior management on purpose exhibit future stock and accounting performance. We add to this stream of literature by not only validating their findings but also by showing that firms with high ESG Score *and* employee opinions of senior management outperform the firms with high opinions of senior management alone. This suggests that ESG leads to enhanced firm value when employees are bought into the senior managers, who are likely to push ESG initiatives.

Finally, we add to the papers that examined employee perspectives across a large set of firms via Glassdoor data. For example, Green et al., (2019) find that firms with higher change in quarterly employee rating on the firm outperform the firms with low quarterly change. Sheng (2019) finds that firms with higher employee beliefs exhibit higher future returns. Huang, Li, and Markov (2020) uses Glassdoor's employee predictions of companies' six-month outlook and find that firms with higher outlook exhibit higher future operating performance. Like these papers, we

use insights from employees. But unlike these papers, we use employee's opinions on their senior managers to inform our understanding about the value implication of ESG.

The remainder of the paper is organized as follows. The next section provides the literature review and motivation. Section 3 describes the data and sample. Section 4 presents the research design and results. Section 5 concludes.

II. LITERATURE REVIEW & MOTIVATION

Why Firms Engage in ESG

There is a mixed evidence in the prior literature on the relation between sustainability and financial performance which examines different motives that shape firm sustainability outcomes (Barnett and Salomon, 2006; Margolis and Walsh, 2003; Orlitzky, Schmidt and Rynes, 2003; Hillman and Keim, 2001; McWilliams and Siegel, 2000). For example, a set of papers find that firms engage in sustainability to obtain better resources (Cochran and Wood, 1984; Waddock and Graves, 1997), attract higher quality employees (Bode et al. 2015, Turban and Greening, 1997), and better market products and services (Moskowitz, 1972; Fombrun, 1996). Some papers find that sustainability practices could also mitigate the likelihood of negative regulatory, legislative or fiscal action (Hillman and Keim, 2001) and tail risk (Hoepner et al., 2018), while protecting and enhancing corporate reputation (Fombrun and Shanley, 1990; Fombrun, 2005; Freeman et al., 2007).

On the other hand, others find sustainability related investments inefficient, led by manager incentives to extract private benefits (Brammer and Millington, 2008; Cheng, Hong, and Shue, 2014) or to serve political beliefs and agenda (Di Giuli and Kostovetsky, 2014). According to this stream of literature, sustainability investments disproportionately raise a firm's costs, creating a

disadvantage in a competitive market (Friedman, 1970; Aupperle et al., 1985; McWilliams and Siegel, 1997; Jensen, 2002).

ESG and Firm Value

While a vast majority of papers fail to document the value enhancing role of firm sustainability practices, there are a few papers that provide empirical evidence consistent with sustainability investments creating financial value. Khan et al., (2016) find that firms that invest in sector specific material ESG investments improve shareholder value. Eccles et al. (2014) identify a set of firms that adopted corporate policies related to environmental and social issues before the adoption of such policies became widespread, and find that these firms outperform their peers in the future in terms of stock market and accounting performance. Borgers et al. (2013) find that firms with better sustainability performance initially exhibit higher risk-adjusted returns but document that this result has reversed in more recent years. Dimson, Karakas and Li (2014) show that after successful engagements, particularly on environmental/social issues, companies experience improved accounting performance. This study contributes to this literature by examining the managerial environment in which ESG may enhance shareholder value.

Employees and Firm Value

Early theories (e.g., Taylor, 1911) about labor were driven by the concept that employees are just like other raw material inputs—replaceable—making employee opinions of their leader inconsequential. On the other hand, human relations theories (e.g., Maslow, 1943; Hertzberg, 1959; McGregor, 1960) view employees as critical assets to organizations (e.g. not-commodities) who can create increased value in ways raw materials cannot. Such notions are consistent with modern-day labor markets that do not view labor as a replaceable commodity, but value human

capital as an important determinant of innovation (Zingales, 2000). In similar spirit, papers have documented that the intrinsic motivation of workers is an important driver of employees (Kitzmueller and Shimshack, 2012; Leete, 2001; Mocan and Tekin, 2003).

A few papers examine employee satisfaction's impact on shareholder value. As most would expect, opinions of senior management and employee satisfaction are two highly correlated variables. Edmans (2011) uses the list from Fortune Magazine's 100 Best Companies to Work For and find that the value-weighted portfolio of these firms outperform the market. He interprets measures of employee satisfaction as reflecting firms' intangible assets. Green et al., (2019) use the data from Glassdoor and find that firms with higher quarterly change in employee satisfaction exhibits higher stock returns. They also note alpha attributable to employee opinions of senior management which we also confirm in our findings. Sheng (2019) also use Glassdoor employer reviews and finds evidence consistent with hedge funds trading on employer reviews.

In our paper, we choose to focus on employee opinions of senior management, instead of employee satisfaction, as we view it closer to the mechanism related to motivating employees to better implement firm ESG related investments from senior management.

ESG and Employee Outcomes

Bauman and Skitka (2012) points out that most studies on ESG and employees are done through survey and small-scale data, noting employee level data is hard to obtain and is the likely source of paucity of ESG research on employees. Generally, ESG is viewed as a way to attract employees. As the Society for Human Resource Management (SHRM 2007) noted "Talent-strapped companies have found that ESG can be a draw in a crowded labor marketplace and can grab the attention of a certain type of highly skilled, highly motivated employee." However, the

evidence is somewhat mixed. Carnahan, Kryscynski, and Olson (2017) document law firms with more ESG activity (i.e., pro-bono cases) experienced higher turnover rates noting that investments in ESG may increase employee departures from organizations under certain conditions. Once more, Borghesi, Houston, and Naranjo (2014) find that if certain ESG activities come too close to represent personal political causes of executives it may have a negative effect, discouraging certain employees. As noted in the intro, ESG and employee views of management have less in common, presenting no correlation between the two measures.

III. DATA AND SAMPLE

ESG Data

Data on firm ESG performance comes from MSCI ESG Ratings. We use MSCI ESG Ratings because it is the largest ESG data provider to the investment community (Christensen, Serafeim, and Sikochi, 2019). For example, of the 50 largest asset managers, ranked by assets under management, 46 use the MSCI performance score, with the total number of clients being 1,200+ investment firms (Serafeim and Yoon, 2020). We also use this dataset for ESG performance, because it gives us the greatest number of firm-years when merged with our Glassdoor data when compared with Sustainalytics and Thomson Reuters Asset4. We do not use MSCI KLD data used by Khan et al., (2016) to link ESG to stock returns, because according to MSCI, KLD Data now only exists for 400 companies, is mostly used by academic research, and is now in the process of being phased out as MSCI shifts towards MSCI ESG Ratings as their main ESG dataset. We also note that MSCI ESG Ratings dataset is not backfilled.

The MSCI ESG Ratings data is based on 37 key issues, which correspond to one of ten macro themes that MSCI identifies as concerns to investors. The ten macro themes are climate change, natural capital, pollution and waste, environmental opportunities, human capital, product

liability, stakeholder opposition, social opportunities, corporate governance, and corporate behavior. Key issues are annually selected for each of the 156 GICS Subindustries and weighted according to MSCI's materiality-mapping framework. MSCI aggregates the issue data to an overall score, where each issue is weighted according to its assessed materiality in each industry.

MSCI measures the exposure of each company by combining company-specific operations data with key-issue-relevant macro-level data relating to the company's geography of operations and business segment. Company-operations data are sourced from corporate reporting, such as annual reports, investor presentations, and financial and regulatory filings, with macro-level data being sourced from a wide variety of academic, government, and NGO databases. Similarly, risk and opportunity management–related data come from corporate documents, government data, news media, relevant organizations and professionals, and an assortment of popular, trade, and academic journals. As part of its data-verification process, MSCI engages in direct communication with companies and invites companies to participate in a data-review process, which includes commenting on the accuracy of company data for all MSCI ESG research reports.

Glassdoor Data

We obtain employee satisfaction ratings from Glassdoor. Founded in 2007, Glassdoor maintains the largest database of anonymous employee reviews of employment experiences. Glassdoor's online platform provides company reviews, job-interview reports, salary reports, and CEO approval ratings for over 600,000 public and private companies. Glassdoor requires an active email address or a valid social networking account (e.g., Facebook) to prevent companies profiled on the website from artificiality manipulating reviews (i.e., fake reviews) or promoting itself. Also, according to Glassdoor, they use an algorithm to detect fraudulent reviews and also have a human go through the content to eliminate invalid reviews (Green et al., 2019).

As shown in Figure 1, those who review their employment at a company across a number of unique categories (e.g., overall rating of the company, career opportunities, compensation, senior management, work-life balance, and culture and values) provide their perspective of the employer on a scale of 1 to 5. In addition to the scaled ratings, employees also can input textual responses for pros and cons of working at the firm. We use the ratings on senior management provided by the employees as a proxy for employee buy-in to (or employee opinion of) senior management.

A common bias in any survey setting is the voluntarily submission process of anonymous responses, which skews reviews being provided by a certain of employee or a certain of type of reviews. For example, when views are made public (e.g., Yelp!), there is an empirical bias towards positive public reviews like those offered by Glassdoor. We note that our dataset could also be subject to such an issue. According to Glassdoor, Glassdoor implemented "give-to-get model" in 2015 to partially alleviate such a potential concern. This model limits access to its online information to job seekers unless the job seeker provides their own review on the employer.

Marinescu et. al., (2018) compared Glassdoor's "give-to-get model" to a randomized controlled experiment and found that the "give-to-get model" leads to similar results and concluded that such a model leads to a significant reduction in bias.

Other Firm-Level Characteristics

We obtain firm level characteristic data from Compustat and obtain all stock price related data from CRSP. We obtain Fama-French five factors from Ken French's website.

Descriptive Statistics

Table 1 describes the sample. Panel A presents the number of observations by year. There are 13,807 reviews of 348 unique companies in 2011 which grow to 210,352 reviews of 1,472 unique companies by 2017. We have 102,355 reviews of 1,188 unique companies in 2018 because our employee review data is until June 2018. Panel B presents the 976,126 review observations by GICS sector. The top three sectors with the most reviews include: Consumer Discretionary Sector with 1,670 firms having 358,594 reviews, Information Technology Sector with 1,886 firms having 177,048 reviews, and the Industrials Sector with 126,116 reviews across 1,834 firms. The lowest reviewed sectors include: Real Estate with 5,479 reviews of 253 firms, Financials with 8,261 reviews of 169 firms, and Utilities with 8,774 reviews across 371 firms.

Table 2 Panel A presents the summary statistics. Employee Rating on Senior Management has a mean and median of 2.84 and 3.00. Employee Rating on the Firm has a mean and median of 3.31 and 3.00. MSCI ESG Score has a mean and median of 4.53 and 4.50, and a standard deviation of 1.05. Environmental Score has a mean and median of 4.80 and 4.60, and a standard deviation of 2.03. Social Score has a mean and median of 4.38 and 4.40, and a standard deviation of 1.60.

Governance Score has a mean and median of 5.56 and 5.30, and a standard deviation of 2.21. An average firm has a Size of 14.96, MTB of 3.70, ROE of 0.08, SG&A/Sales of 0.37, Adv Exp/Sales of 0.01, R&D/Sales of 0.22, and Capex/PPE of 0.11.

Panel B presents the correlation table. We first note a high correlation between our main measure Glassdoor employee rating on senior management and the employee rating on the firm (0.78). However, Glassdoor employee buy-in rating's correlation with MSCI ESG Score, Environmental Score, Social Score, and Governance Score are 0.00, 0.00, -0.01, and 0.01, respectively. Notably, the buy-in rating on senior management and ESG's Social rating are not correlated (-0.01). This low correlation suggests that firm ESG rating and employee rating on senior managers could be unrelated signals. We also note that Size is moderately correlated (0.17) with employee ratings of senior managers and firm ESG ratings (0.21).

IV. RESEARCH DESIGN & RESULTS

Calendar Time Portfolio Returns Using ESG Score or Glassdoor as Signals

To test the future performance implications of firms' ESG and employee buy-in to senior management, we form portfolios based using ESG and/or employee ratings of senior management and conduct the following regression:

$$R_{i,t} = \alpha + \beta_{MKT} MKT_{i,t} + \beta_{SMB} SMB_{i,t} + \beta_{HML} HML_{i,t} + \beta_{RMW} RMW_{i,t} + \beta_{CMA} CMA_{i,t} + \varepsilon_{i,t}$$

where $R_{i,t}$ is the return on portfolio i in month t in excess of the risk free rate. $MKT_{i,t}$ is the market excess return; $SMB_{i,t}$ and $HML_{i,t}$ are the Fama and French (1993) size and book-to-market factors; $RMW_{i,t}$ and $CMA_{i,t}$ are profitability and investment factors from Fama and French (2016). α is an intercept that captured the abnormal risk-adjusted return. This research design adopts controls for

standard risk factors and then tests whether a portfolio long and short scoring high or low in the focal characteristic yields alpha.

First, we form portfolios based on just MSCI's ESG score and find no alpha in the long/short portfolio. Specifically, we take the firm-level MSCI ESG score during the year *t* as a signal and construct portfolios at the beginning of January of *t+1*.[5] Table 3 Panel A presents the estimated coefficients of a five-factor model for the bottom and top quartile portfolios. We do not find results for portfolios constructed based on ESG ratings alone: the long-short portfolio having insignificant alpha. Specifically, the portfolios of firms with high ESG score yields an annualized alpha of 0.82% (t-stat: 0.97) and those firms with low ESG yields an annualized alpha of 0.11% (t-stat: 0.10). When we take the value-weighted approach, the portfolios of firms with high ESG yields an annualized alpha of 0.81% (t-stat: 0.97) and those firms with low ESG yields an annualized alpha of -0.18% (t-stat: -0.17). Similar to the notions in the prior literature, finding insignificant alpha suggests that MSCI Scores alone are not a meaningful signal that predicts future stock returns.

In Panel B, we consider employee opinions of senior management as the only signal and do find alpha consistent with prior research. When we take the equal-weighted approach, the portfolios of firms with high employee satisfaction yields an annualized alpha of 2.20% (t-stat: 2.40) and those firms with low employee satisfaction yields an annualized alpha of -0.41% (t-stat: -0.44). The difference in alphas is 2.62% that is statistically significant at the 5% level. When we take the value-weighted approach, the portfolios of firms with high employee satisfaction yields an annualized alpha of 1.91% (t-stat: 2.11) and those firms with low employee satisfaction yields

[5] We use an annual signal to reduce multiple rebalancing during the year. Moreover, MSCI has inconsistent timing of its firm updates, updating scores at various times throughout the year as data becomes available. MSCI updates firms in each industry on an annual basis unless there is a major event.

an annualized alpha of -0.46% (t-stat: -0.50). The difference in alphas is 2.37% that is statistically significant at the 5% level. This set of results on employee opinions of management suggests that firms with higher employee view on senior management outperform others and is similar to Gartenberg et. al., (2019) that documents that high clarity and purpose leads to enhanced accounting and stock performance, and Green et al., (2019) that documents high employee opinions of the firm exhibits better stock returns.

Calendar Time Portfolio Returns Using ESG Score and Glassdoor as Signals

Next, we construct a double sorted portfolio based on the two signals (i.e., ESG and employee ratings on senior managers) to examine whether there is an interaction effect between ESG and employee opinion of senior management to improvements in firm value. Specifically, we use quartile cuts to form portfolios and take the portfolio of firms that score high on both ESG Score and employee opinion of senior management as our long portfolio and the firms that score low on both dimensions as our short portfolio.

Table 4 Panel A presents the main results where we take the equal-weighted approach in columns 1 and 2 and the value-weighted approach in columns 3 and 4, respectively. Our main finding is that the portfolio of firms with high ESG Score and high opinion of senior management significantly outperforms the firms with low ESG and low opinion of senior management. Specifically, we find that the equal weighted portfolio of firms that score high on ESG and high opinion on senior management yields an annualized alpha of 4.74% (t-stat: 2.69) and the portfolio of firms that score low on both dimensions yields an annualized alpha of -1.77% (t-stat: -1.09). The difference in alphas is 6.50% and is statistically significant at the 1% level.

When we use value-weighted approach, we find that the portfolio of firms that score high on ESG and opinion of senior management yields an annualized alpha of 4.66% (t-stat: 2.70) and the portfolio of firms that score low on both dimensions yields an annualized alpha of -1.98% (t-stat: -1.24). The difference in alphas is 6.64% and also statistically significant at the 1% level. Overall, these results suggest that ESG and employee opinion of senior management combined can be used as a signal to predict the impact of ESG initiatives on future stock returns Employee buy-in to senior management may be a necessary condition for ESG policies to generate shareholder value. As firm ESG policies are likely impacted by a tone set by senior managers, proper execution of ESG initiatives may require employees that are bought into the senior management vision.

Additional Tests to Corroborate the Finding

In Table 4 Panel B, we conduct additional tests to decompose returns and to assess the robustness of our findings in Panel A. We first decompose the ESG score used in previous tables to scores to that related to environment, social, and governance. Then, we create double sorted portfolios based on the grouped component of employee opinion of senior management and individual category ESG component (e.g., Environment, Social, or Governance).

The portfolio of firms with high social score and high employee opinion of senior management outperforms the portfolio of firms with low social score and low employee opinion of senior management by 4.41% (p-value<0.05) and 4.39% (p-value<0.05) using equal-weighted and value-weighted approaches, respectively. However, when we use MSCI Governance Score or Environment score, the portfolio of firms with high performance on these dimensions and also

with high employee opinion of senior management do not exhibit statistically different alpha vis-a-cis the firms with low ratings on the doubled sorted signals.

Second, we analyze portfolio performance using different portfolio cuts (i.e., tercile and quintile instead of quartile cut approach). When we use the tercile cut, we find that long portfolio outperforms the short portfolio by 5.42% (p-value<0.05) and 5.28% (p-value<0.05) using equal and value-weighted approach, respectively. When we use the quintile cut, we find that long portfolio outperforms the short portfolio by 5.44% (p-value<0.05) and 5.92% (p-value<0.05) using equal and value-weighted approach, respectively. We note that we do not use decile cuts in our data as double sorting to identify the set of firms that score high in both signals will lead to extremely thin portfolios.

Next, we analyze performance over different time periods. We split the analysis period to before and after 2014, which is the midpoint of our total period of examination. During 2011-2014, we find that the long portfolio outperforms the short portfolio by 5.10% and 5.15% using equal and value-weighted portfolios, respectively. However, the difference is not statistically significant. During 2015-2018, we find that the long portfolio outperforms the short portfolio by 7.05% (p-value<0.01) and 7.32% (p-value<0.01) using equal and value-weighted portfolios, respectively. We speculate that the stronger results in the second half could reflect the improved data collection process that Glassdoor implemented post 2015 that uses the give-to-get model we identified and discussed in the data section.

Last, we assess the robustness of results to different factor models. We estimate alphas using the Fama-French (1993) three-factor model that excludes the momentum and liquidity factors, or a four-factor model that excludes the liquidity factor (Carhart 1997). The results are unchanged using these alternative factor models. When we use the three-factor model, we find that

the long portfolio outperforms the short portfolio by 5.68% (p-value<0.05) and 5.81% (p-value<0.01) using equal-weighted and value-weighted portfolios, respectively. When we use the four-factor model, we find that the long portfolio outperforms the short portfolio by 5.77% (p-value<0.01) and 5.15% (p-value<0.01) using equal-weighted and value-weighted portfolios, respectively.

Firm-Level Panel Regression

In Table 4 Panel C, we present the results using firm level panel regressions that control for several firm level attributes that could predict future returns in a way not captured in the calendar-time portfolio regression specification that were presented in the previous panels. Specifically, we conduct a Fama-MacBeth (1973) estimation:

$$R_{i,t} = \beta_0 + \beta_1 * Hi\ ESG\ \&\ Hi\ Rating\ on\ Senior\ Mgmt + \beta_2 * Lo\ ESG\ \&\ Lo\ Rating\ on\ Senior\ Mgmt + \beta_3 * Z_{i,t} + \varepsilon_{i,t}$$

where $R_{i,t}$ is the stock return for firm i in month t. Hi ESG & Hi Rating on Senior Mgmt (Lo ESG & Lo Rating on Senior Mgmt) indicates the firms that have high (low) ESG Score and high (low) employee opinion of senior management. $Z_{i,t}$ is a vector of firm characteristics. First set of controls is similar in spirit to Edmans (2011). Last Year's Return is the 12-month stock return during year t. PRC is the price at the end of month t-2. DVOL is the dollar trading volume (in millions) in month t-2. Size is the natural log of market capitalization. MTB is market value at the end of the calendar year over book value of equity. We also add additional controls for robustness. ROE is defined as net income over average shareholder equity. SG&A/Sales is selling, general, and administrative expense over sales. Adv Exp/Sales is advertising expense over sales.

R&D/Sales is R&D expense over sales. Capex/PPE is capital expenditure divided by property plant and equipment. Lastly, we control for industry and year-month fixed effects.

In column 1, we consider control variables similar to those used in Edmans (2011). The coefficient estimates on High ESG & High Rating on Senior Management and Low ESG & Low Rating on Senior Management are 0.0039 (t-stat: 3.64) and 0.0000 (t-stat: 0.02). This means that an annualized alpha from the long short portfolio is 4.80% and is statistically significant at the 1% level. In column 2, we consider additional firm level control variables. The coefficient estimates on High ESG & High Rating on Senior Management and Low ESG & Low Rating on Senior Management are 0.0036 (t-stat: 3.39) and 0.0001 (t-stat: 0.04). This means that an annualized alpha from the long short portfolio is 4.37% and is also statistically significant at the 1% level. Overall, the firm-level panel regression results confirm those in previous panels and corroborate that ESG and employee buy-in can be used as a signal to predict future stock returns.

Comparing Portfolio Return to Other Portfolios that use ESG Score and/or Glassdoor Data

In this subsection, we compare the portfolio of firms with high ESG and employee buy-in (i.e., our long portfolio) to other portfolio of firms using employee buy-in and ESG rating. In Table 5 Panel A, we present the results equal-weighted approach. First, we find that our long portfolio outperforms the portfolio of firms with low ESG but high buy-in by 3.87% (p-value< 0.05) and the portfolio of firms with high ESG and low buy-in by 6.98% (p-value< 0.01). We also compare our long portfolio to portfolio of firms from Table 3. Specifically, we find that our long portfolio outperforms the portfolio of firms with high ESG only by 3.92% (p-value<0.01) and firms with high employee buy-in only by 2.53% (p-value<0.05).

Our results similar in terms of statistical significance and economic magnitude when we use value-weighted approach. We find that our long portfolio outperforms the portfolio of firms with low ESG but high buy-in by 4.01% (p-value< 0.05) and the portfolio of firms with high ESG and low buy-in by 6.67% (p-value< 0.01). We also compare our long portfolio to portfolio of firms from Table 3. Specifically, we find that our long portfolio outperforms the portfolio of firms with high ESG only by 3.85% (p-value<0.05) and firms with high employee buy-in only by 2.75% (p-value<0.05).

Overall, our findings in the previous three tables can be summarized as follows. First, we confirm that employee opinions of senior management predict future stock returns as noted in prior literature. Second, we find employee opinions of senior management coupled with ESG has a stronger impact on firm value than just employee opinions of senior management alone. Third, our results suggest that ESG leads to enhance shareholder value when there are employees that are more satisfied. We view that this is a key finding that makes a contribution to the ESG literature, because it presents a circumstance in which ESG enhances value—namely when employees are bought-in and engaged in the efforts of the firm.

Future Accounting Performance

Up to this point, all regressions examine the future stock market performance as a dependent variable to understand the value attributable to ESG and employee opinions of senior management. To complement these results, we also examine the future changes in accounting performance. This analysis helps to identify whether the firm value identified in prior results are due to price pressure or firm operations. The number of investors integrating ESG data in investment decisions has grown considerably over the period of study potentially putting price

pressure on the stocks of firms with good ESG performance and high employee opinion of senior management —possibly driving positive alphas found earlier. If firms investing in sustainability issues and employee opinion of senior management exhibit superior future accounting performance, this would suggest that price pressure alone cannot explain the superior future stock price performance and that accounting fundamentals are driving some aspect of this enhanced value.

Table 6 presents the future changes in accounting performance using sales and profitability. In Panel A, we compare Sales of firms with high ESG and high buy-in to other firms that use different permutations of the two signals. We find that the portfolio of firms with high ESG and employee buy-in exhibits more positive changes in sales than other firms across all time horizons. For example, when we compare the firms with high ESG and buy-in to firms with low performance on both signals during t=0 to t=1, t=0 to t=2, t=0 to t=3, t=0 to t=4, and t=0 to t=5, we find significant differences in sales growth of 3.90%, 8.92%, 13.34%, 14.16%, and 16.63%, respectively and the differences are all significant at the 1% level. The firms with high ESG and buy-in also exhibit superior sales growth than firms with high ESG and low buy-in and the firms with low ESG and high buy-in.

In Panel B, we compare ROE growth instead of Sales growth. We again find that the portfolio of firms with high ESG and employee buy-in exhibits more positive changes in ROE than other firms across all time horizons. For example, when we compare the firms with high ESG and buy-in to firms with low performance on both signals during t=0 to t=1, t=0 to t=2, t=0 to t=3, t=0 to t=4, and t=0 to t=5, we find significant differences in ROE growth of 15.17%, 26.15%, 24.08%, 36.72%, and 39.51%, respectively and the differences are all significant at the 1% level. The firms

with high ESG and buy-in also exhibit superior sales growth than firms with high ESG and low buy-in and the firms with low ESG and high buy-in.

In Panel C, we examine this in a panel regression format. Our dependent variable is Sales and ROE Growth from t=0 to t=2. All other variables are defined as in Table 4 Panel C but the only difference is that we control for year fixed effects because our panel is structured at the firm-year level. Our results are similar to those in Panels A and B. The portfolio of firms that exhibit high ESG and employee buy-in exhibits 4.39% greater sales growth than the firms with low ESG and employee buy-in. In addition, the portfolio of firms that exhibit high ESG and employee buy-in exhibits 26.07% greater ROE growth than the firms with low ESG and employee buy-in. These numbers are significant even after controlling for firm-level controls and fixed effects. Taken together, firms with high ESG and high buy-in to senior management vision not only exhibit stronger stock performance but also exhibit stronger top and bottom line. Overall, we view this test as a robustness that confirms employee buy-in as an important signal for ESG to enhance shareholder value.

V. CONCLUSION

In this paper, we provide evidence that ESG coupled with employee buy-in to senior management predicts future stock returns. Using calendar-time portfolio stock returns, we find that firms with high ratings on both ESG and employee opinion of senior management significantly outperform those with low ratings on both. This result is robust to using to using alternative factor models and portfolio permutations. In addition, it is robust to using panel regression that controls for additional firm level covariates that may drive stock returns. These set of firms with high ESG and employee buy-in not only exhibit superior future stock market performance but also stronger

accounting performance. Lastly, firms with high ratings on both ESG and employee buy-in outperform those with high employee opinion of senior management or ESG alone.

We believe that our paper makes three important contributions to the literature. First, our paper adds to the papers that examined shareholder implications of firm ESG investments. We show that employee opinion of senior management may be a condition that better enables ESG to enhance shareholder value. Second, we also add to the literature on employee insights to firm performance and shareholder value. We add by showing that employee opinion of senior management coupled with ESG leads to value over and beyond the effect from employee opinion of senior management alone. Last, we provide evidence that suggest that firm engagements in ESG may have synergies when coupled with employee opinion of senior management. Overall, our results demonstrate that ESG coupled with employee buy-in to senior management is a valuable signal to predict stock returns. We hope that our findings may have implications for asset managers who integrate ESG factors into their portfolios and also inform firm managers who manage their human capital.

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Table 1: Sample Description

This table describes the sample. Panel A (B) presents the number of observations by year (industry).

Panel A: By Year

Year	# of Firm	# of Reviews
2011	348	13,807
2012	1,124	32,389
2013	1,188	68,428
2014	1,410	126,007
2015	1,506	208,104
2016	1,504	214,684
2017	1,472	210,352
2018	1,188	102,355
Total	9,740	976,126

Panel B: By Industry

GICS Industry	# of Firm	# of Reviews
Energy	624	18,915
Materials	645	20,176
Industrials	1,834	126,116
Consumer Discretionary	1,670	358,594
Consumer Staples	517	91,109
Health Care	1,312	81,505
Financials	169	8,261
Information Technology	1,886	177,048
Communication Services	459	80,149
Utilities	371	8,774
Real Estate	253	5,479
Total	9,740	976,126

Table 2 Descriptive Statistics

This table presents descriptive statistics. Rating on Senior Management (Rating on Firm) is the median employee rating on senior management (overall rating) from Glassdoor. See Figure 1 for detailed illustration. MSCI Score is the ESG Score from MSCI. Env Score, Soc Score, and Gov Score are environmental, social, and governance scores from MSCI. Size is the natural log of market capitalization. MTB is market value at the end of the calendar year divided by book value of equity. ROE is defined as net income divided by average shareholder equity. SG&A/Sales is selling, general, and administrative expense divided by sales. Adv Exp/Sales is advertising expense divided by sales. R&D/Sales is R&D expense divided by sales. Capex/PPE is capital expenditure divided by property plant and equipment. Bold fonts in Panel B indicate when p-value is less than 5%.

Panel A. Summary Statistics

Variable	N	Mean	S.D.	25%	Median	75%
Rating on Senior Mgmt	9,740	2.84	0.97	2.00	3.00	3.00
Rating on Firm	9,740	3.31	0.86	3.00	3.00	4.00
MSCI ESG Score	9,740	4.53	1.05	3.90	4.50	5.20
Env Score	9,740	4.80	2.03	3.40	4.60	6.10
Soc Score	9,740	4.38	1.60	3.40	4.40	5.40
Gov Score	9,736	5.56	2.21	4.00	5.30	6.80
Size	9,740	14.96	1.55	13.85	14.85	15.99
MTB	9,740	3.70	247.75	1.42	2.44	4.31
ROE	9,740	0.08	0.82	0.02	0.10	0.19
SG&A/Sales	9,740	0.37	11.06	0.08	0.19	0.34
Adv Exp/Sales	9,740	0.01	0.03	0.00	0.00	0.01
R&D/Sales	9,740	0.22	2.63	0.00	0.00	0.06
Capex/PPE	9,740	0.11	0.16	0.06	0.08	0.13

Panel B. Correlation Table

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Rating on Senior Mgmt	1.00												
2	Rating on Firm	**0.78**	1.00											
3	MSCI ESG Score	0.00	0.02	1.00										
4	Env Score	0.00	0.01	**0.56**	1.00									
5	Soc Score	-0.01	0.00	**0.63**	**0.08**	1.00								
6	Gov Score	0.01	0.00	**0.23**	**-0.08**	**-0.02**	1.00							
7	Size	**0.17**	**0.21**	**0.09**	**0.16**	**-0.03**	**0.04**	1.00						
8	MTB	0.01	0.01	**0.02**	**0.03**	0.01	0.00	0.01	1.00					
9	ROE	0.01	0.00	**0.04**	**0.03**	0.01	**0.03**	**0.10**	0.00	1.00				
10	SG&A/Sales	-0.02	**-0.02**	0.00	0.00	0.00	-0.01	0.00	0.00	-0.02	1.00			
11	Adv Exp/Sales	**0.06**	**0.06**	**-0.05**	**0.03**	**-0.05**	**-0.05**	0.01	0.02	-0.01	0.01	1.00		
12	R&D/Sales	**0.06**	**0.03**	0.00	0.01	0.00	**-0.03**	**-0.05**	0.00	**-0.08**	**0.27**	-0.01	1.00	
13	Capex/PPE	**0.04**	**0.02**	0.00	0.01	0.00	0.01	**-0.03**	-0.01	**-0.06**	0.01	**0.06**	**0.04**	1.00

Table 3. Calendar Time Portfolios Using Glassdoor Rating and/or MSCI Score

The table reports alphas, factor loadings, and t-statistics from monthly calendar-time Fama-French regressions for equal- and value-weighted portfolios. Classifications are based on Rating on Senior Management or MSCI Score. Rating on Senior Management is the median employee rating on senior management from Glassdoor. MSCI Score is the ESG Score from MSCI. The intersections of quartile portfolios are formed to estimate the regressions. Firms scoring at the bottom and top quartiles of the signal are included as the short and long portfolios, respectively. The regressions are estimated from January 2012 to December 2019. Market is the market excess return; SMB and HML are the Fama and French (1993) size and book-to-market factors; RMW and CMA are profitability and investment factors from Fama and French (2016). ***, **, and * on difference in alphas indicate two-tailed p-value less than 1, 5, and 10%, respectively.

Panel A. Long/Short Portfolio on MSCI Score Only

	Equal-Weighted				Value-Weighted			
	(1)		(2)		(3)		(4)	
	Low ESG		High ESG		Low ESG		High ESG	
Parameter	Estimate	t	Estimate	t	Estimate	t	Estimate	t
Intercept	0.0001	0.10	0.0007	0.97	-0.0002	-0.17	0.0007	0.97
Market	1.0592	32.38	1.0451	44.00	1.0553	33.48	1.0373	43.96
SMB	0.5791	11.79	0.4855	13.98	0.5384	11.35	0.4427	12.71
HML	0.1861	3.93	0.0610	1.66	0.1671	3.61	0.0505	1.42
RMW	0.1720	2.42	0.0468	0.98	0.1675	2.44	0.0389	0.82
CMA	0.0259	0.34	0.0569	1.00	0.0141	0.19	0.0582	1.03
	0.0021	2.94						
N	96		96		96		96	
Annualized Alpha	0.11%		0.82%		-0.18%		0.81%	
Difference in Alphas			0.70%				0.99%	

Panel B. Long/Short Portfolio on Ratings on Senior Management Only

	Equal-Weighted				Value-Weighted			
	(1)		(2)		(3)		(4)	
	Low Rating on Senior Mgmt		High Rating on Senior Mgmt		Low Rating on Senior Mgmt		High Rating on Senior Mgmt	
Parameter	Estimate	t	Estimate	t	Estimate	t	Estimate	t
Intercept	-0.0003	-0.44	0.0018	2.40	-0.0004	-0.50	0.0016	2.11
Market	1.0638	40.23	0.9928	41.58	1.0538	40.95	0.9921	41.89
SMB	0.7453	18.60	0.5808	17.46	0.7145	17.93	0.5397	16.38
HML	0.1543	3.29	0.1028	3.14	0.1341	3.00	0.0881	2.78
RMW	0.1106	1.50	-0.1868	-3.32	0.1163	1.64	-0.1872	-3.39
CMA	0.0504	0.75	-0.1399	-2.50	0.0445	0.68	-0.1328	-2.43
N	96		96		96		96	
Annualized Alpha	-0.41%		2.20%		-0.46%		1.91%	
Difference in Alphas			2.62%	**			2.37%	**

Table 4. Calendar Time Portfolios Using Rating on Senior Management and MSCI Score

The table reports alphas, factor loadings, and t-statistics from monthly calendar-time Fama-French regressions for equal- and value-weighted portfolios. Classifications are based on Rating on Senior Management or MSCI Score. Rating on Senior Management is the median employee rating on senior management from Glassdoor. MSCI Score is the ESG Score from MSCI. The intersections of quartile portfolios are formed to estimate the regressions. Firms scoring at the bottom and top quartiles of the signal are included as the short and long portfolios, respectively. The regressions are estimated from January 2012 to December 2019. Market is the market excess return; SMB and HML are the Fama and French (1993) size and book-to-market factors; RMW and CMA are profitability and investment factors from Fama and French (2016). ***, **, and * on difference in alphas indicate two-tailed p-value less than 1, 5, and 10%, respectively.

Panel A. Long/Short Portfolio on both Rating on Senior Management and MSCI Score

	Equal-Weighted				Value-Weighted			
	(1)		(2)		(3)		(4)	
	Low ESG & Low Rating on Senior Mgmt		High ESG & High Rating on Senior Mgmt Only		Low ESG & Low Rating on Senior Mgmt		High ESG & High Rating on Senior Mgmt Only	
Parameter	Estimate	t	Estimate	t	Estimate	t	Estimate	t
Intercept	-0.0015	-1.09	0.0039	2.69	-0.0017	-1.24	0.0038	2.70
Market	1.0935	25.99	0.9637	20.77	1.0861	27.29	0.9606	20.84
SMB	0.7510	10.28	0.4023	5.92	0.7140	10.01	0.3569	5.35
HML	0.2207	2.65	0.0530	0.83	0.1930	2.35	0.0472	0.76
RMW	0.3062	2.68	-0.2150	-2.01	0.3034	2.73	-0.2310	-2.19
CMA	0.1505	1.47	-0.0650	-0.65	0.1399	1.42	-0.0488	-0.50
N	96		96		96		96	
Annualized Alpha	-1.77%		4.74%		-1.98%		4.66%	
Difference in Alphas			6.50%	***			6.64%	***

Panel B. Robustness Test

The table reports alphas, factor loadings, and t-statistics from monthly calendar-time Fama-French regressions for equal- and value-weighted portfolios. Classifications are based on Rating on Senior Management or MSCI Score. Rating on Senior Management is the median employee rating on senior management from Glassdoor. MSCI Score is the ESG Score from MSCI. Env Score, Soc Score, and Gov Score are environmental, social, and governance scores from MSCI. The intersections of portfolios are formed to estimate the regressions. Firms scoring at the bottom and top quartiles of the signal are included as the short and long portfolios, respectively. The regressions are estimated from January 2012 to December 2019. ***, **, and * on difference in alphas indicate two-tailed p-value less than 1, 5, and 10%, respectively.

	Equal-Weighted Annualized Alpha				**Value-Weighted Annualized Alpha**			
	Low ESG & Low Rating on Senior Mgmt Only	High ESG & High Rating on Senior Mgmt Only	Difference in Alpha		Low ESG & Low Rating on Senior Mgmt Only	High ESG & High Rating on Senior Mgmt Only	Difference in Alpha	
Sub ESG Categories in lieu of Overall ESG Rating								
Environmental	1.08%	4.86%	3.79%		0.81%	4.72%	3.91%	
Social	-2.00%	2.41%	4.41%	**	-2.05%	2.34%	4.39%	**
Governance	1.82%	2.84%	1.02%		1.59%	2.78%	1.19%	
Alternative Portfolio Cut								
Tercile	-1.89%	3.54%	5.42%	**	-1.89%	3.39%	5.28%	**
Quintile	-1.06%	4.38%	5.44%	**	-1.59%	4.33%	5.92%	**
Sub period								
2011-2014	-2.04%	3.05%	5.10%		-2.10%	3.05%	5.15%	
2015-2018	-1.58%	5.48%	7.05%	***	-1.97%	5.35%	7.32%	***
Alternative Factor Models Using Quartile Cut								
3-factor alpha	-1.28%	4.40%	5.68%	**	-1.50%	4.31%	5.81%	***
4-factor alpha	-0.74%	5.04%	5.77%	***	-0.74%	4.40%	5.15%	***

Panel C. Firm-Level Panel Regression

Dependent variable is the monthly stock return for each firm measured as in the calendar-time portfolios for every month beginning in January to December of t+1. High ESG & High Rating on Senior Management (Low ESG & Low Rating on Senior Management) indicates firms scoring at the top (bottom) quartile of ESG and Employee Rating on Senior Management. Last Year's Return is the 12-month stock return during year t. PRC is the price at the end of month t-2. DVOL is the dollar trading volume (in millions) in month t-2. Remaining controls are additional firm level controls. Size is the natural log of market capitalization. MTB is market value at the end of the calendar year divided by book value of equity. ROE is defined as net income divided by average shareholder equity. SG&A/Sales is selling, general, and administrative expense divided by sales. Adv Exp/Sales is advertising expense divided by sales. R&D/Sales is R&D expense divided by sales. Capex/PPE is capital expenditure divided by property plant and equipment. Standard errors are robust and clustered at the firm-level.

	(1)		(2)	
	Estimate	t	Estimate	t
High ESG & High Rating on Senior Mgmt	0.0039	3.64	0.0036	3.39
Low ESG & Low Rating on Senior Mgmt	0.0000	-0.02	0.0001	0.04
Last Year's Return	-0.0081	-5.58	-0.0083	-5.68
PRC	-0.0010	-2.09	-0.0011	-2.28
DVOL	-0.0006	-1.26	-0.0007	-1.45
MTB	0.0000	-0.67	0.0000	-0.70
Size	0.0009	1.69	0.0010	1.77
ROE			0.0023	3.57
SG&A/Sales			0.0000	-0.19
Adv Exp/Sales			0.0315	2.54
R&D/Sales			0.0004	1.44
Capex/PPE			0.0022	1.21
F.E.	Industry & Year-Month			
N	116,880		116,880	
Annualized Alpha	4.80%		4.37%	

Table 5. Calendar Time Portfolios Using Rating on Senior Management and/or MSCI Score

The table reports alphas, factor loadings, and t-statistics from monthly calendar-time Fama-French regressions for equal- and value-weighted portfolios. Classifications are based on Rating on Senior Management or MSCI Score. Rating on Senior Management is the median employee rating on senior management from Glassdoor. MSCI Score is the ESG Score from MSCI. The intersections of quartile portfolios are formed to estimate the regressions. Firms scoring at the bottom and top quartiles of the signal are included as the short and long portfolios, respectively. The regressions are estimated from January 2012 to December 2019. Market is the market excess return; SMB and HML are the Fama and French (1993) size and book-to-market factors; RMW and CMA are profitability and investment factors from Fama and French (2016). ***, **, and * on difference in alphas indicate two-tailed p-value less than 1, 5, and 10%, respectively.

Panel A. Long/Short Portfolio on both Rating on Senior Management and/or MSCI Score- Equal Weighted

	Equal-Weighted									
	(1)		(2)		(3)		(4)		(5)	
	Low ESG & High Rating on Senior Mgmt		High ESG & Low Rating on Senior Mgmt		High ESG Only		High Rating on Senior Mgmt Only		High ESG & High Rating on Senior Mgmt Only	
Parameter	Estimate	t	Estimate	t	Estimate	t	Estimate	t	Estimate	t
Intercept	0.0007	0.99	-0.0019	-1.40	0.00	0.97	0.0018	2.40	0.0039	2.69
Market	1.0072	39.86	1.1085	24.55	1.05	44.00	0.9928	41.58	0.9637	20.77
SMB	0.6162	13.92	0.6921	11.43	0.49	13.98	0.5808	17.46	0.4023	5.92
HML	0.0971	2.28	0.0965	1.37	0.06	1.66	0.1028	3.14	0.0530	0.83
RMW	0.0133	0.23	0.2002	1.90	0.05	0.98	-0.1868	-3.32	-0.2150	-2.01
CMA	-0.1121	-1.84	-0.0719	-0.72	0.06	1.00	-0.1399	-2.50	-0.0650	-0.65
N	96		96		96		96		96	
Annualized Alpha	0.87%		-2.25%		0.82%		2.20%		4.74%	
Diff in Alphas vs Col (5)	3.87%	**	6.98%	***	3.92%	***	2.53%	**		

Panel B. Long/Short Portfolio on both Rating on Senior Management and/or MSCI Score- Value Weighted

	Value-Weighted									
	(1)		(2)		(3)		(4)		(5)	
	Low ESG & High Rating on Senior Mgmt		High ESG & Low Rating on Senior Mgmt		High ESG Only		High Rating on Senior Mgmt Only		High ESG & High Rating on Senior Mgmt Only	
Parameter	Estimate	t	Estimate	t	Estimate	t	Estimate	t	Estimate	t
Intercept	0.0005	0.83	-0.0017	-1.29	0.0007	0.97	0.0016	2.11	0.0038	2.70
Market	1.0093	45.11	1.0920	25.31	1.0373	43.96	0.9921	41.89	0.9606	20.84
SMB	0.5750	14.56	0.6656	11.26	0.4427	12.71	0.5397	16.38	0.3569	5.35
HML	0.0891	2.37	0.0819	1.20	0.0505	1.42	0.0881	2.78	0.0472	0.76
RMW	0.0144	0.27	0.1993	1.92	0.0389	0.82	-0.1872	-3.39	-0.2310	-2.19
CMA	-0.1041	-1.92	-0.0791	-0.80	0.0582	1.03	-0.1328	-2.43	-0.0488	-0.50
N	96		96		96		96		96	
Annualized Alpha	0.65%		-2.01%		0.81%		1.91%		4.66%	
Diff in Alphas vs Col (5)	4.01%	**	6.67%	***	3.85%	**	2.75%	**		

Table 6: Future Accounting Performance

Panels A and B report the accounting metrics of the year of portfolio formation and future years. Sales is defined as total sales during the year. ROE is defined as net income divided by average shareholder equity. t=x to t=y represents a change between year x and year y. High ESG & High Rating on Senior Management (Low ESG & Low Rating on Senior Management) indicates firms scoring at the top (bottom) quartile of ESG and Employee Rating on Senior Management. High ESG & Low Rating on Senior Management (Low ESG & High Rating on Senior Management) indicates firms scoring at the top (bottom) quartile of ESG and at the bottom (top) quartile of Employee Rating on Senior Management.

Panel A: Sales

		Sales				
		t=0 to t=1	t=0 to t=2	t=0 to t=3	t=0 to t=4	t=0 to t=5
(1)	**High ESG & High Rating on Senior Mgmt**	**9.55%**	**21.29%**	**39.74%**	**50.99%**	**71.09%**
(2)	High ESG & Low Rating on Senior Mgmt	5.74%	12.61%	23.55%	34.73%	48.80%
(3)	Low ESG & High Rating on Senior Mgmt	7.14%	16.08%	28.91%	35.67%	51.74%
(4)	**Low ESG & Low Rating on Senior Mgmt**	**5.65%**	**12.36%**	**26.40%**	**36.82%**	**54.46%**
	Difference (1)-(4)	**3.90%**	**8.92%**	**13.34%**	**14.16%**	**16.63%**
	t-stat	4.51	5.86	4.81	4.13	3.11

Panel B: Profitability

		ROE				
		t=0 to t=1	t=0 to t=2	t=0 to t=3	t=0 to t=4	t=0 to t=5
(1)	**High ESG & High Rating on Senior Mgmt**	**-1.22%**	**-2.85%**	**-4.91%**	**-1.73%**	**0.43%**
(2)	High ESG & Low Rating on Senior Mgmt	-15.35%	-24.04%	-27.74%	-32.77%	-26.44%
(3)	Low ESG & High Rating on Senior Mgmt	-10.99%	-16.47%	-22.57%	-23.88%	-20.95%
(4)	**Low ESG & Low Rating on Senior Mgmt**	**-16.38%**	**-29.00%**	**-28.99%**	**-38.45%**	**-39.07%**
	Difference	**15.17%**	**26.15%**	**24.08%**	**36.72%**	**39.51%**
	t-stat	3.27	4.08	3.20	4.48	4.21

Panel C: Panel Regressions

Dependent variable is the Sales and ROE Growth from t=0 to t=2. High ESG & High Rating on Senior Management (Low ESG & Low Rating on Senior Management) indicates firms scoring at the top (bottom) quartile of ESG and Employee Rating on Senior Management. Last Year's Return is the 12-month stock return during year t. PRC is the price at the end of month t-2. DVOL is the dollar trading volume (in millions) in month t-2. Remaining controls are additional firm level controls. Size is the natural log of market capitalization. MTB is market value at the end of the calendar year divided by book value of equity. ROE is defined as net income divided by average shareholder equity. SG&A/Sales is selling, general, and administrative expense divided by sales. Adv Exp/Sales is advertising expense divided by sales. R&D/Sales is R&D expense divided by sales. Capex/PPE is capital expenditure divided by property plant and equipment. Standard errors are robust and clustered at the firm-level.

	Sales		ROE	
	Growth from t=0 to t=2			
	(1)		(2)	
	Estimate	t	Estimate	t
High ESG & High Rating on Senior Mgmt	0.0470	4.05	0.1336	2.49
Low ESG & Low Rating on Senior Mgmt	0.0031	0.28	-0.1271	-2.01
Last Year's Return	0.1599	15.16	0.1844	3.24
PRC	0.0448	10.72	0.1012	4.74
DVOL	0.0641	12.55	-0.1743	-7.13
MTB	0.0000	0.21	-0.0001	-2.21
Size	-0.0769	-13.70	0.2155	8.16
ROE	-0.0020	-0.43	0.0033	0.09
SG&A/Sales	-0.0002	-0.98	-0.0025	-5.95
Adv Exp/Sales	0.3400	3.10	-0.6570	-1.33
R&D/Sales	-0.0054	-1.91	0.0227	3.41
Capex/PPE	0.2436	3.10	-0.1210	-1.06
F.E.	Industry & Year			
N	9,669		9,669	
Difference	4.39%		26.07%	

Figure 1 Glassdoor Survey