

# Human Capital Disclosures\*

Thomas Bourveau<sup>†</sup>    Maliha Chowdhury<sup>‡</sup>    Anthony Le<sup>§</sup>

Ethan Rouen<sup>¶</sup>

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## Abstract

We analyze the dynamic of quantitative human capital disclosures by U.S. public firms using a large sample of hand-collected data from 12,356 10-K filings over the 2018–2023 period. We find that firms are more likely to disclose human capital metrics in their 10-K filings after the SEC’s 2020 amendment to Regulation S-K that required firms to provide additional human capital information. However, considerable heterogeneity remains in terms of the firms that disclosed and what they disclosed. We find that quantitative disclosures are not comparable within industries. This selective disclosure equilibrium seems to be driven by various economic factors, information collection frictions, uncertainty about what should be disclosed, and firms’ underlying performance on these metrics. We provide both empirical and qualitative evidence to explain these drivers.

**Keywords:** Human Capital; Voluntary Disclosure; Mandatory Disclosure; Regulation S-K

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<sup>†</sup>Columbia Business School - [tb2797@columbia.edu](mailto:tb2797@columbia.edu) (Corresponding author)

<sup>‡</sup>Columbia Business School - [rmc2223@columbia.edu](mailto:rmc2223@columbia.edu)

<sup>§</sup>Columbia Business School - [ale25@gsb.columbia.edu](mailto:ale25@gsb.columbia.edu)

<sup>¶</sup>Harvard Business School - [erouen@hbs.edu](mailto:erouen@hbs.edu)

# 1 Introduction

Human capital (HC) has grown increasingly vital to firms’ operating success.<sup>1</sup> However, firms’ disclosures related to their HC strategies and risks have failed to keep pace. Most HC information is not explicitly disclosed in firms’ financial statements (e.g., HC-related costs are aggregated into operating expenses in the income statement), and information on firms’ HC is limited and spread across various regulated and voluntary venues.<sup>2</sup> In 2020, the Securities and Exchange Commission (SEC) launched an initiative to modernize and improve the disclosure of registrants’ human capital management. It amended Regulation S-K (Reg S-K) to include a principles-based disclosure mandate under Item 101(c). Specifically, it required the inclusion of “a description of the registrant’s human capital resources to the extent such disclosures would be material to an understanding of the registrant’s business” (SEC, 2020). Motivated by this requirement, our study aims to (1) describe firms’ HC disclosures in 10-K filings around the disclosure mandate and (2) document the forces that contribute to the documented selective disclosure equilibrium.

In the first part of our paper, we provide comprehensive descriptive evidence on the evolution of firms’ HC disclosures in their 10-K filings. Our sample consists of 2,395 unique publicly traded U.S. firms that have all available data from 2017–2023, our sample period.<sup>3</sup> For each firm, we manually parsed each 10-K during our sample period and extracted every HC-related metric, along with the metric’s definition. We further assigned each firm to its corresponding Sustainability Accounting Standards Board (SASB) industry and coded whether any of the metrics correspond to the industry-specific quantitative metrics recommended by the SASB methodologies (if any).<sup>4</sup>

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<sup>1</sup>See Zingales (2000), Sun and Xiaolan (2019), Fedyk and Hodson (2023), and Belo et al. (2022).

<sup>2</sup>Regulated filings include 10-Ks and Equal Employment Opportunity forms (EEO-1s) while sustainability reports and corporate websites constitute the main voluntary venues.

<sup>3</sup>We start with the largest 3,000 listed firms in U.S. capital markets as of December 31, 2021, require firms to be incorporated in the U.S., and to have available financial data throughout our sample period.

<sup>4</sup>See Grewal et al. (2021), Bochkay et al. (2023), and Rouen et al. (2023) for evidence on the relevance of SASB metrics to investors.

We focus our data collection on quantitative HC metrics for two reasons. First, from an institutional perspective, it is important to stress that much of the regulatory debate around the 2020 SEC regulation revolved around the mandate for specific HC metrics, especially those related to compensation, workforce composition, and workforce stability (e.g., turnover) (e.g., O’Brien, 2017; SEC, 2020). For example, Schacht and Allen (2016) stated, in their letter to the SEC, that “different issuers [would] apply the principles differently, thus making the information incomparable” and that the SEC should specify which “data-driven” metrics should be reported. This statement was echoed by many other investors, who viewed the principles-based approach as potentially leading to an underprovision of comparable metrics (Grabel, 2019; Bloxham, 2019; Woll, 2021).<sup>5</sup>

Second, from a conceptual perspective, empirical and theoretical research suggest that the voluntary disclosure of a metric creates an implicit commitment to continue to disclose that metric or a similar one (Leuz and Verrecchia, 2000; Einhorn and Ziv, 2008). For example, in the context of financial information, studies have documented that disclosure of earnings forecasts is sticky (e.g., Bozanic et al., 2018) and that quantitative disclosures in the 10-K, on average, persist more than do qualitative disclosures (Christensen et al., 2023). Additionally, once a firm has disclosed a metric, it cannot easily adjust that metric over time as easily as it could qualitative disclosures since metrics are often explicitly defined when disclosed and subject to verification (Baginski et al., 2016).<sup>6</sup>

Our data reveal interesting patterns in the evolution of HC disclosures in the 10-K. First, we observe that, prior to the regulation, fewer than 1% of firms had a 10-K section or subsection heading containing the words “human capital” but that this rate jumps to more than 85% post-regulation. This suggests that firms responded to regulation by organizing their HC disclosures under a header that fits the language of the regulation. Second, we

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<sup>5</sup>In September of 2023, the SEC Investor Advisory Committee proposed additional HC disclosure rules that would require the reporting of specific metrics (<https://www.sec.gov/files/20230914-draft-recommendation-regarding-hcm.pdf>).

<sup>6</sup>The growing landscape of ESG audits documented in Gipper et al. (2023) means that verification of these metrics could be a relevant consideration.

find that, while 40% of firms in our sample disclosed at least one metric pre-regulation, this rate increases to 72% post-regulation. On average, the disclosure rate is constant before the regulatory change, and all of the increase in disclosure at this extensive margin occurs immediately afterward, with the disclosure level then stabilizing. We also observe a similar pattern for SASB industry-specific HC metrics, with the disclosure rate increasing from 9% to 25%.

We next focus on the types of HC metrics disclosed in 10-K filings. To do so, we classify the metrics into nine topic categories. We observe that the vast majority of the pre-regulation metrics pertain to firms' operations. That is, firms share such metrics as the breakdown of their employees across location, segment, and contract types (full-time versus part-time). The disclosure rate for this category displays a moderate increase from 34% pre-regulation to 40% post-regulation. Most of the increase relates to two categories: diversity, equity, and inclusion (DEI) and employee turnover. Both categories were rarely discussed pre-regulation (fewer than 2% of 10-Ks), while the post-regulation disclosure rates converge to more than 33% and 20%, respectively. The remaining six categories (employee engagement, health and safety, compensation, unions, education, and volunteering) experience, at best, a modest increase in disclosure rates post-regulation.

Turning to the intensive margin, we examine the number of HC metrics contained within each firm's 10-K. Considering only firms disclosing at least one metric in a given year, these firms disclose, on average, approximately one metric pre-regulation. The average number of metrics disclosed by a firm more than doubles to 2.5 post-regulation. However, when focusing on the metrics SASB deems to be financially material, we find that the average number exhibits only a modest increase, from just above one pre-regulation to 1.4 in 2023. This suggests that the most of the increase in SASB-related metrics is driven by the extensive margin. This further indicates that, on average, firms are underreporting SASB metrics since the SASB recommends an average of four HC metrics per industry.

Given the increase in metrics, a natural question is whether firms increased their dis-

closures along similar dimensions. To understand whether the regulation led to increased convergence toward specific metrics, we construct a metric-based Herfindahl-Hirschman Index (HHI). We start by standardizing the names of all non-SASB metrics across firms. The metric-based HHI is defined as the sum of squared metric-based shares, and thus it measures the disclosure concentration of each metric within an industry. We document that the index decreases sharply post-regulation due to the influx of new metrics disclosed. More importantly, the HHI stays constant in the years following the regulation. This implies that, in the three years following the Reg S-K amendment, firms within the same industry have not coalesced around a common set of metrics; rather, heterogeneity across firms' disclosures persists. Additional tabulation of the disclosure rates of SASB metrics confirms these findings: In the post-regulation period, 98% of metrics recommended by SASB are disclosed by fewer than 3/4 of firms in a given industry. This suggests that, among the metrics deemed financially material by SASB for a given industry, virtually none are universally disclosed by firms within that industry.

Our descriptive evidence documents that HC disclosures increased post-regulation but that substantial heterogeneity prevails: not all firms disclose, and, conditional on disclosing, the topics and metrics vary even within industries. In the second part of our paper, we examine the forces leading to this partial disclosure equilibrium.

We begin by considering how firms' pre-regulation disclosures relate to their post-regulation ones. We find that firms disclosing HC metrics in their ESG reports pre 2020 are 10% more likely to include at least one HC metric in their 10-K filings post 2020. Next we consider the role of EEO-1s, which firms can voluntarily publicize.<sup>7</sup> We find that firms disclosing EEO-1s are twice as likely to disclose a DEI-related metric in their 10-K post-regulation. By revealed preference, firms that voluntarily disclosed HC-related information in their ESG reports or EEO-1 forms pre-regulation had plausibly assessed the disclosure as being net beneficial. Our findings suggest that these assessments also hold post-regulation, and that

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<sup>7</sup>All firms in our sample are required to provide this filing to the Equal Employment Opportunity Commission (EEOC) on an annual basis under the condition that the EEOC not make the information public.

firms shifted their HC disclosures to their 10-K filings, once regulators nudged them to do so via the principles-based Reg S-K amendment.

In our second test, we examine whether an information collection friction—the internal cost of acquiring the information—helps explain the documented selective disclosure (Jovanovich, 1982; Verrecchia, 1983). To test this friction, we follow Garcia and Norli (2012) and measure the number of unique foreign countries mentioned in firms’ 10-K filings. We find a negative correlation between the number of countries mentioned and the propensity to disclose operating metrics, which include geographic breakdowns of firms’ human capital and the breakdown of employees across divisions, segments, and functions that span multiple countries. We fail to find a correlation with other categories of HC metrics.<sup>8</sup> While demand for information about foreign human resources activities likely increases with the firm’s geographic scope and complexity, our results suggest that firms with more international operations are less likely to provide this information. We interpret these results as arising from the difficulties in collecting HC information across jurisdictions. These difficulties could relate to challenges in implementing systems to compile human resources data across countries, legal restrictions applied to the collection and storage of employee data in foreign jurisdictions, or both.

In a third test, we assess whether uncertainty about the response to disclosures might help shape firms’ disclosures (e.g., Dutta and Trueman, 2002; Suijs, 2007). To test this friction, we focus on DEI metrics. During our sample period, DEI was among the most polarizing topics in American society.<sup>9</sup> Due to this polarization – and how opinions varied by geographic region – it was likely difficult for firms to anticipate how stakeholders would interpret the disclosure of DEI-related metrics. We find a negative correlation between the number of unique U.S. states mentioned in a firm’s 10-K filing and its disclosure of DEI metrics. We find no correlation between states mentioned and other HC categories. One

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<sup>8</sup>Metrics in other categories (e.g., DEI, health & safety) are often only reported for the U.S. workforce

<sup>9</sup>For example, a 2022 [poll](#) of American citizens revealed strong heterogeneity about whether racial and ethnic diversity is “very important” in the workplace and whether employers should take more public-facing actions to promote diversity and inclusion.

interpretation is that, when firms operate in multiple states, they face constituents (e.g., local governments or pension funds) with varying opinions about DEI and prefer to stay silent rather than face any potential backlash from some of their stakeholders.

In our final set of tests, we examine whether a firm’s performance in terms of HC is associated with its disclosures (e.g., [Verrecchia, 1983](#); [Kothari et al., 2009](#)). To tease out a firm’s HC performance from the disclosure itself, we turn to data about employees’ safety from the Occupational Safety and Health Administration (OSHA). We find robust evidence that firms with poor employee safety records, captured through OSHA-identified incidents, are negatively correlated with the disclosure of health and safety metrics in 10-K filings. Interestingly, there is no detected correlation with other categories of HC metrics, suggesting that bad performance along this dimension explains firms’ selective disclosure. Given that research has established that both the “best” and “worst” performers often stay silent ([Huang and Lu, 2022](#); [Liang et al., 2023](#)), our results are consistent with a lack of unravelling, where “bad” performers are not disclosing, presumably trying to pool with “good” ones that have other reasons to stay silent.

In summary, these tests provide a nuanced portrait of firms’ HC disclosure choices and the role that the amendment to Reg S-K played. First, our results suggest that firms with a history of HC disclosure, possibly due to the belief that disclosing was beneficial, switch their disclosures from other venues to 10-K filings after the regulation. In addition, firms facing information acquisition costs or uncertainty about the response to their disclosures are less likely to disclose, even after the SEC mandate. Finally, firms with worse HC performance are also less likely to disclose. Overall the frictions we document resemble those in the context of financial reporting, which is consistent with the arguments of [Christensen et al. \(2021\)](#) that similar economic forces apply to the disclosure of both financial and nonfinancial information.

A legitimate concern is that our tests often rely on indirect proxies. To help validate our findings, we complement the archival tests with interviews of executives and managers

from 16 public firms involved in their firms' HC reporting. These firms operate in various sectors and exhibit substantial variation in market capitalization, number of employees, and listing venue (NYSE versus NASDAQ). Our interviews yielded multiple insights. First, most firms mention that disclosing quantitative information creates an implicit commitment to keep doing so, which could be costly if the pertinent metric deteriorates or stagnates. Second, the vast majority of the companies surveyed mentioned that the principles-based approach to HC disclosures gave them discretion about what to report. Almost all of those interviewed said that companies typically report metrics that fit their corporate narrative and do not portray their firms negatively or expose them to reputational risk. The majority of companies also acknowledged that collecting data was often difficult, either due to differences in internal systems or foreign regulations. Overall our survey validates our archival findings and illuminates the motivations behind reporting choices.

This paper makes several contributions to the literature. First, it helps comprehensively depict firms' HC disclosures. It provides detailed data about quantitative HC disclosures in 10-K filings in recent years. In addition, our companion online appendix breaks down our data by industry for each of the 77 SASB industries. This provides the most granular descriptive evidence on the dynamics of human capital disclosures by U.S. public firms in recent years. Our findings also complement recent papers examining the time series of firms' HC disclosures in their regulatory filings and job postings ([Arif et al., 2022](#); [Demers et al., 2022](#); [Haslag et al., 2022](#); [Zhang, 2022](#)). Those studies use natural language processing to capture the tone, length, or quantity of HC-related information with a focus on qualitative disclosures. This contrasts with our study, which focuses on hand-collected metrics. We focus on quantitative metrics because (1) they are more likely to be comparable across firms and they can set commitments to disclose in the future, a conjecture supported by our interviews ([Leuz and Verrecchia, 2000](#)), and (2) the inclusion of quantitative metrics was at the heart of the debate surrounding the amendment of Reg S-K.

Second, our paper contributes to the literature on the economics of disclosure regulation



(Leuz and Wysocki, 2016). The paucity of HC metrics disclosed in 10-K filings pre-regulation suggests that these metrics were either considered irrelevant to investors or that information frictions discouraged their disclosure.<sup>10</sup> Our results suggest that information frictions do appear to play a role in limiting the disclosure of HC metrics. Further, the amendment to Reg S-K led to a substantial increase in disclosure at both the extensive and intensive margins. However, our results also suggest that, despite this increase, substantial heterogeneity remains after the first three years of the regulation: A significant fraction of firms (27%) still do not disclose any HC metrics, and, among those that do disclose, there is ample variation across topics and metrics, even within industries. Notably, this heterogeneity does not improve in the three years following the Reg S-K amendment, even among metrics identified as financially material by the SASB. This result suggests that the disclosure dynamic is unlikely to quickly converge toward full unraveling. This lack of convergence and investors’ concerns surrounding the comparability of metrics across firms (e.g., O’Brien, 2017; Buttle, 2019; Klemmer, 2019) indicate that a more prescriptive disclosure mandate might be necessary to obtain more comparable disclosures.<sup>11</sup>

Our findings also complement the growing literature on the impact of nonfinancial disclosure mandates, particularly on the “S” dimension of ESG. The studies most related to ours focus on the response to either rules-based (Huang and Lu, 2022; Pan et al., 2022) or principles-based disclosure mandates (Bakke et al., 2022; She, 2022).<sup>12</sup> Our paper advances this literature by providing early evidence of the evolution of HC metrics around the principles-based amendment to Reg S-K. While studies have primarily focused on mandates impacting one type of “S” disclosure (e.g., gender-related or supply-chain information), our findings complement these studies by assessing disclosure decisions in a setting where firms

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<sup>10</sup>See Bourveau et al. (2023a), Bochkay et al. (2023), Gipper et al. (2023), and Rouen et al. (2023) for recent evidence on the role of market forces on voluntary disclosure and assurance of financial and non-financial information.

<sup>11</sup>While a rules-based approach would lead to more HC disclosure, we caution the reader that our results do not speak to the desirability of such a regulation and that a formal economic evaluation would be necessary.

<sup>12</sup>For studies of environmental disclosure mandates within a single country, see Chen et al. (2018), Jouvenot and Krueger (2021), Bonetti et al. (2023), and Tomar (2023).

can disclose HC information spanning many metrics and topics.

Third, our results speak to the literature on voluntary disclosure. Given the principles-based nature of the 2020 regulatory intervention, firms retain discretion about HC disclosures. In line with the general prediction of [Christensen et al. \(2021\)](#), our results suggest that firms' decisions to voluntarily disclose financial or nonfinancial information depend on similar forces. Our findings suggest that frictions present in the financial reporting context, such as the ability to collect the information internally, the cost-benefit trade-off of disclosure, and uncertainty about stakeholders' responses to the disclosure, explain our documented partial disclosure equilibrium. We also contribute to this literature by assessing the role of these frictions individually for various HC topics. Because we observe an array of HC metrics, our setting also allows us to assess the extent to which each of the frictions limits each type (i.e., topic) of HC disclosure.<sup>13</sup> These results could provide a framework for future researchers to assess which frictions are most likely to play a role in their setting, depending on the nature of the HC information they are investigating.

## 2 Institutional Background

Prior to the 2020 amendment of Reg S-K, limited disclosure regulation pertained to firms' human capital. Since 2005, firms have been required to disclose only the total number of people employed, although the disclosure choice varied, with some firms separately reporting full- and part-time employees and others reporting employees by division as well as information on union representation ([SEC, 2020](#)). Beginning in 2017, firms also had to disclose, in their proxy statements, the ratio of the CEO's pay to that of the median employee. Although this disclosure was the first that required all publicly traded firms to report information about non-executive compensation, the usefulness of the measure to investors has been questioned ([Rouen, 2020](#)).

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<sup>13</sup>Other studies focus on how disclosure frictions and market forces relate to the disclosure of specific topics such as DEI (e.g., [Baker et al., 2023](#); [Bourveau et al., 2023b](#)) or compensation (e.g., [LaViers et al., 2022](#)).

In August 2020, the SEC voted in favor of amending the required disclosures for three items in firms' 10-Ks – disclosures of business, legal proceedings, and risk factors – under Reg S-K. The new rules, implemented on November 9, 2020, were the first significant revisions to these items in more than 30 years. The aim of the updates was to modernize disclosures for investors and simplify compliance for filers while improving readability and reducing boilerplate disclosures ([SEC, 2020](#)).

While the 2020 amendment required several changes to firms' disclosure practices, the most consequential, and the one that received the most attention, was the change to Item 101(c). Item 101(c) requires firms to describe their business, with a focus on segments that are material to investors and for which financial information is also reported in the financial statements. The item is designed to be principles-based, meaning that firms have leeway in determining what is materially relevant to investors and how to disclose it.

The amendment adds as a disclosure topic under Item 101(c) “a description of the registrant’s HC resources to the extent such disclosures would be material to an understanding of the registrant’s business ...” ([SEC, 2020](#)). Since at least 2017, investors had been urging the SEC to require firms to disclose information about their human capital management practices and the risks they faced as part of a broader push for better ESG-related disclosures (e.g., [Sheehan, 2017](#)). The desire for this information came in part because some investors believed that these issues were financially material and in part because the shift to broad institutional holding of shares meant that the primary concern of these diversified investors was systematic risk ([Coffee, 2021](#)).

During the public comment period, the SEC received “a substantial number of comments supporting increased disclosure of human capital management policies and specific human capital metrics” ([SEC, 2020](#)). Still, significant disagreement emerged among commenters about whether a principles-based approach was preferable. Those in support of a principles-based approach argued, for example, “that prescriptive disclosure requirements can elicit information that is not material to investors, obscure material information, and be costly to

provide” (Allen, 2019). Others raised concerns that there was “no consensus on the most appropriate metrics or methodology for human capital management disclosure” (SEC, 2020). The CEO of the Global Reporting Initiative, a voluntary standard-setting organization, argued that a principles-based approach would let firms disclose information most relevant to investment decisions while “prescribing fixed, specific line item disclosures would not result in the most meaningful disclosure. Specifying the type or form of disclosures in legislation will lock in the practice and quickly devolve into a ‘box-ticking’ exercise” (Mohin, 2019).

On the other hand, numerous commenters proposed requiring quantitative disclosures related to workforce demographics, compensation, diversity, and turnover (e.g., O’Brien, 2017). The main concerns raised about a principles-based approach were that firms would disclose selectively or not disclose sufficiently without standardized metrics, that differing information disclosed by firms could result in investor confusion, and that without standardized metrics, comparability across firms and time would be impossible (e.g., O’Brien, 2017; Buttle, 2019; Klemmer, 2019). As one investor wrote, “Requiring specific, consistent and comparable data would be highly beneficial to investors as it would allow benchmarking of corporate performance and the observation of trends over time” (Klemmer, 2019).

In justifying the principles-based approach outlined in the final rule, the SEC stated: “We do not believe that prescriptive requirements or a designated standard or framework will ensure more comparable disclosure given the variety in registrant operations as well as how registrants define, calculate, and assess human capital measures” (SEC, 2020). In addition, the commission rejected calls to formally define the term “human capital” because its meaning could differ in different industries and definitions might evolve (SEC, 2020). Still, given the debate among commenters, the SEC appeared to make at least one concession to those arguing for a rules-based approach: The final amendment said: “Various human capital measures and objectives that address the attraction, development, and retention of personnel ... may be material, depending on the nature of the registrant’s business and workforce.” It added: “We emphasize that these are examples of potentially relevant subjects,

not mandates. Each registrant’s disclosure must be tailored to its unique business, workforce, and facts and circumstances.” (SEC, 2020).

Given the principles-based nature of the amendment to Reg S-K, it remains an empirical question whether the amendment led to greater disclosure and which metrics firms chose to include in their 10-K. We focus on metrics, rather than qualitative disclosures, because investors’ concerns regarding the principles-based nature of the amendment was that it would result in a lack of quantitative disclosures. In Section 3, we describe how our sample and data are constructed. In Section 4, we descriptively explore the landscape of quantitative HC disclosures to understand along which margins, if any, the mandate led to greater disclosure. Then, in Section 5, we investigate the factors associated with firms’ decisions to disclose quantitative HC information. Finally, in Section 6, we validate our findings by providing qualitative insights from numerous human resource executives at large public firms in our sample.

### 3 Sample

To construct our sample, we start with the 3,000 largest firms in the Compustat-CRSP universe as of December 31, 2021. We require that these firms have market and accounting data for the fiscal years between 2017 to 2022. We then download the 10-K filings for the entire sample from the SEC EDGAR database.<sup>14</sup>

Next we develop an industry-specific coding scheme, based on the SASB 2018 industry standards, to categorize all HC metrics disclosed in our sample firms’ reports. SASB defines a selection of industry-specific ESG metrics that are materially relevant to investors for each of its 77 Sustainable Industry Classification System (SICS) industries.<sup>15</sup> We read each industry standard and note all of SASB’s recommended HC metrics to use in our coding

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<sup>14</sup>Our sample period covers the period 2017-2022 and the corresponding 10-K filing dates lie in 2018-2023.

<sup>15</sup>For example, SASB recommends the disclosure of the “percentage of restaurant employees earning minimum wage, by region” for firms in the restaurant industry, while it recommends firms in the chemicals industry disclose the “total recordable incident rate and fatality rate for [direct and contract] employees.”

scheme. To apply the industry-specific coding scheme to the 10-K filings of the relevant firms, we categorize the firms into their SICs industries using the SICs Look-up Tool on the SASB website.<sup>16</sup>

Once the firms are assigned to their primary SICs industries, we manually parse each company’s 10-Ks to identify the type and measure of quantitative HC disclosures. For the 10-Ks filed after the effective date of the 2020 regulation, the relevant items are contained in Item 101(c). In the pre-regulation period, the disclosures are not consistently reported in a specific section of the 10-K. We search for keywords including “employees,” “employs,” or “employed” and read through the sections where the hits are contained to identify any pertinent metrics disclosed by firms. In most cases, we find that “Item 1 (Business)” contains the relevant disclosures.’ We manually categorize the collected metrics into SASB or other (non-SASB) metrics using our industry-specific coding scheme. We collect this information for all firms in industries for which the SASB identifies at least one recommended HC metric. For firms in industries for which there are no recommended SASB HC metrics, we collect any HC metrics disclosed and categorize them as other metrics. A full list of SICs industries and whether the SASB provides at least one suggested metric for that industry are shown in [Appendix 2](#). In addition to classifying the HC metrics as SASB and other (non-SASB), we also assign each of our metrics to one of nine categories: DEI, operations, compensation, recruitment and turnover, health and safety, labor relations and unions, employee engagement, volunteering, and employee education. We define these nine categories based on the SASB’s broad topic categories used in its industry standards.

We also collect data on the total number of employees and the subheading under which firms report their HC disclosures. While we create a comprehensive dataset of firm-level HC disclosures, we exclude from our analysis the measure of total number of employees, since the SEC required this disclosure for all firms prior to our sample period. Additionally, we exclude the breakdown of employees by unionization status and the breakdown by geography

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<sup>16</sup>The Look-up Tool can be found at [SASB industry lookup tool](#).

because these metrics were widely disclosed prior to the regulation and showed only modest increases afterward (Batish et al., 2021).

Our next step involves coding all available ESG reports disclosed by firms in our sample and coding them for HC metrics. Because the disclosure of ESG reports is voluntary, firms do not disclose an ESG report every year. To collect the reports, we first identify whether the ESG reports exist by manually checking firms’ websites. We supplement this process by searching the Responsibility Reports database to collect reports unavailable on firms’ websites. Once we have collected all available ESG reports for the firms in our sample, we use the same industry-specific coding scheme that we did with the firms’ 10-K filings and use an identical process to code the relevant HC metrics in firms’ ESG reports. Since ESG reports do not follow a standardized format, like the 10-Ks do, we search for the relevant HC metrics in the data appendix section and specific sections likely to contain relevant disclosures, such as those titled “social,” “people,” and “stakeholders.”

In the last step of our data collection, we collect data from EEO-1 reports for the subset of firms that voluntarily disclose them. We only collect 2018 EEO-1 reports since the reporting deadline for the 2019 and 2020 EEO-1 reports lies in the post-regulation period. Regardless, the disclosure of the 2018 EEO-1 reports proxies for pre-regulation voluntary disclosure of HC metrics since the disclosure decision in the pre-regulation period is sticky (i.e., firms that disclose this information prior to 2020 are also likely to continue to do so). One challenge of collecting these reports is that firms rarely maintain past EEO-1 reports on their websites, even if they were previously disclosed. Therefore we use the Wayback Machine to browse firms’ websites and manually collect publicly disclosed EEO-1 reports.<sup>17</sup> Note that firms sometimes disclose EEO-1 report details in their ESG reports. To ensure comprehensive collection of the EEO-1 disclosures, we manually check all ESG reports to collect any EEO-1 reports disclosed there.

Our final sample consists of 12,356 firm-year observations of 10-K filings that correspond

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<sup>17</sup>Recent studies have successfully started to rely on the Wayback Machine to track and collect firms’ historical disclosures (e.g., Boulland et al., 2019; Chen et al., 2023).

to 2,395 unique firms. The sample also includes 12,356 firm-year observations of ESG reports and a cross-section of firms' EEO-1 disclosures in 2018 for 2,306 unique firms. For the sample firms, we collect data for our control variables from CRSP, Thomson Reuter's 13F database, and Compustat. We additionally collect data on unemployment from the Bureau of Labor Statistics (BLS).

Summary statistics on our main variables of interest are shown in [Table 1](#). Across the sample of 10-Ks, 57% of firm-years disclose at least one metric, but only 18% of firm years disclose at least one metric designated by SASB as financially material to their industry. On average firms disclose 1.09 (0.23) non-SASB (SASB) metrics in their 10-Ks, and 66% of firms in the 10-K sample are in industries where SASB offers relevant guidance. [Appendix 2](#) provides detailed variable descriptions.

[Table 2](#) reports the correlation matrix for our variables of interest. Firms with higher sales, as measured by  $\text{Log}(\text{Sales})$ , are significantly more likely to disclose metrics, as are those with more employees ( $\text{Log}(1 + \text{Emp})$ ) and in concentrated industries (HHI). Institutional Ownership is significantly positively associated with disclosing SASB metrics but is insignificantly associated with the disclosure of any quantitative or non-SASB metric. We explore these relations in more detail in multivariate regressions in [section 5](#).

## 4 The Evolution of Disclosure in 10-K Filings

As both a cost and a form of value creation, HC has become increasingly important to firms in recent years ([Zingales, 2000](#); [Regier and Rouen, 2023](#)). Therefore one might expect firms to have increased their HC-related disclosures during this period, given that the SEC defines a matter as material "if there is a substantial likelihood that a reasonable person would consider it important" ([SEC, 1999](#)). On the other hand, that the SEC felt compelled to amend Reg S-K to require greater disclosure of HC suggests that firms were not providing enough information to investors on material HC issues. In this section, we describe how



quantitative HC disclosures evolved around the amendment to Reg S-K.

## 4.1 Description of Human Capital Management

We begin by examining the extent to which firms explicitly devote a section of their 10-K to the discussion of HC issues. Firms use sections and subsections of their 10-Ks, in part, to discuss material issues that help investors contextualize financial information and make informed decisions. For example, in section 1 (the business description) of [Target's 2022 10-K](#), the company has 13 subsections devoted to topics like seasonality, customer loyalty programs, and working capital, as well as a subsection devoted to HC management. In this analysis, we examine the temporal pattern of the choice to devote a section of the 10-K to a description of the firm's HC resources. While we expect the amendment to Reg S-K to result in an increase in sections devoted to HC, firms might have reasons not to respond. First, the materiality of HC might mean that they are already disclosing this information throughout the 10-K, making the regulation unnecessary. Second, the amendment to Reg S-K provided little guidance about *how* firms should disclose HC information, so they may not do so in a uniform way.

[Figure 1](#) provides dramatic evidence of firms' response to the amendment to Reg S-K. Prior to 2021, fewer than 1% of firms included a section or subsection of the 10-K with "human capital" in its title. Immediately after the amendment's passage, though, more than 85% of firms organized their HC disclosures under a header that fits the language of the updated regulation. That rate of disclosure remains steady for three years following the implementation of the amendment. This evidence, while not causal, suggests that most firms responded to regulation by organizing their HC disclosures in a single location.

## 4.2 Did firms increase quantitative disclosures?

While the prior analysis offers evidence that firms organized their HC information in a central location within the 10-K after the amendment to Reg S-K, it is unclear whether

this behavioral change resulted in new information or whether it moved previously dispersed disclosures to one place. We explore this question in this section and the next. First, we explore the extensive margin, asking whether more firms disclose HC metrics. Second, we document the intensive margin to see whether the average number of HC metrics included in the 10-K increased.

#### 4.2.1 Evidence at the extensive margin

As stated above, one possible explanation for the finding in [Figure 1](#) is that firms organized all of their HC information into a primary location of the 10-K after the amendment. Here we examine whether that is the case or whether firms also increased the amount of quantitative HC information. To do so, we hand-collect all quantitative HC disclosures from the 10-K, not just those that firms reported in the specific HC section.

[Figure 2](#) reports the percentage of firms disclosing at least one HC metric in each year of our sample. Prior to the new regulation, 40% of firms disclosed at least one metric. This rate nearly doubles to 72% post-regulation. On average, the disclosure rate is constant over the 2018–2020 (i.e., pre-regulation) period, and almost all of the increase in disclosure at this extensive margin occurs immediately after the change in regulation (10-Ks filed from November 2020 to November 2021), with the disclosure level stabilizing in 2022 and 2023. We also observe a similar pattern for SASB industry-specific HC disclosure metrics, with the disclosure rate increasing from 9% to 25%.

We next explore the heterogeneity in the types of HC metrics disclosed in firms' 10-K filings following Reg S-K. To do so, we assess the change in disclosure across nine topic categories. In [Figure 3](#), we observe that the vast majority of the pre-regulation metrics pertain to firms' operations. That is, firms share metrics, such as the breakdown of their employees across location, segment, and contract types (full-time versus part-time). For example, as shown in [Appendix 1](#), Esco Technologies reported in its 2019 10-K not only the total number of employees but also the number of employees working in the United States

and the number in other countries in which it operates. The disclosure rate for this category displays a moderate increase from 34% pre-regulation to 40% post-regulation.

Most of the increase in HC disclosure induced by the update to Reg S-K happens through DEI and employee turnover metrics. Both types of metrics were rarely reported pre-regulation (fewer than 2% of 10-Ks). In the first post-regulation year, the share of firms discussing DEI metrics jumped to 27% and by 2023 grew to 35%.<sup>18</sup> The increase in the disclosure of recruitment and turnover metrics jumped to 20% in the first post-regulation year and has stayed constant since. Our remaining six categories (employee engagement, health and safety, compensation, unions, education, and volunteering) experienced a modest increase in disclosure rates post-regulation.

While the disclosure of DEI and employee turnover metrics sharply increased post-regulation, we caution the reader not to interpret these patterns as causal evidence of the impact of the regulation itself. Instead, confounding events such as the Black Lives Matter (BLM) protests and the COVID-19 pandemic, likely made these topics relevant to investors, inducing disclosures in firms' 10-K filings.

Next, in [Figure 4](#), we examine the heterogeneity in disclosure across sectors. While the financials and resource transformation sectors exhibit the greatest increase in quantitative disclosures, 10 out of the 11 sectors exhibit a similar pattern, with a steady percentage of firms reporting metrics in the pre-period, followed by a surge immediately after the amendment. One exception is the transportation sector, which had a high percentage of firms with quantitative information in the pre-period that endured in the post-period. One potential explanation is that this industry has among the highest union representation of all sectors, and union-related disclosures could account for this pre-regulation disclosure rate.<sup>19</sup>

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<sup>18</sup>What is included in these disclosures vary significantly across firms. For example, in its 2020 10-K, EXL Service disclosed only the total percent of women and “racially/ethnically diverse individuals” employed. On the other hand, in its 2020 10-K, Eastern Bankshares provided detailed tabular information about the gender and race/ethnicity of its workforce, broken out by race/ethnicity, as well as by seniority and new hires.

<sup>19</sup>Union-related disclosures are common within this sector. For example, as shown in [Appendix 1](#), The Goodyear Tire & Rubber Company disclosed the number of employees covered by collective bargaining agreements, the number represented by the largest union, and the number covered in the United States and

Taken together, these results suggest that firms responded to the change in regulation in meaningful ways. A large majority of firms began devoting a specific section of the 10-K to HC immediately after the amendment took effect, a practice that was nearly non-existent prior to 2021. This change did not solely organize already disclosed HC information in a central location. Firms also increased the amount of quantitative HC information in the 10-K, with an emphasis on measures of DEI and turnover.

### 4.3 Evidence at the intensive margins

We now turn our attention to the intensive margin to gain a deeper understanding of whether the amount, in addition to the prevalence, of HC information has increased in recent years. To do so, we first examine the change in the number of metrics disclosed by the subset of firms that disclosed at least one metric prior to the amendment.

As documented by the solid black line in [Figure 5](#), the average number of unique metrics disclosed by a firm doubles to more than 2.5 post-regulation. However, the dashed red line reports the time series disclosure rates for metrics that SASB deems to be material to investors. We see only a modest increase in this reporting choice, with firms reporting, on average, approximately 1 SASB metric in the pre-period and just below 1.5 SASB metrics in the post-period. This suggests that, in terms of SASB metrics, the increase in disclosure after Reg S-K mostly results from the extensive margin (i.e., the number of firms disclosing a SASB metric).

In [Figure 6](#), we again disaggregate our findings into nine topic categories. We find that most topics exhibit a modest increase in the average number of metrics disclosed. Like our descriptive findings on the extensive margin, DEI and recruitment and turnover metrics exhibit the greatest increase in disclosure. The average number of DEI metrics in the 10-K grew from 1 in 2018 to 2.5 in 2023, although the pre-regulation trend makes it unclear how much of this increase can be attributed to Reg S-K itself. Recruitment and turnover metrics

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internationally in its 2019 10-K.

exhibit a more modest change, increasing from one metric in the pre-period to approximately 1.5 in the post-period. Our other categories exhibit an increase of less than 0.5 metrics. One category, health and safety, exhibits a decline in the average number of metrics in the post-regulation period, due to newly disclosing firms that disclose fewer metrics on average, compared to the average number of metrics disclosed by firms pre-regulation.

Finally, we explore the heterogeneity in the number of metrics disclosed across sectors. We find that the number of metrics disclosed for each industry is relatively flat in the pre-period and increases after the amendment to Reg S-K. The financials and infrastructure sectors experience the largest increases in disclosure. Firms in both industries disclosed approximately one metric from 2018–2020 and about four on average in 2023. Most other sectors saw a more modest increase.<sup>20</sup>

Our evidence so far suggests that, after the amendment to Reg S-K, more firms disclose HC metrics as well as *more* of those metrics. While this increase is concentrated in a few sectors, almost all sectors see at least a modest increase in the average number of metrics included in the 10-K. These patterns prompt the question of whether firms are increasing their HC disclosures in comparable ways. We explore this question next.

#### 4.4 Disclosure convergence

An aim of standards and disclosure regulation is to increase the comparability of financial information (IFRS, 2015). In this section, we investigate whether firms’ changing HC disclosures around the amendment to Reg S-K resulted not just in additional information but also in more comparable information across firms, an attribute that investors value (Anderson, 2021). To explore this question, we create a metric-based Herfindahl-Hirschman Index (HHI) that measures the concentration of metrics being disclosed across firms within an industry. We start by standardizing the names of all non-SASB metrics across firms. The metric-based

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<sup>20</sup>The average number of metrics for firms in the health care sector doubled to 2 in 2021 but then decreased to 1 in 2023. This result is likely due to the 2023 sample being incomplete because data collection took place during that year.

HHI is then defined as the sum of squared metric-based shares, and thus it measures the disclosure concentration of each metric within an industry.

Figure 8 reports the HHI by year for the full sample of firms. Focusing on non-SASB metrics (the black solid line), we find that comparability decreases sharply (i.e., the HHI decreases by more than 250%) post-regulation, largely because of the influx of new metrics being disclosed. More importantly, the HHI stays constant in the years following the regulation. In Figure 9, we report the HHI by year for the firms that voluntarily disclosed HC metrics in the pre-regulation period. We find that, even among these voluntary disclosers, the HHI sharply decreases post-regulation and stays constant in the following three years. Our descriptive findings imply that, in the years following the regulation, firms within the same industry did not converge toward particular metrics that matter to investors in that industry. Instead the descriptive findings in this figure suggest that there is substantial heterogeneity in the metrics that firms choose to disclose and that this heterogeneity increased in the three years following the regulation.

We explore this heterogeneity further by tabulating, at the sector level, the rate of disclosure of SASB metrics, and report the results in Table 3. We begin by identifying the total number of SASB metrics related to human capital that are deemed material for each sector. We then identify how many of these were disclosed by less than 1/4 of firms, between 1/4 and 1/2 of firms, between 1/2 and 3/4 of firms, or for more than 3/4 of firms in the sector and report these counts separately for the pre- and post-regulation periods. This tabulation allows us to descriptively assess whether firms are, to some extent, converging on metrics deemed financially material by a standard setter. If so, we would expect to see increases in the number of metrics being disclosed by firms post-regulation.

In Panel A of Table 3, we include all firms within the sector, including firms that never disclose a single metric. We find that across our sample, out of a total of 219 SASB metrics that could be disclosed, only 13 of them (i.e., 6%) are disclosed by more than 1/4 of firms in the pre-regulation period, meaning that a large majority of firms are disclosing no

SASB-defined HC metrics. The number of SASB metrics only marginally improves after the amendment to Reg S-K, with 16 SASB metrics (i.e., 7%) being disclosed by more than 1/4 of firms. In Panel B, we include only firms that disclose at least one metric in our sample period. We find that, among these, there is generally more agreement, although the rate of disclosure does not change after the amendment to Reg S-K. In the pre-regulation period, 25 (i.e., 24%) metrics out of the 105 that are disclosed at least once are disclosed by more than 1/4 of firms. In the post-regulation period, 63 (i.e., 34%) metrics out of the 186 that are disclosed at least once are disclosed by more than 1/4 of firms. Overall these findings suggest that there are almost no SASB metrics that firms universally disclose, even within a given industry.

Overall the results in this section provide descriptive evidence that the principles-based approach to regulated HC disclosures resulted in a large increase in HC information in the 10-K but also created significant heterogeneity in those disclosures, hampering comparability, a goal of disclosure standards (IFRS, 2015). The absence of convergence, or unravelling, documented here likely reflects that firm-specific considerations may shape disclosure decisions. In our next set of empirical analyses, we examine potential explanations for the strategic disclosure choices documented above.

## 5 Archival Analysis of Strategic Disclosure

In this section, we take a quantitative approach to examine potential explanations for the absence of convergence observed above. We exploit the characteristics of various forms of HC disclosures to explore four potential explanations: the use of other disclosure venues, impediments to data collection, uncertainty about investor interpretation of these disclosures, and poor performance related to the underlying metric. In [section 6](#), we support our empirical analysis with interviews from HC disclosure experts.

## 5.1 General Financial Determinants

We begin by assessing the general determinants of HC disclosures in [Table 4](#). Our multivariate analysis reveals two interesting patterns. First, we find some evidence of a negative correlation between firms’ profitability (ROA) and the disclosure of quantitative HC metrics, particularly for SASB metrics. This relation could reflect the fact that firms use disclosures to justify the investment in their organizational capital, which is accounted for in U.S. GAAP as an expense, mechanically resulting in lower reported profitability ([Ewens et al., 2022](#)). Our regressions also reveal that firms with higher institutional ownership are more likely to publish an ESG report. This finding is consistent with recent studies suggesting that institutional investors are driving the demand for ESG information while allocating capital accordingly and engaging with companies to induce social and environmental change (e.g., [Azar et al., 2021](#); [Bourveau et al., 2022](#); [Lopez de Silanes et al., 2022](#)).

## 5.2 The Role of Other Venues

We start our exploration of the selective disclosure equilibrium by assessing whether the increase in disclosure post-regulation primarily stems from new HC information being produced or whether firms responded to the new disclosure requirement by shifting into the 10-K information that they had disclosed elsewhere. Firms’ 10-Ks are not the only venue through which firms are required – or choose – to disclose HC information. Both the Equal Employment Opportunity Commission (EEOC) and the Occupational Health and Safety Administration (OSHA) require firms to report information on their workforces, either confidentially or in public filings. Firms also use ESG reports to describe various aspects of their workforce.

We begin by splitting all of the metrics into two categories: “unique” metrics and “existing” metrics. “Unique” metrics are those that are not required to be disclosed by any other party (e.g., government agencies). “Existing” metrics are those that are already required to be disclosed by OSHA or the EEOC. These include metrics such as firms’ OSHA



incident/injury rates and the breakdown of employees by race or gender.

Using these categorizations, we first examine whether the Reg S-K amendment resulted in an increase in the disclosure of “unique” and “existing” metrics. In [Figure 10](#), we find that regulation impacted the reporting decision for both types of metrics. As shown by the solid black line, almost 40% of firms disclosed at least one metric in the pre-period that was not required to be reported elsewhere (i.e., unique metrics).

The number of firms disclosing unique metrics increased to 60% of all firms by 2023, with the bulk of that increase occurring immediately after the Reg S-K amendment. Metrics that were required to be reported elsewhere experienced a more dramatic increase, albeit from a lower base. Before the amendment, almost no firms disclosed metrics required by other agencies (dashed red line), but by 2023, nearly 40% did so. This comparison suggests that firms began disclosing new information in the 10-K post-amendment but that a significant component of the overall increase in disclosure resulted from their shifting metrics disclosed to other government agencies into the 10-K.

To explore this question of whether firms shifted disclosure venues, we focus on a specific disclosure topic: DEI. We focus on DEI metrics because most of them can be drawn from firms’ EEO-1 forms, which break down employees by job type, gender, and race. Thus we use firms’ pre-regulation disclosure of their EEO-1 filings to understand whether disclosure of their EEO information prior to the regulation is associated with their decision to disclose DEI metrics in their 10-K post-regulation. A positive association would be consistent with firms shifting disclosures from another venue (i.e., their EEO-1 filings) to the 10-K once the SEC mandates disclosure.

In [Figure 11](#), we split our sample between firms that publicly disclosed their reports in 2018 (7% of the sample) and those that consistently redacted this information from the public repository (93% of the sample). We find that both groups reported no DEI metrics in their 10-Ks pre-regulation. Interestingly, the percentage of firms disclosing quantitative DEI metrics post-regulation is 20 percentage points higher by 2023 for the firms that were

publicly reporting their EEO-1 reports pre-regulation. This indicates that firms were more likely to disclose in the 10-K when they were disclosing similar information voluntarily pre-regulation – presumably because it was beneficial to them – through another venue. Taken together, these graphs provide additional evidence of the impact of the amendment to Reg S-K on firms’ disclosure choices, with firms increasing both unique metrics as well as those that were already disclosed elsewhere.

To complete this series of analyses, we formally test the role of alternative venues using multivariate analysis by examining whether firms’ pre-regulation disclosure decisions were associated with the decision to report HC metrics in the 10-K post-regulation. Specifically, we examine the relation between post-regulation 10-K disclosures and pre-regulation disclosures through two venues, the ESG report and the EEO-1 form.

In [Table 5](#), we find evidence consistent with our univariate statistics. In Columns (1) through (6), we test whether a firm’s disclosure of at least one ESG report in the pre-regulation period is associated with its decision to disclose a metric, a SASB metric, or a non-SASB metric in the post-regulation period. We find that publishing an ESG report in the pre-regulation period is positively associated with the disclosure of all three of these categories. Firms that disclosed an ESG report in the pre-regulation period are 10 percentage points more likely to disclose any metric (Column (2)), three to four percentage points more likely to disclose a SASB metric (Column (4)), and 11 percentage points more likely to disclose a non-SASB metric (Column (6)) in their 10-K post-regulation. In Columns (7) and (8), we test whether firms’ disclosure of an EEO-1 report in the pre-regulation period is associated with the inclusion of DEI metrics in their 10-K post-regulation.<sup>21</sup> We find that disclosing the EEO-1 in the pre-regulation period is associated with a 14 percentage point higher likelihood of disclosing DEI metrics in the 10-Ks post-regulation.

Taken together, our results suggest that regulation was associated with an increase in both unique metrics and metrics that were previously disclosed elsewhere. Still, it appears

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<sup>21</sup>Due to the significant amount of time required to collect these data via the Wayback machine, we look only at whether the firm disclosed its EEO-1 report in 2018.

that firms that relied on voluntary disclosure pre-regulation shifted those disclosures into the 10-K once the SEC required additional HC information. This is reminiscent of firms' disclosure of other nonfinancial information in financial reports. For example, [Christensen et al. \(2017\)](#) find that mandating the disclosure of mine safety disclosures in firms' 10-K reports increases awareness among investors and other stakeholders, even though that information had been publicly disclosed on the Mine Safety and Health Administration (MSHA)'s website. Similarly, firms may have an incentive to shift HC metrics from their ESG and EEO-1 reports into the 10-K if they want to highlight the information. While the reasons for these decisions are impossible to test empirically, in [section 6](#), we report information provided by corporate managers to provide context for our results.

### 5.3 Information Collection and Interpretation

We now turn to the geographic characteristics of the firm to test two potential explanations for the absence of unraveling in the wake of regulation. First, we examine whether firms are less likely to disclose HC metrics when the costs of collecting that information are higher. Second, we examine whether increased uncertainty about the interpretation of the metrics hinders firms' disclosures. We test these questions by constructing a proxy of firms' geographic presence by counting the number of unique countries and U.S. states mentioned in their 10-Ks, using the methodology of [Garcia and Norli \(2012\)](#).

Collecting and measuring human capital can be costly to firms, and this cost increases with the growth of firms' geographic footprint ([Roberts et al., 1998](#); [Cantrell et al., 2023](#)). In Panel A of [Table 6](#), we assess the relation between firms' global footprint and their HC disclosures. We focus on global reach, as opposed to domestic reach, because countries have significant variation in what can be collected from employees and what stakeholders value (e.g., in France, firms are not allowed to gather workforce data on race, while this is required in the United States).

We find, in Column (1), that there is a negative correlation between the number of

countries that a firm operates in and its decision to disclose operating metrics. A 1% increase in the number of countries mentioned in a firm's 10-K is associated with a four percentage point decline in the likelihood of disclosing an operating metric. The HC metrics included in the operating metrics category typically include those that span many countries and divisions, such as the breakdown of HC deployed across segments, divisions, and countries. Thus this negative association likely reflects difficulties in setting up systems that capture accurate and timely HC information when the firm operates in many regions. It could also reflect regulations in certain countries that prevent the collection of certain types of information on employees. Further, we do not find a significant association with other HC metrics, such as DEI, turnover, and health and safety. This likely stems from the fact that these topics are not typically reported on the *global* level but rather only for the U.S. workforce (e.g., OSHA rate for U.S. establishments and the breakdown of U.S. employees by ethnicity based on EEO-1 data), which strengthens our interpretation of this result as one related to the challenge of information collection.

We next test whether firms' presence in U.S. states is associated with their HC disclosures. In Panel B of [Table 6](#), we find a significant negative correlation for both recruitment and turnover and DEI metrics. The negative correlation for the former metrics likely represents a similar information collection friction to the one documented in Panel A. Since firms typically report turnover metrics for their U.S. workforce, those that operate in more states likely have greater difficulty collecting this information.

Our interpretation of the negative relation between U.S. geographic presence and DEI metric disclosure differs. Since firms are already required to collect and disclose most DEI metrics to the EEOC through EEO-1 forms (i.e., breakdowns by gender and race), this relation is unlikely to reflect difficulties in information collection. Another possible interpretation is that it represents firms' uncertainty about the response to their DEI disclosures when they operate in many jurisdictions. During our sample period, DEI was among the most polarizing topics in American society. Due to this polarization – and how opinions vary

by geographic region – it is likely difficult for firms to anticipate how different stakeholders would interpret the disclosure of DEI-related metrics. Thus, when firms operate in multiple states, they face constituents (e.g., state and local governments) with varying opinions about DEI. Therefore they may prefer to stay silent rather than face potential backlash from some stakeholders. As with the previous analysis, we supplement these interpretations with qualitative assessments in [section 6](#).

## 5.4 Performance

In our last set of analyses, we test whether firms’ performance on a metric is associated with their decision to disclose that metric. We home in on the disclosure of a specific topic, health and safety, because this topic provides two advantages over other HC topics. It is among the easier topics to interpret (i.e., lower injury rates are objectively better), and it is possible to measure firms’ underlying performance on this metric from OSHA data (e.g., [Caskey and Ozel, 2017](#)).

In Panel A of [Table 7](#), we use RepRisk’s count of negative OSHA events as a proxy for firms’ performance on health and safety. We find that the number of negative OSHA events is negatively associated with the disclosure of health and safety metrics. A 1% increase in the number of negative OSHA events is associated with a 2.4 percentage point decline in a firm’s likelihood of disclosing a health and safety metric. We also find that a firm’s total number of negative OSHA events is not associated with the disclosure of operating, DEI, recruitment, compensation, or labor practice metrics. This suggests that the firm’s performance on health and safety appears to only correlate with its disclosure of that topic and not more generally for other topics.

In Panel B, we re-run the tests using data from the OSHA Company Injury Tracking Application (ITA). While these data more directly proxy for a firm’s health and safety performance, they only capture a subset of establishments covered by OSHA’s reporting

requirement.<sup>22</sup> Thus we focus on the subset of firms that are covered by the reporting requirement and can be matched to the OSHA ITA data. The measure we use as a proxy for health and safety performance is the total injury rate, which is reported to OSHA in field M(1) of Form 300A.

Like our findings in Panel A, we find that firms with higher injury rates are less likely to disclose a health and safety metric. A one percentage point increase in the injury rate is associated with a 4.5 percentage point decline in the likelihood that a firm discloses a health and safety metric in its 10-K. We again find that this relation is specific to health and safety metrics and does not hold for the disclosure of metrics from any other topic. Among all of the empirical findings, this result is, perhaps, the most troubling, given that Reg S-K required firms to disclose in their 10-Ks material risks related to HC and firms with more incidents are more likely to face related HC risks. We next turn to our qualitative assessment to augment our interpretations of these results.

## 6 Qualitative Assessment of Strategic Disclosure

### 6.1 Overview and sample characteristics

To better understand and support the inferences from our empirical analyses, we interviewed managers and executives at publicly traded companies who are directly involved in HC reporting. As research has shown, interviews with “elite informants” can help uncover evidence related to strategic management decisions ([Hambrick and Mason, 1984](#); [Basu and Palazzo, 2008](#); [Aguinis and Solarino, 2019](#)).<sup>23</sup>

With each expert, we conducted a 30-minute interview where we asked a series of questions about how that person and peers made HC disclosure decisions, and we encouraged

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<sup>22</sup>OSHA maintains [a list of exempt](#) industries and a more [complete description](#) of firms that are exempt.

<sup>23</sup>There are several definitions of the term “elite informant” in the management literature ([Aguinis and Solarino, 2019](#)). Following [Richards \(1996\)](#), we create a sample of experts who possess information not possessed by others.

free-range responses. Seeking a large and diverse sample, we contacted people from 41 companies and conducted interviews with 20 people from 16 companies. The most common title of our interviewees was vice president or senior vice president responsible for issues related to human resources, human capital, and corporate social responsibility, although we also interviewed lawyers in the general counsel’s office and c-suite executives.

Panel A of [Table 8](#) reports the characteristics of the companies interviewed and summaries of their answers to questions on various topics.<sup>24</sup> The sample represents a diverse subset of publicly traded companies. The most common sector in our sample is resource transformation, with five firms, although those firms are in diverse industries. In total, we have firms from seven of the 11 SASB sectors. These firms also vary significantly in size, ranging from those with a market capitalization of below \$20 billion and fewer than 5,000 employees to those with a market capitalization of above \$100 billion with more than 150,000 employees. Our largest firm, by market capitalization, is more than \$200 billion, and our largest firm, by number of employees, has more than 200,000 employees.

We asked each interviewee why there is heterogeneity in quantitative HC disclosures across companies, what the relation is between quantitative HC disclosures in the ESG report and the 10-K, why firms deemed “poor performers” are less likely to disclose, why firms would be reluctant to disclose operational HC metrics, and why firms would be reluctant to disclose DEI-related HC metrics. With these questions, we sought to validate our interpretations of the archival findings.

Panel B of [Table 8](#) reports the categories of responses we summarize in Panel A. Turning back to Panel A, we see that a majority of the experts made claims that support our empirical findings. For example, 94% of the experts stated that firms take advantage of the lack of disclosure regulation to craft a positive story about their HC management, while 63% stated that they were uncertain about what the most relevant disclosures should be. Below, we discuss the themes that emerged from these interviews and how they relate to our findings.

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<sup>24</sup>We agreed to keep participants and their companies anonymous in order to allow them to speak freely about confidential decisions.

## 6.2 Interview results

We began our interviews by allowing experts to tell us in an open-ended manner what they believed drove the heterogeneity in their and their peers’ quantitative HC disclosures. We did so to better understand the lack of convergence in metrics we document in [section 4.4](#). Among the responses, 13 out of 16 interviewees said they used peers’ disclosures as guidance, and 10 out of 16 stated that they were uncertain of what HC information to disclose. Commenting on the lack of homogeneity in metrics across firms, a global head of corporate social responsibility for a technology firm stated that it was “mind-boggling how unregulated and unstandardized and totally voluntary” the HC disclosure requirements were. Additionally, 15 out of 16 of the experts said that they exploited the flexibility of current HC disclosure regulation to positively portray their HC “story,” which they believe helps explain the differing metrics disclosed by each firm. For example, the head of human resources for an insurance company stated: “If [they] don’t have great statistics on female representation, but [they] have terrific statistics on minority representation, then that is what [they] are going to highlight” – a statement that was representative of the views of the sample of interviewees. These insights support strategic disclosure of HC metrics leading to the lack of convergence documented in [section 4.4](#). The near-uniform responses suggesting that firms are unlikely to disclose information that portrays them negatively suggest that the heterogeneity observed in recent years is unlikely to abate without additional regulation.

Although nearly all of the interviewees agreed that telling a positive story was a relevant factor in their disclosure decision, they stressed that this was not the only relevant factor. We next asked the experts for their insights on why we find in [section 5.1](#) that firms disclosing information in their ESG reports are more likely to include this information in their 10-Ks. Eleven out of 16 stated that the information disclosed in ESG reports was relevant to investors and so belonged in the 10-K. In addition, several respondents said they used the unaudited ESG report as a way to develop disclosures before adding them to regulated filings. Specifically, seven out of 16 interviewees said that the ESG report served as an op-



portunity to develop metrics prior to potential regulation. Six out of 16 also stated that there is less pressure to release an ESG report by a specific date, meaning that they could develop and check metrics for errors before disclosing them for a specific period. These insights provide several explanations for why firms may shift metrics between venues, which we document in [section 5.1](#). Next we asked the interviewees about how information collection and standardization affected their reporting decisions. Consistent with our findings that greater cross-country presence relates negatively to the disclosure of operating HC metrics in [section 5.2](#), the majority of interviewees described geographic challenges as a relevant factor shaping their disclosures. Ten out of 16 stated that laws in different countries impeded the collection of uniform data, while nine out of 16 said that differing workforce characteristics across countries made uniform measurement challenging. Interestingly, eight out of 16 cited significant data collection challenges as a reason why geographic dispersion resulted in less disclosure. The head of total rewards at a resource transformation company stated: “[We] don’t have the same HR in every country where [they] operate,” suggesting that standardizing data across countries to compute a metric on a global basis required a significant manual work. Others stated that their companies lacked the within-country expertise to craft appropriate disclosures and that developing a uniform HR management system would cost “in the tens of millions of dollars.”

The experts also listed two important factors that help explain why we find a negative association between the number of U.S. states where a firm operates and the likelihood that it provides DEI-related metrics in [section 5.2](#). Nine out of 16 said that the broader political exposure created by operating in states with different political leanings hampers willingness to disclose. Relatedly, 11 out of 16 said that litigation risk makes them less likely to disclose, especially on diversity.

Finally, when asked to explain why firms with worse health and safety records would be less likely to disclose related information, as documented in [section 5.3](#), 12 out of 16 of the experts said they would be unwilling to disclose information that negatively portrayed the

company. Explaining this decision, the global HR director for a chemicals company said: “Why would you air dirty laundry? If you’ve got improvements to make, [you] want to make them before you disclose them.” The reluctance to disclose poor performance relates both to current and future performance. Eight out of 16 stated that they are guided in their quantitative HC disclosures, in part, by the implicit commitment to continue disclosing. As the head of total rewards at a resource transformation company explained: “Once we start, we have to continue ... and so the reluctance is to start in the first place.” This finding validates our conjecture that metrics create a commitment to future disclosure and support our focus on quantitative metrics above qualitative statements.

Our interviews helped validate the interpretations of our empirical analysis in [section 5](#). Taken together, the experts’ responses suggested that, given the current principles-based approach to HC disclosures outlined in the amendment to Reg S-K, firms selectively disclose to minimize disclosure risks and emphasize the aspects of HC on which they are performing best. These findings help explain why there is a lack of convergence in the metrics being disclosed as well as why various aspects of a firm’s operating environment, such as geographic dispersion and underlying HC performance are associated with HC disclosure choices.

## 7 Conclusion

Human capital has become an increasingly important component of the economy and firms’ operational strategies and risks ([Zingales, 2000](#)). In response, regulators have begun responding to investor demands by increasing the amount of information firms must disclose about their HC strategy and risk. This paper examines the recent HC disclosure landscape for a large majority of publicly traded U.S. firms.

Using a hand-collected sample of *all* quantitative HC disclosures from 2018–2022, we find that firms dramatically increased the amount of HC information in the 10-K, both at the extensive and intensive margins, following the amendment in 2020 of Reg S-K. Still, our

descriptive evidence shows significant heterogeneity in these disclosures, suggesting a lack of comparability. Our empirical analysis suggests that this lack of convergence is, in part, the result of strategic choices: The choice of whether and what to disclose is associated with firm-level factors, including whether the information is reported elsewhere, the ease with which the firm can obtain the information, and the firm's performance on the activity being measured. To help interpret these results and better understand the lack of unraveling, we interviewed 20 experts working for 16 publicly traded firms who are involved in HC disclosure decisions. Nearly all of these experts stated that, without a rules-based disclosure regime, firms would continue to selectively disclose to minimize disclosure risk and emphasize the aspects of HC on which they are performing best.

Our findings should be of interest to academics, corporate managers, and regulators. The analysis we conduct is particularly timely, given the recommendation of the SEC's Investor Advisory Committee in September 2023 that the Commission should increase HC disclosure requirements and mandate that all firms report a set of HC metrics.<sup>25</sup> Our results provide a detailed overview of the current quantitative HC disclosure landscape and offer evidence that the principles-based approach of the Reg S-K amendment resulted in significant disclosure heterogeneity driven by firms' selective disclosure practices.

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<sup>25</sup>The draft proposal from SEC's Investor Advisory Committee is available at <https://www.sec.gov/files/20230914-draft-recommendation-regarding-hcm.pdf>.

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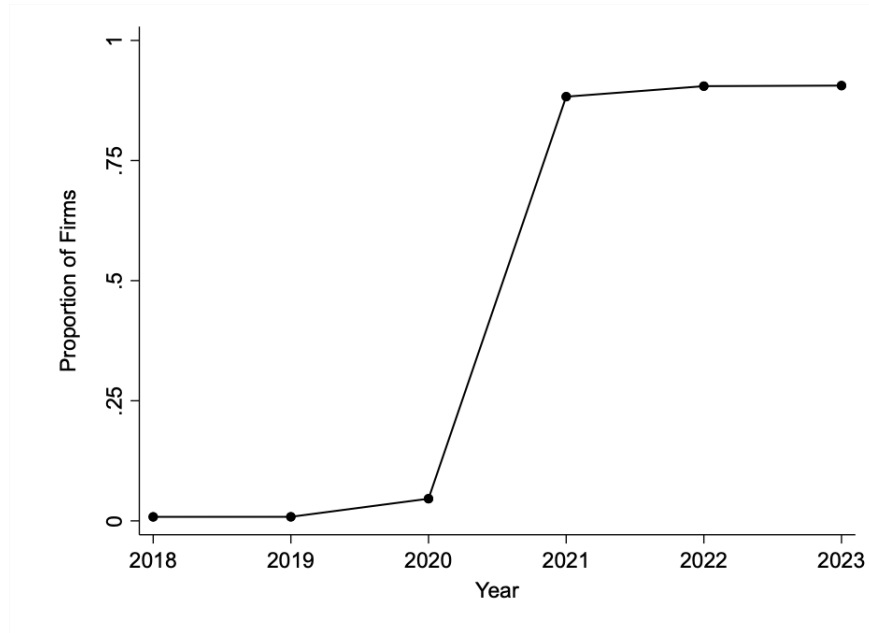
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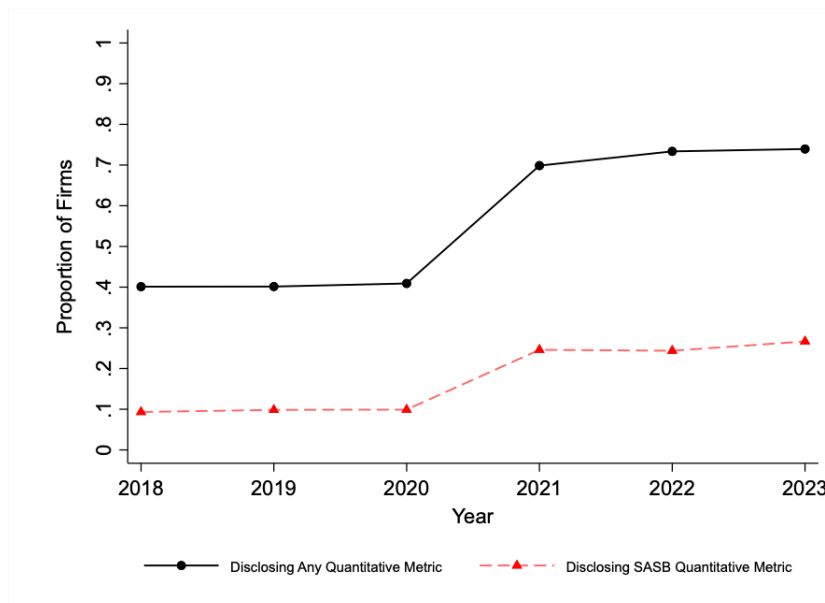
**Figure 1:** Firms with “Human Capital” Subheading in 10-K

This figure shows the proportion of firms that had a subsection in their 10-K report with the phrase “Human Capital.” *Year* refers to the year corresponding to the filing date of the 10-K.



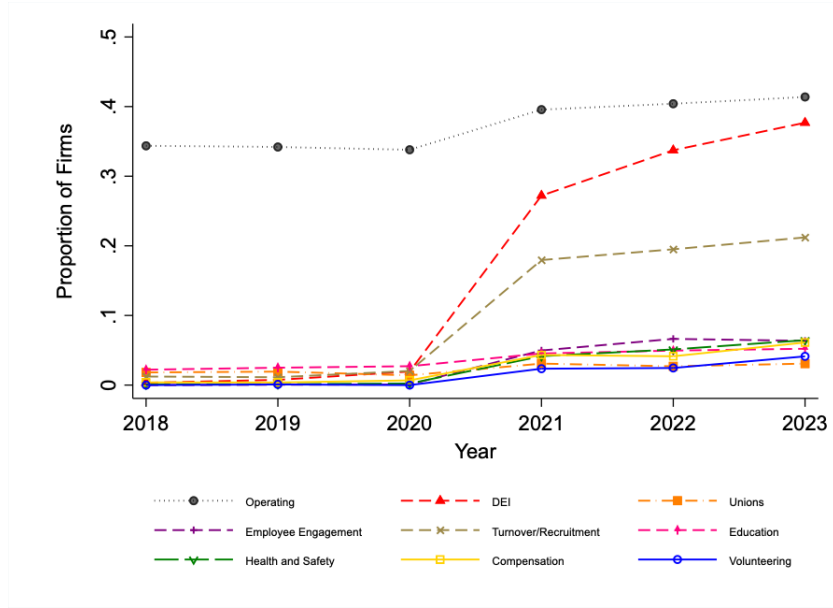
**Figure 2:** Firms Disclosing Metrics in 10-K

This figure shows the proportion of firms that were disclosing any metric in their 10-K (solid black line) and the proportion of firms disclosing a SASB recommended metric (dashed red line) in their 10-K. *Year* refers to the year corresponding to the filing date of the 10-K. The definition of “Quantitative metric” is any type of numerical disclosure, with the exception of workforce unionization breakdowns and geographical breakdowns.



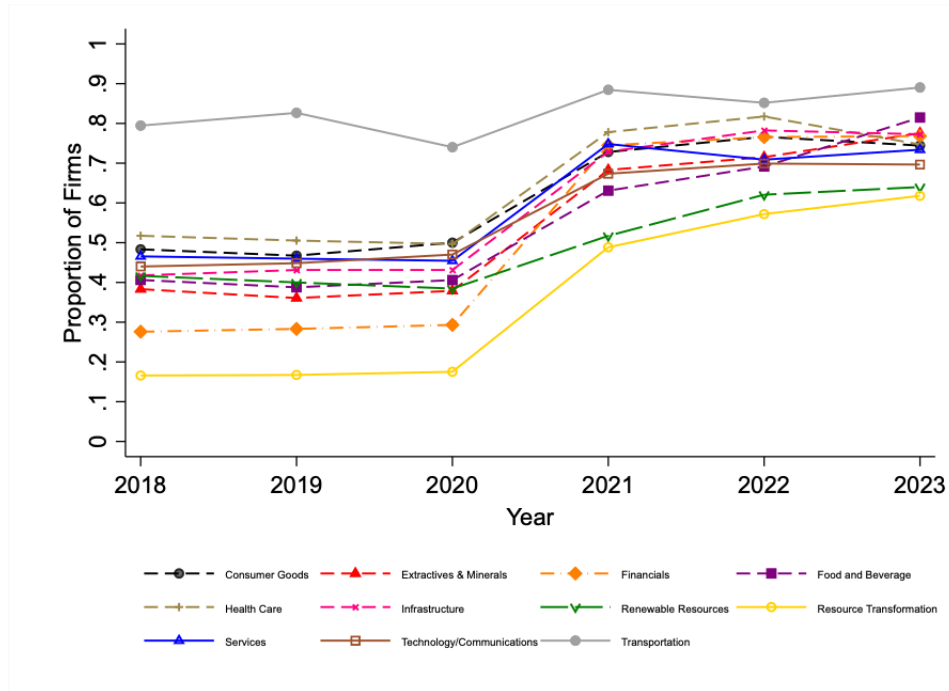
**Figure 3: Firms Disclosing Metric in 10-K (by Topic)**

This figure shows, by metric topic, the proportion of firms that were disclosing at least one metric (either SASB or non-SASB) in their 10-K. The nine different topics we present are based on the categorization of metrics adopted by the SASB standards. Examples of disclosures falling under each of these categories are presented in Appendix 1.



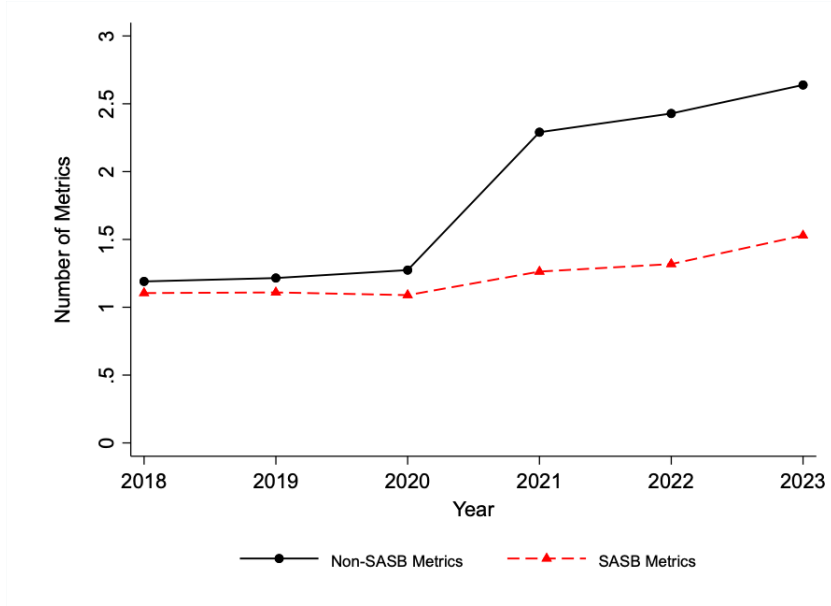
**Figure 4: Firms Disclosing Metric in 10-K (by Sector)**

This figure shows, by sector, the proportion of firms that were disclosing at least one metric (either SASB or non-SASB) in their 10-K. The 11 sectors considered are the sectors defined by the SASB.



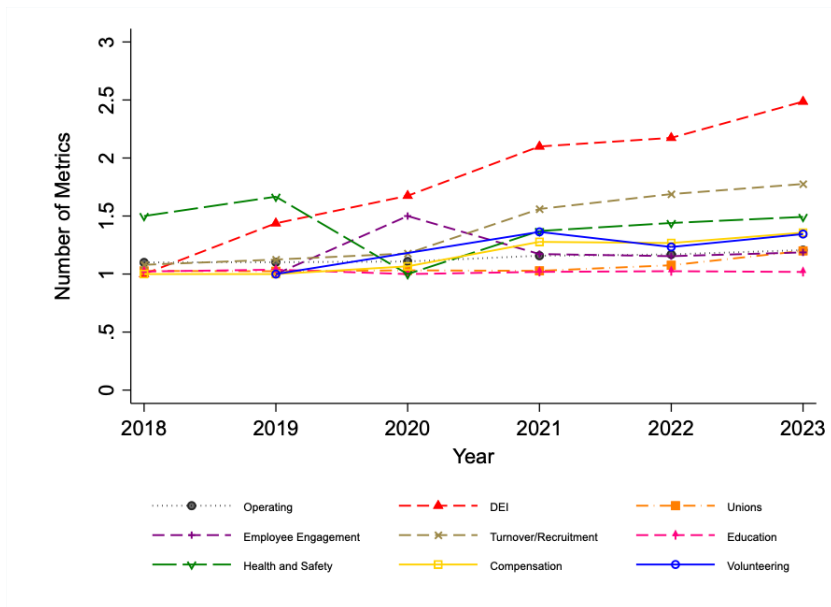
**Figure 5: Number of Metrics in 10-K**

This figure shows the number of HC metrics disclosed by firms in the 10-K. This is separately broken down for both SASB recommended metrics (dashed red line) and non-SASB metrics (solid black line).



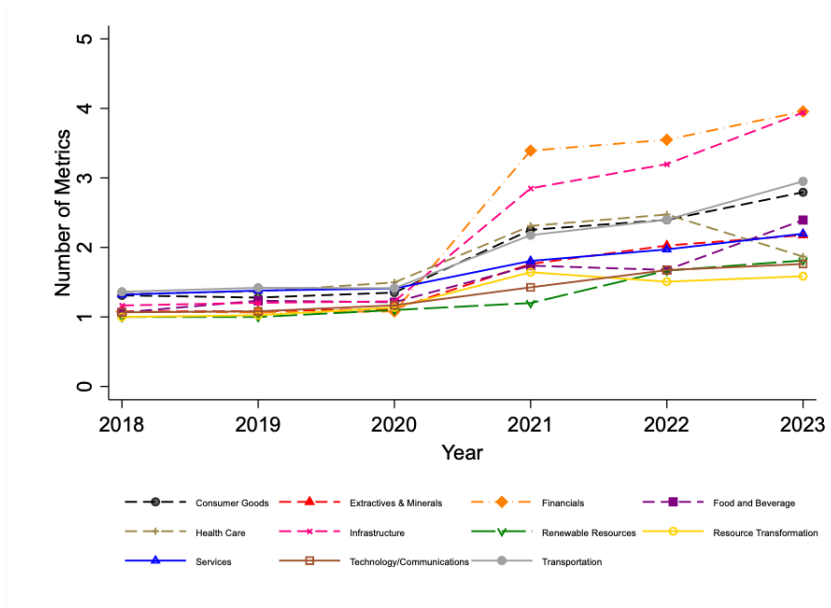
**Figure 6: Number of Metrics in 10-K (by Topic)**

This figure shows, by metric topic, the number of HC metrics disclosed by firms in the 10-K. The nine different topics we present are based on the categorization of metrics adopted by the SASB standards. Examples of disclosures falling under each of these categories are presented in Appendix 1.



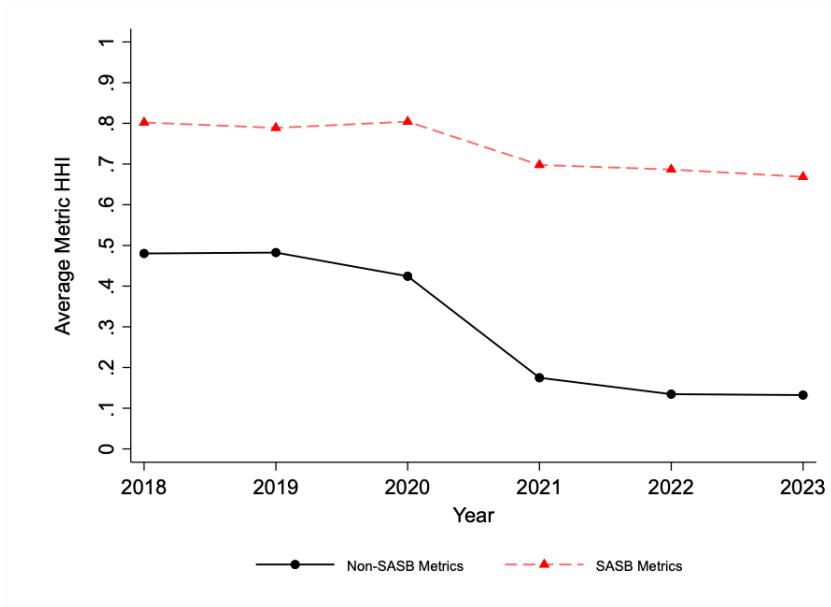
**Figure 7:** Number of Metrics in 10-K (by Sector)

This figure shows, by sector, the number of HC metrics (either SASB or non-SASB) disclosed by firms in the 10-K. The 11 sectors considered are the sectors defined by the SASB.



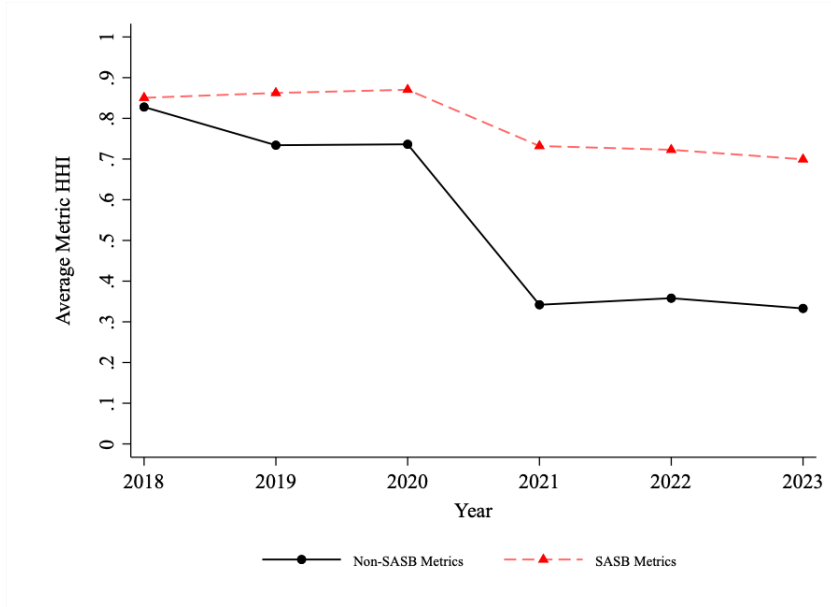
**Figure 8:** Metric-Based Herfindahl-Hirschman Index (HHI)

This figure shows the average metric-based HHI across industries for each year. The metric-based HHI is defined as the sum of squared metric-based shares, and thus, it measures the disclosure concentration of each metric within an industry across the years in our sample. This figure shows the metric-based HHI computed using all firms in our sample. The solid black line refers to the metric HHI for non-SASB metrics, while the dashed red line refers to the metric HHI for SASB metrics.



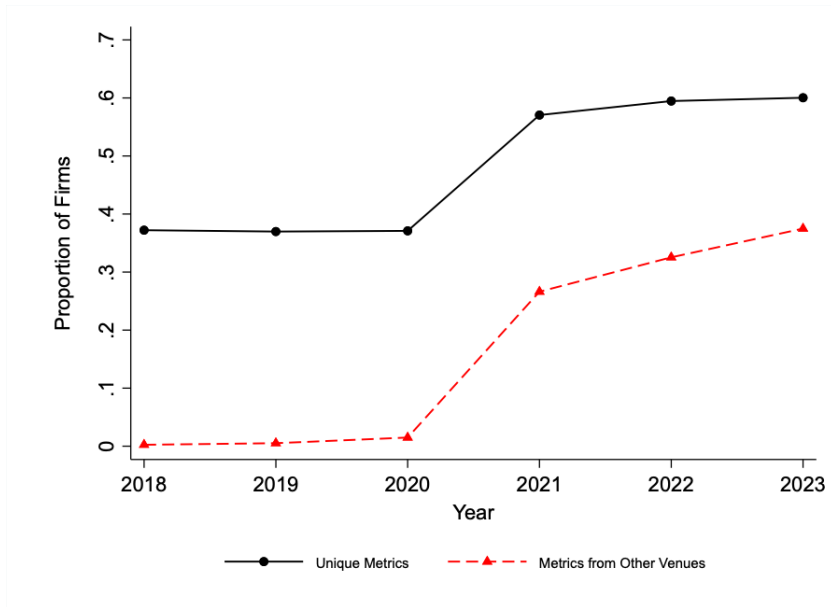
**Figure 9:** Metric-Based Herfindahl-Hirschman Index (HHI) for Pre- Disclosers Only

This figure shows the average metric-based HHI across industries for each year. The metric-based HHI is defined as the sum of squared metric-based shares, and thus, it measures the disclosure concentration of each metric within an industry across the years in our sample. This figure shows the metric-based HHI computed only for the firms that disclosed at least one metric in the pre-regulation period. The solid black line refers to the metric HHI for non-SASB metrics, while the dashed red line refers to the metric HHI for SASB metrics.



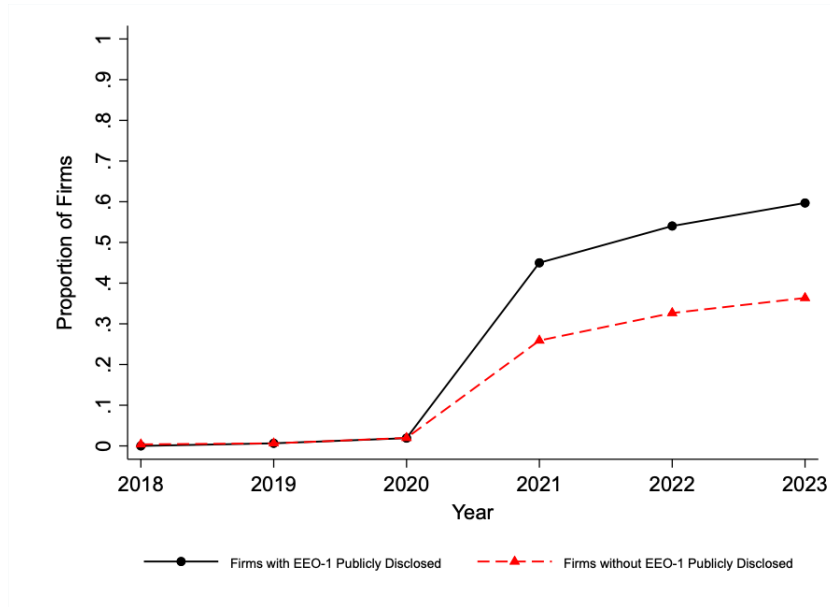
**Figure 10:** Firms Disclosing Unique versus Existing Metrics in 10-K

This figure shows the proportion of firms that disclosed at least one “unique” metric (solid black line) and the proportion of firms that disclosed at least one metric from another venue in their 10-K report (dashed red line). We define metrics as coming from another venue if they were required to be reported to another regulatory agency (i.e., data from EEO-1 reports and/or OSHA-mandated metrics). Metrics are considered “unique” if they were not previously required by another regulatory agency.



**Figure 11:** Firms Disclosing DEI Metric in 10-K by EEO-1 Disclosure Status

This figure shows the proportion of firms that disclosed at least one DEI-related metric, based on whether they publicly released their 2018 EEO-1 report. The trends show that firms that disclosed their EEO-1 publicly pre-regulation, documented by the solid black line, were more likely to disclose a DEI metric than were non-disclosers, documented by the dashed red line.



**Table 1: Summary Statistics**

This table reports the summary statistics for the main outcome and independent variables used in our analysis. All variables are defined in Appendix 2. All continuous variables are winsorized at the 1% and 99% level.

	Obs	Mean	SD	p10	p25	p50	p75	p90
<b>Human Capital Metrics</b>								
Any Quantitative Metric	12356	0.57	0.49	0.00	0.00	1.00	1.00	1.00
SASB Metric	8196	0.18	0.38	0.00	0.00	0.00	0.00	1.00
Non-SASB Metric	12356	0.53	0.50	0.00	0.00	1.00	1.00	1.00
EEO-1 Disclosure	11926	0.07	0.26	0.00	0.00	0.00	0.00	0.00
ESG Report Disclosure	12356	0.18	0.39	0.00	0.00	0.00	0.00	1.00
No. of SASB Metrics	8196	0.23	0.56	0.00	0.00	0.00	0.00	1.00
No. of Non-SASB Metrics	12356	1.09	1.74	0.00	0.00	1.00	1.00	3.00
SASB HC Guidance Exists	12356	0.66	0.47	0.00	0.00	1.00	1.00	1.00
Any Operating Metric	12356	0.38	0.49	0.00	0.00	0.00	1.00	1.00
Any DEI Metric	12356	0.17	0.38	0.00	0.00	0.00	0.00	1.00
Any Recruitment & Turnover Metric	12356	0.11	0.31	0.00	0.00	0.00	0.00	1.00
Any Health & Safety Metric	12356	0.03	0.16	0.00	0.00	0.00	0.00	0.00
Any Compensation Metric	12356	0.03	0.16	0.00	0.00	0.00	0.00	0.00
Any Labor Practices Metric	12356	0.02	0.15	0.00	0.00	0.00	0.00	0.00
<b>Financial Variables</b>								
Return on Assets	12351	0.01	0.14	-0.13	-0.00	0.03	0.07	0.12
Market-to-Book	11753	4.48	10.03	0.85	1.39	2.52	5.07	10.60
Log(Sales)	12136	7.39	1.85	5.34	6.29	7.38	8.56	9.64
CapEx/Sales	12104	0.08	0.16	0.00	0.01	0.03	0.06	0.18
COGS/Sales	12146	0.73	1.17	0.18	0.37	0.60	0.76	0.87
Log(1 + Employees)	12327	1.76	1.41	0.16	0.61	1.50	2.62	3.74
Institutional Ownership	12092	0.79	0.21	0.48	0.70	0.85	0.95	1.00
<b>Other Variables</b>								
HHI	12356	0.08	0.09	0.02	0.03	0.04	0.09	0.18
Unemployment Rate	12322	0.04	0.02	0.02	0.03	0.03	0.04	0.07
Number of Countries	12352	14.66	13.69	2.00	4.00	10.00	20.00	33.00
Number of U.S. States	12352	13.08	9.14	5.00	7.00	10.00	16.00	25.00
Total Injury Rate	3529	0.02	0.02	0.00	0.01	0.02	0.03	0.05
OSHA Events	12356	0.14	0.59	0.00	0.00	0.00	0.00	0.00

**Table 2: Correlation Matrix**

This table reports the pairwise correlations between the main outcome and independent variables used in our analysis. All variables are defined in Appendix 2. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1) Any Quant Metric	1.00																		
(2) SASB Metric	0.40***	1.00																	
(3) Non-SASB Metric	0.90***	0.17***	1.00																
(4) EEO-1 Disc	0.00	-0.05*	0.02	1.00															
(5) ESG Report Disc	-0.14***	-0.03	-0.15***	0.15***	1.00														
(6) ROA	-0.02	0.02	-0.01	0.06**	0.06**	1.00													
(7) MTB	-0.03	-0.00	-0.02	0.04	0.05*	0.13***	1.00												
(8) Log(Sales)	0.08***	0.12***	0.08***	0.33***	0.22***	0.31***	0.04	1.00											
(9) CapEx/Sales	0.06**	-0.02	0.08***	0.03	-0.01	-0.26***	-0.06**	-0.18***	1.00										
(10) COGS/Sales	0.02	-0.01	0.03	-0.04	-0.05*	-0.38***	-0.04*	-0.24***	0.34***	1.00									
(11) Log(1 + Emp)	0.08***	0.10***	0.07***	0.22***	0.19***	0.16***	0.08***	0.76***	-0.11***	-0.08***	1.00								
(12) Institutional Ownership	0.03	0.07***	-0.01	-0.12***	0.01	0.02	-0.04*	-0.10***	-0.05*	0.01	-0.06**	1.00							
(13) HHI	0.16***	0.09***	0.14***	-0.02	0.00	0.08***	0.04	0.08***	-0.08***	0.03	0.22***	0.01	1.00						
(14) Unemployment Rate	0.16***	0.12***	0.15***	-0.00	-0.02	-0.07***	0.05*	-0.04	-0.10***	0.02	0.07**	0.02	0.21***	1.00					
(15) Number of Countries	-0.19***	0.01	-0.20***	0.08***	0.16***	-0.00	0.10***	0.32***	-0.18***	-0.06**	0.36***	0.06**	-0.22***	-0.01	1.00				
(16) Number of U.S. States	0.10***	0.00	0.10***	0.03	0.09***	0.02	0.01	0.30***	0.02	-0.01	0.29***	-0.06**	0.21***	0.05*	-0.01	1.00			
(17) Total Injury Rate	0.02	0.06**	0.01	-0.08***	-0.05*	0.08***	0.04*	0.00	-0.05*	-0.02	0.15***	-0.01	0.22***	-0.00	-0.12***	0.13***	1.00		
(18) Negative OSHA Events	0.02	0.10***	0.02	0.16***	0.19***	-0.01	0.06**	0.44***	-0.00	0.02	0.40***	-0.18***	0.09***	0.10***	0.17***	0.15***	0.06**	1.00	
(19) Job Openings per Unemployed	0.09***	0.11***	0.07***	-0.02	-0.17***	0.08***	0.03	0.04*	-0.02	0.00	0.07**	-0.05*	-0.04	-0.36***	-0.08***	0.04	0.17***	-0.11***	1.00



**Table 3: Heterogeneity in Disclosure Rates of SASB Metrics**

This table reports the disclosure rates of SASB metrics within an industry. Each “metric” refers to a metric that SASB determines is financially material for firms within a given industry. In total, there are 219 unique metric-industry pairs. We then compute the share of firms within that industry that disclose that suggested metric in the pre-regulation and post-regulation periods. Based on their disclosure rates by firms within the industry, we put these metrics into four buckets: less than 1/4 of the industry disclose the metric, between 1/4 and 1/2 of the industry disclose, between 1/2 and 3/4 of the industry disclose, and over 3/4 of the industry disclose. Each row corresponds to the SASB sector for the metric-industry pair (e.g., Proportion of Women in the Apparel industry would be classified under the “Consumer Goods” Sector). Panel A reports the disclosure rates across all firms in the sample. Panel B reports the disclosure rates conditional on the firm disclosing at least one metric.

**Panel A: Disclosure Rates of SASB Metrics within Sectors (All Firms)**

Sector	Under 1/4 Disclosed		Between 1/4 and 1/2 Disclosed		Between 1/2 and 3/4 Disclosed		Over 3/4 Disclosed	
	Pre-Regulation	Post-Regulation	Pre-Regulation	Post-Regulation	Pre-Regulation	Post-Regulation	Pre-Regulation	Post-Regulation
Consumer Goods	25	25	0	0	0	0	0	0
Extractives & Mineral Processing	32	31	0	1	1	2	1	0
Financials	17	17	0	0	0	0	0	0
Food & Beverage	18	18	0	0	1	1	0	0
Health Care	6	6	1	1	0	0	0	0
Infrastructure	14	13	0	1	1	0	0	1
Renewable Resources	7	7	0	0	0	0	0	0
Resource Transformation	10	10	0	0	0	0	0	0
Services	30	30	0	1	1	1	1	0
Technology & Communication	25	24	1	1	0	1	0	0
Transportation	22	22	0	1	3	1	2	3
<b>Total</b>	206	203	2	6	7	6	4	4

**Panel B:** Disclosure Rates of SASB Metrics within Sectors (Disclosers Only)

Sector	Under 1/4 Disclosed		Between 1/4 and 1/2 Disclosed		Between 1/2 and 3/4 Disclosed		Over 3/4 Disclosed	
	Pre-Regulation	Post-Regulation	Pre-Regulation	Post-Regulation	Pre-Regulation	Post-Regulation	Pre-Regulation	Post-Regulation
Consumer Goods	17	14	0	2	0	2	2	1
Extractives & Mineral Processing	10	19	0	3	0	0	0	7
Financials	-	11	-	2	-	0	-	3
Food & Beverage	5	14	0	1	0	1	1	3
Health Care	0	4	0	0	0	0	0	3
Infrastructure	7	9	0	1	0	0	1	3
Renewable Resources	-	-	-	-	-	-	-	-
Resource Transformation	2	6	0	0	0	0	1	2
Services	10	17	1	3	2	4	2	5
Technology & Communication	10	10	0	3	0	3	3	3
Transportation	19	19	1	1	0	0	7	7
<b>Total</b>	<b>80</b>	<b>123</b>	<b>2</b>	<b>16</b>	<b>2</b>	<b>10</b>	<b>21</b>	<b>37</b>

**Table 4: Determinants of Disclosing HC Metrics**

This table reports the estimates of OLS regressions, regressing indicators for HC metrics on a set of key determinants. All independent variables are defined in Appendix 2. *Any Quant Metric* is an indicator equal to 1 if a firm discloses at least one metric, and 0 otherwise. *SASB Metric* is an indicator equal to 1 if a firm discloses at least one metric recommended by the industry's SASB standard, and 0 otherwise. *Non-SASB Metric* is an indicator equal to 1 if a firm discloses at least one metric that is not included in the relevant SASB standard, and 0 otherwise. Standard errors are clustered at the industry level and shown in parentheses. The intercepts are included but not reported. All continuous variables are winsorized at the 1% and 99% level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% level, respectively

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Quant Metric	Any Quant Metric	SASB Metric	SASB Metric	Non-SASB Metric	Non-SASB Metric
ROA	-0.166*** (0.040)	-0.092 (0.072)	-0.107*** (0.034)	-0.068* (0.037)	-0.064 (0.041)	-0.014 (0.099)
MTB	0.000 (0.000)	0.000 (0.001)	0.002*** (0.000)	0.000 (0.000)	-0.001 (0.000)	0.000 (0.001)
Log(Sales)	0.002 (0.005)	-0.004 (0.009)	0.007* (0.004)	0.014** (0.006)	0.004 (0.005)	-0.007 (0.010)
Capex/Sales	-0.002 (0.033)	-0.097 (0.072)	-0.011 (0.021)	-0.005 (0.031)	0.015 (0.033)	-0.086 (0.075)
COGS/Sales	0.029*** (0.004)	0.021*** (0.006)	-0.024*** (0.003)	-0.004 (0.004)	0.041*** (0.004)	0.024*** (0.006)
Unemployment Rate	2.613*** (0.227)	-1.344 (1.046)	1.083*** (0.226)	-1.019* (0.548)	2.185*** (0.234)	-0.540 (1.116)
Institutional Ownership	0.185*** (0.023)	0.105*** (0.030)	0.117*** (0.020)	0.051*** (0.018)	0.151*** (0.023)	0.089*** (0.033)
Log(1 + Emp)	0.008 (0.006)	0.004 (0.011)	0.007 (0.004)	-0.003 (0.007)	0.004 (0.006)	0.008 (0.011)
N	11223	11223	7635	7635	11223	11223
Adj. R-squared	0.027	0.195	0.021	0.343	0.022	0.177
Year FE	No	Yes	No	Yes	No	Yes
Industry FE	No	Yes	No	Yes	No	Yes
Clusters	N/A	Industry	N/A	Industry	N/A	Industry

**Table 5: Determinants of Post-Regulation Quantitative Human Capital Disclosure in 10-K**

This table reports the estimates of OLS regressions, regressing indicators for quantitative human capital metrics on a set of key determinants. Additionally, all determinants included in this table also contain an interaction with the variable Post. This facilitates comparison of the determinants' effects pre-regulation and post-regulation. *Any Quant Metric* is an indicator equal to 1 if a firm discloses at least one quantitative metric, and 0 otherwise. *SASB Metric* is an indicator equal to 1 if a firm discloses at least one quantitative metric recommended by the industry's SASB standard, and 0 otherwise. *Non-SASB Metric* is an indicator equal to 1 if a firm discloses at least one quantitative metric that is not included in the relevant SASB standard, and 0 otherwise. Standard errors are clustered at the industry level and shown in parentheses. All intercepts, main effects, and interacted control variables are included, although not reported. All continuous variables are winsorized at the 1% and 99% level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% level, respectively

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Any Quant Metric	Any Quant Metric	SASB Metric	SASB Metric	Non-SASB Metric	Non-SASB Metric	Any DEI Metric	Any DEI Metric
Post × Pre-Reg ESG Report	0.101*** (0.020)	0.105*** (0.026)	0.025 (0.021)	0.038** (0.018)	0.112*** (0.020)	0.109*** (0.026)		
Post × Pre-Reg EEO-1 Disc							0.140*** (0.028)	0.135*** (0.045)
Post	0.189*** (0.070)	0.223 (0.255)	0.051 (0.061)	0.041 (0.106)	0.143** (0.070)	0.226 (0.260)	0.036 (0.047)	0.082 (0.170)
ROA	-0.155** (0.065)	-0.118 (0.099)	-0.052 (0.039)	-0.047 (0.047)	-0.077 (0.065)	-0.058 (0.112)	-0.013 (0.013)	0.016 (0.029)
MTB	0.001 (0.001)	0.001 (0.001)	0.001 (0.000)	-0.001** (0.000)	0.000 (0.001)	0.001 (0.001)	-0.000** (0.000)	0.000 (0.000)
Log(Sales)	-0.013* (0.007)	-0.008 (0.015)	0.001 (0.004)	0.012 (0.009)	-0.016** (0.007)	-0.015 (0.015)	0.002* (0.001)	0.008 (0.008)
COGS/Sales	0.033*** (0.007)	0.031*** (0.011)	-0.017*** (0.004)	0.006* (0.003)	0.041*** (0.007)	0.030** (0.011)	0.002 (0.002)	0.005 (0.006)
Capex/Sales	0.090* (0.050)	-0.045 (0.118)	0.031 (0.023)	0.042 (0.025)	0.094* (0.049)	-0.035 (0.119)	0.001 (0.009)	-0.040 (0.057)
Unemployment Rate	3.648*** (0.480)	2.723 (1.885)	0.268 (0.338)	-0.717 (1.420)	3.291*** (0.481)	4.274** (2.015)	1.199*** (0.214)	3.412** (1.580)
Institutional Ownership	0.109*** (0.033)	0.076* (0.045)	0.049** (0.022)	0.005 (0.020)	0.086*** (0.032)	0.067 (0.046)	0.002 (0.006)	-0.001 (0.018)
Log(1 + Emp)	0.021** (0.009)	-0.001 (0.017)	0.008* (0.005)	-0.007 (0.010)	0.018** (0.008)	0.002 (0.016)	0.001 (0.002)	0.003 (0.010)
N	11223	11223	7635	7635	11223	11223	10832	10832
Adj. R-squared	0.125	0.208	0.062	0.352	0.118	0.190	0.211	0.246
Year FE	No	Yes	No	Yes	No	Yes	No	Yes
Industry FE	No	Yes	No	Yes	No	Yes	No	Yes
Clusters	N/A	Industry	N/A	Industry	N/A	Industry	N/A	Industry

**Table 6: Information Collection and Human Capital Disclosure**

This table reports the estimates of OLS regressions, regressing indicators for human capital disclosure topics on a set of key determinants. All independent variables are defined in Appendix 2. *Any Operating Metric* is an indicator equal to 1 if a firm discloses at least one operating metric and 0 otherwise. *Any DEI Metric* is an indicator equal to 1 if a firm discloses at least one DEI metric, and 0 otherwise. *Any Recruitment & Turnover Metric* is an indicator equal to 1 if a firm discloses at least one recruitment metric, and 0 otherwise. *Any Health & Safety Metric* is an indicator equal to 1 if a firm discloses at least one health and safety metric, and 0 otherwise. *Any Compensation Metric* is an indicator equal to 1 if a firm discloses at least one compensation metric, and 0 otherwise. *Any Labor Practices Metric* is an indicator equal to 1 if a firm discloses at least one labor practice metric, and 0 otherwise. The main independent variable of interest in Panel A is *Log(Number of Unique Countries)*, which is a count of the number of unique countries that are mentioned in a firm's 10-K. The main independent variable of interest in Panel B is *Log(Number of Unique U.S. States)*, which is a count of the number of unique U.S. states that are mentioned in a firm's 10-K. The grey highlighted row shows the variable of interest in each table. The intercepts are included but not reported. All continuous variables are winsorized at the 1% and 99% level. \*\*\*, \*\*, \* and \* indicate statistical significance at the 1%, 5%, and 10% level, respectively

**Panel A: Number of Unique Countries Mentioned in 10-K**

	(1) Any Operating Metric	(2) Any DEI Metric	(3) Any Recruitment & Turnover Metric	(4) Any Health & Safety Metric	(5) Any Compensation Metric	(6) Any Labor Practice Metric
Log(Number of Unique Countries)	-0.040*** (0.013)	-0.003 (0.007)	-0.007 (0.005)	-0.001 (0.003)	-0.005 (0.004)	-0.001 (0.003)
ROA	-0.039 (0.080)	-0.002 (0.046)	0.045 (0.033)	0.008 (0.018)	0.015 (0.017)	-0.019 (0.016)
MTB	0.000 (0.000)	0.000 (0.001)	0.000 (0.000)	-0.000* (0.000)	0.000 (0.000)	0.000 (0.000)
Log(Sales)	-0.010 (0.009)	0.024*** (0.007)	0.006 (0.006)	0.005* (0.003)	-0.001 (0.003)	0.004 (0.002)
Capex/Sales	-0.098 (0.076)	0.063* (0.034)	0.029 (0.023)	0.005 (0.013)	0.008 (0.013)	0.018 (0.015)
COGS/Sales	0.027*** (0.006)	0.004 (0.004)	-0.002 (0.003)	0.002 (0.002)	-0.003*** (0.001)	0.002 (0.002)
Institutional Ownership	0.051 (0.032)	0.092*** (0.020)	0.024 (0.020)	-0.013 (0.012)	0.008 (0.011)	-0.005 (0.010)
Log(1 + Emp)	0.004 (0.011)	0.006 (0.008)	0.009 (0.008)	0.002 (0.004)	0.008** (0.004)	-0.004* (0.002)
Unemployment Rate	-0.161 (0.920)	-1.274 (0.907)	-0.782 (0.672)	0.776* (0.402)	-0.303 (0.338)	0.049 (0.333)
N	11,221	11,221	11,221	11,221	11,221	11,221
Adj. R-squared	0.108	0.221	0.131	0.095	0.062	0.130
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Clusters	Industry	Industry	Industry	Industry	Industry	Industry

**Panel B.** Number of Unique U.S. States Mentioned in 10-K

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Operating Metric	Any DEI Metric	Any Recruitment & Turnover Metric	Any Health & Safety Metric	Any Compensation Metric	Any Labor Practice Metric
Log(Number of Unique U.S. States)	0.024 (0.018)	-0.025** (0.010)	-0.012* (0.007)	-0.000 (0.004)	-0.003 (0.004)	0.005 (0.004)
ROA	-0.006 (0.082)	-0.008 (0.046)	0.046 (0.032)	0.008 (0.018)	0.018 (0.017)	-0.016 (0.015)
MTB	0.000 (0.000)	0.000 (0.001)	0.000 (0.000)	-0.000* (0.000)	0.000 (0.000)	0.000 (0.000)
Log(Sales)	-0.018** (0.008)	0.025*** (0.007)	0.005 (0.006)	0.005 (0.003)	-0.002 (0.003)	0.003 (0.002)
Capex/Sales	-0.098 (0.076)	0.063* (0.033)	0.030 (0.023)	0.005 (0.013)	0.009 (0.013)	0.017 (0.015)
COGS/Sales	0.025*** (0.005)	0.004 (0.004)	-0.002 (0.003)	0.002 (0.002)	-0.004*** (0.001)	0.002 (0.001)
Institutional Ownership	0.046 (0.032)	0.094*** (0.019)	0.024 (0.020)	-0.013 (0.012)	0.008 (0.011)	-0.006 (0.009)
Log(1 + Emp)	-0.002 (0.011)	0.007 (0.008)	0.009 (0.008)	0.002 (0.004)	0.008* (0.004)	-0.005** (0.002)
Unemployment Rate	-0.037 (0.946)	-1.260 (0.899)	-0.759 (0.674)	0.778* (0.404)	-0.285 (0.342)	0.052 (0.330)
N	11,221	11,221	11,221	11,221	11,221	11,221
Adj. R-squared	0.105	0.222	0.131	0.095	0.061	0.130
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Clusters	Industry	Industry	Industry	Industry	Industry	Industry

## Table 7: Performance and Human Capital Disclosure

This table reports the estimates of OLS regressions, regressing indicators for human capital disclosure topics on a set of key determinants. All independent variables are defined in Appendix 2. *Any Operating Metric* is an indicator equal to 1 if a firm discloses at least one operating metric and 0 otherwise. *Any DEI Metric* is an indicator equal to 1 if a firm discloses at least one DEI metric, and 0 otherwise. *Any Recruitment & Turnover Metric* is an indicator equal to 1 if a firm discloses at least one recruitment metric, and 0 otherwise. *Any Health & Safety Metric* is an indicator equal to 1 if a firm discloses at least one health and safety metric, and 0 otherwise. *Any Compensation Metric* is an indicator equal to 1 if a firm discloses at least one compensation metric, and 0 otherwise. *Any Labor Practices Metric* is an indicator equal to 1 if a firm discloses at least one labor practice metric, and 0 otherwise. The main independent variable of interest in Panel A is *Log(OSHA Events)*, which is the count of the number of negative RepRisk OSHA events in a given year for the company. The main independent variable of interest in Panel B is *Total Injury Rate*, which is the total number of injuries divided by the average annual number of employees. The grey highlighted row shows the variable of interest in each table. The intercepts are included but not reported. All continuous variables are winsorized at the 1% and 99% level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% level, respectively

**Panel A: RepRisk OSHA Events**

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Operating Metric	Any DEI Metric	Any Recruitment & Turnover Metric	Any Health & Safety Metric	Any Compensation Metric	Any Labor Practice Metric
Log(OSHA Events)	-0.009 (0.025)	-0.006 (0.017)	-0.014 (0.012)	-0.024*** (0.007)	-0.008 (0.007)	0.002 (0.008)
ROA	-0.014 (0.081)	-0.002 (0.047)	0.048 (0.033)	0.005 (0.018)	0.018 (0.017)	-0.018 (0.016)
MTB	0.000 (0.000)	0.000 (0.001)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Log(Sales)	-0.016* (0.009)	0.023*** (0.007)	0.005 (0.006)	0.006* (0.003)	-0.002 (0.003)	0.003 (0.002)
Capex/Sales	-0.094 (0.075)	0.063* (0.034)	0.029 (0.024)	0.006 (0.013)	0.009 (0.013)	0.018 (0.015)
COGS/Sales	0.025*** (0.006)	0.004 (0.004)	-0.002 (0.003)	0.003 (0.002)	-0.003*** (0.001)	0.002 (0.001)
Institutional Ownership	0.047 (0.032)	0.092*** (0.020)	0.022 (0.020)	-0.015 (0.011)	0.007 (0.011)	-0.005 (0.010)
Log(1 + Emp)	0.000 (0.011)	0.006 (0.008)	0.009 (0.008)	0.003 (0.004)	0.008* (0.004)	-0.005* (0.002)
Unemployment Rate	-0.027 (0.945)	-1.257 (0.902)	-0.745 (0.670)	0.806** (0.404)	-0.277 (0.343)	0.050 (0.327)
N	11,223	11,223	11,223	11,223	11,223	11,223
Adj. R-squared	0.104	0.221	0.131	0.096	0.062	0.130
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Clusters	Industry	Industry	Industry	Industry	Industry	Industry

Panel B: OSHA Injury Tracking Application Total Injury Rate

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Operating Metric	Any DEI Metric	Any Recruitment & Turnover Metric	Any Health & Safety Metric	Any Compensation Metric	Any Labor Practice Metric
Total Injury Rate	0.795 (0.626)	-0.298 (0.408)	-0.313 (0.413)	-0.454* (0.254)	0.293 (0.187)	0.085 (0.160)
ROA	0.006 (0.140)	-0.092 (0.099)	0.145** (0.068)	0.011 (0.035)	0.032 (0.032)	0.003 (0.024)
MTB	0.001 (0.001)	0.000 (0.001)	-0.000 (0.001)	-0.001*** (0.000)	0.000 (0.000)	-0.000 (0.000)
Log(Sales)	-0.003 (0.019)	0.041*** (0.010)	0.003 (0.010)	0.007 (0.007)	-0.003 (0.006)	-0.001 (0.004)
Capex/Sales	-0.065 (0.157)	0.150 (0.104)	0.051 (0.070)	-0.085* (0.043)	-0.016 (0.028)	0.043 (0.035)
COGS/Sales	0.015 (0.016)	-0.003 (0.014)	-0.004 (0.010)	0.005 (0.004)	-0.008** (0.003)	-0.005 (0.004)
Institutional Ownership	0.008 (0.084)	0.097** (0.040)	0.021 (0.032)	0.034 (0.027)	0.042** (0.019)	-0.036* (0.020)
Log(1 + Emp)	-0.007 (0.021)	-0.010 (0.013)	0.006 (0.012)	0.005 (0.009)	0.002 (0.008)	-0.006 (0.004)
Unemployment Rate	2.997 (2.037)	-2.126* (1.153)	0.639 (1.045)	1.563 (1.240)	0.306 (0.549)	0.458 (0.952)
N	3,411	3,411	3,411	3,411	3,411	3,411
Adj. R-squared	0.135	0.220	0.123	0.091	0.061	0.246
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Clusters	Industry	Industry	Industry	Industry	Industry	Industry



**Table 8: Human Capital Disclosure Survey**

This table reports the summary statistics for the sample of firms included in our human capital disclosure survey and the definitions for the variables from the survey. In Panel A, Column (1) reports the company ID, Column (2) reports the SASB sector the company belongs to, Column (3) reports the index they are on, Column (4) reports the range that the company's market cap falls in, Column (5) reports the range of the total number of employees at the company. The remainder of the columns summarize the company's response for the variables defined in Panel B.

**Panel A: Firm Characteristics and Responses to Human Capital Disclosure Survey**

Company	Sector	Index	Mkt Cap	Number of Employees	Investor Relevance	Storytelling	Industry Guide	Commitment	Country Law	Country Characteristics	Data Challenges
Company A	Infrastructure	Nasdaq	\$30B-\$50B	10,000-25,000	1	1	1	0	0	0	0
Company B	Financials	NYSE	\$20B-\$30B	50,000-75,000	0	1	1	0	1	1	0
Company C	Financials	NYSE	\$100B-\$200B	75,000-100,000	0	1	1	0	1	0	0
Company D	Health Care	NYSE	<\$20B	10,000-25,000	1	1	1	0	1	1	1
Company E	Services	NYSE	\$100B-\$200B	150,000-200,000	0	1	1	1	1	1	1
Company F	Resource Transformation	NYSE	\$50-\$75B	75,000-100,000	1	1	1	0	1	1	0
Company G	Consumer Goods	Nasdaq	<\$20B	<5,000	1	1	1	1	1	1	0
Company H	Resource Transformation	NYSE	\$100B-\$200B	150,000-200,000	1	1	1	1	0	1	1
Company I	Resource Transformation	NYSE	<\$20B	25,000-50,000	1	1	1	1	0	0	1
Company J	Technology & Communications	Nasdaq	<\$20B	<5,000	0	1	0	0	1	1	1
Company K	Services	NYSE	\$50B-\$75B	10,000-25,000	1	1	1	1	1	1	0
Company L	Health Care	NYSE	\$200B-\$300B	100,000-150,000	0	1	1	0	1	0	0
Company M	Resource Transformation	NYSE	\$30B-\$50B	50,000-75,000	1	1	1	1	0	1	1
Company N	Infrastructure	NYSE	\$100B-\$200B	<5,000	1	0	0	0	0	0	1
Company O	Resource Transformation	NYSE	\$30B-\$50B	10,000-25,000	1	1	1	1	0	0	1
Company P	Health Care	Nasdaq	\$20B-\$30B	>200,000	1	1	1	0	1	0	0
					69%	94%	81%	50%	63%	56%	50%
Company A	Infrastructure	Nasdaq	\$30B-\$50B	10,000-25,000	1	0	0	1	1	1	1
Company B	Financials	NYSE	\$20B-\$30B	50,000-75,000	1	1	1	1	1	1	1
Company C	Financials	NYSE	\$100B-\$200B	75,000-100,000	0	0	0	0	0	0	0
Company D	Health Care	NYSE	<\$20B	10,000-25,000	1	1	1	1	1	1	1
Company E	Services	NYSE	\$100B-\$200B	150,000-200,000	0	0	1	1	1	1	1
Company F	Resource Transformation	NYSE	\$50B-\$75B	75,000-100,000	1	1	1	1	0	1	1
Company G	Consumer Goods	Nasdaq	<\$20B	<5,000	1	1	1	1	1	1	1
Company H	Resource Transformation	NYSE	\$100B-\$200B	150,000-200,000	0	0	0	0	0	0	0
Company I	Resource Transformation	NYSE	<\$20B	25,000-50,000	0	0	1	0	0	0	0
Company J	Technology & Communications	Nasdaq	<\$20B	<5,000	0	0	1	1	1	1	1
Company K	Services	NYSE	\$50B-\$75B	10,000-25,000	0	1	1	1	1	0	0
Company L	Health Care	NYSE	\$200B-\$300B	100,000-150,000	0	0	1	1	0	1	1
Company M	Resource Transformation	NYSE	\$30B-\$50B	50,000-75,000	0	0	0	1	0	1	1
Company N	Infrastructure	NYSE	\$100B-\$200B	<5,000	1	1	1	1	0	1	1
Company O	Resource Transformation	NYSE	\$30B-\$50B	10,000-25,000	0	1	0	1	1	0	0
Company P	Health Care	Nasdaq	\$20B-\$30B	>200,000	0	0	1	0	1	0	0
					38%	44%	69%	75%	56%	63%	

**Panel B: Variable Definition**

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Variable	Definition
Investor Relevance	Human capital disclosures are relevant to investors
Storytelling	Firms use the lack of regulation to craft a story
Industry Guide	Firms determine what HC metrics to disclose, in part, by what peers disclose
Commitment	Disclosure is sticky
Country Law	Disclosure across countries is hindered by different laws
Country Characteristics	Certain country characteristics (e.g., importance of race) make it more difficult to disclose across countries
Data Challenges	Data are not uniformly maintained making it difficult to aggregate data across different systems
ESG Timing	Disclosure in ESG reports is easier because there is less time pressure
ESG Practice	Disclosure in ESG report is less risky for various reasons, so firms disclose in ESG reports before shifting the disclosures to 10Ks
Legal Concern	Litigation risk inhibits disclosure
Reputation Concern	Firms are reluctant to disclose issues that are likely to negatively affect their reputation
Reputation & DEI	Reputation risk leads to less DEI disclosure
Disclosure Uncertainty	Firms are unsure about what to disclose

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## Appendix 1: Example of HCD Disclosures

Firm: *Esco Technologies Inc*; Filing date: *2019-11-29*

### Employees

As of September 30, 2019, the Company employed 3,239 persons, including 3,012 full time employees. Of the Company's full-time employees, 2,440 were located in the United States and 572 were located in 15 foreign countries.

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Firm: *Eastern Bankshares, Inc.*; Filing date: *2021-03-29*

### Diversity, Equity & Inclusion (DE&I)

The Company is deeply committed to having a diverse workforce reflective of the communities we serve, where all feel included and supported. Our strategy is to build and sustain diversity, equity and inclusion ("DE&I") as a critical aspect of our work and workplace environment, which we believe makes us a better employer, a better provider of services to our customers, a better member of our communities and a better investment for our shareholders.

The Company has long been committed to and recognized as a leader in DE&I, as evidenced by:

- Our diverse Board of Directors. DE&I starts with our diverse Board of Directors, which has long been led by professionals of color (Wendall Knox, Lead Director 2009-2017; Deborah Jackson, Lead Director Jan. 2019 – present). Overall, 50% of our Board of Directors is comprised of women and people of color.
- Our diverse leadership team. Our Management Committee, which runs the Company, is comprised of 12 executives, 40% of whom are women or people of color, including our President, Quincy Miller.
- Our Company was built by women. Our first customer was a woman, and for over 200 years women have played a key role in our Company's success. Women comprise 67% of our total workforce and 38% are Vice Presidents or hold more senior positions across our divisions.
- Our recognition as a leader in DE&I. We've been recognized in 2020 as a "Best Place to Work" for LGBTQ+ equality by the Human Rights Campaign for the eighth consecutive year, and *The Wall Street Journal* featured Eastern's work to drive a diverse and inclusive culture in December 2020.
- Our 11 employee resource groups. Each group has an executive sponsor, and serves as a source of support and inclusion for colleagues. The groups also provide guidance to leadership on issues of importance to them. In 2020, our Black Professionals Alliance played a key leadership role in advising executive management in holding a Town Hall dedicated to discussing management's reflections and action plans in the wake of the murders of George Floyd and Breonna Taylor, among other Black people by law enforcement. The leadership of our Black Professional Alliance also helped develop additional training centered on "Understanding Racism" that

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continues to be offered to all employees. The employee resource groups reflect the diversity of our workforce and the communities we serve, and include:

- Asian American Professional Coalition;
- Black Professional Alliance;
- Latinos in Action;
- disAbility Advocacy Alliance;
- Equality Under the Blue (LGBTQ+);
- Sustainability Network (environment);
- Heart of Eastern (volunteerism);
- Parenting Networking Group;
- Veterans and Military Families;
- Women's Interest Network; and
- Young Professionals Network.

While we are proud of our long standing commitment to DE&I, we also recognize that we have more work to do to improve DE&I within our Company, particularly at the most senior levels of our organization. Accordingly, the Company is implementing a "Road to Equity" action plan which reflects greater intentionality in increasing DE&I across a number of areas including talent acquisition, retention and development, and supplier diversity. While our Company has been successful in recruiting diverse talent into our organization, we have a richness of gender and ethnic diversity at the junior levels of our Company, but not as much at the more senior levels. In addition, some of our divisions, such as our Retail Division, are incredibly diverse, while other divisions remain predominantly comprised of non-diverse colleagues. Senior management at the Company is in the process of setting both qualitative and quantitative goals to help drive an enhanced focus on DE&I, with metrics and dashboards under development to ensure accountability for making progress toward these goals over time. Simply stated, our main goal is to equitably represent like the communities we serve at all levels of our organization, from our branches to the C-suite.

To help drive diverse recruiting, the Company partners with external organizations that develop diverse candidate pipelines and supply diverse talent, regularly reports on diverse hiring to the Board of Directors, and has a talent acquisition team led by and comprised of diverse colleagues. In 2020, we achieved a record diversity hiring of 43 percent across the Company. To further enhance our culture and commitment to DE&I, the Company provides DE&I training across all divisions and employee populations, offering mandatory training on the Company's DE&I strategy for all employees; middle management training on understanding social identity; and senior management training on organizational change tied to the Road to Equity, with the assistance and leadership of experienced external DE&I professionals. The Company recently formed a DE&I steering committee chaired by the Chief Executive Officer, whose members include executives, leaders of our employee resource groups, and external advisors who are leaders on and experts in DE&I issues to further drive this intentionality. The Board of Directors recently engaged an independent DE&I consultant, reporting directly to the Lead Director, to provide guidance and best practices to further drive our success on the Road to Equity.

### Demographics

The tables below depict the Company's demographics as of December 31, 2020 for our Board of Directors, our Management Committee (which consists of our senior most leaders at the Company), our total workforce, and new hires in 2020 who remained employed as of December 31, 2020:

#### 2020 Board of Directors

	Gender				Race & Ethnicity						
	Female	Male	Not Disclosed	Total	Asian	Black	Latinx	Not Disclosed	Other POC	White	Total
Count	3	9	0	12	1	2	1	0	0	8	12
Percentage	25.0%	75.0%	—%	100.0%	8.3%	16.7%	8.3%	—%	—%	66.7%	100.0%

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#### 2020 Management Committee

	Gender				Race & Ethnicity						
	Female	Male	Not Disclosed	Total	Asian	Black	Latinx	Not Disclosed	Other POC	White	Total
Count	3	9	0	12	0	2	0	0	0	10	12
Percentage	25.0%	75.0%	—%	100.0%	—%	16.7%	—%	—%	—%	83.3%	100.0%

#### 2020 Total Workforce

	Gender				Race & Ethnicity						
	Female	Male	Not Disclosed	Total	Asian	Black	Latinx	Not Disclosed	Other POC	White	Total
Count	1,270	613	1	1,884	108	110	172	37	40	1,417	1,884
Percentage	67.4%	32.5%	0.1%	100.0%	5.7%	5.9%	9.1%	2.0%	2.1%	75.2%	100.0%

#### 2020 New Hires (2020 new hires employed as of 12/31/20)

	Gender				Race & Ethnicity						
	Female	Male	Not Disclosed	Total	Asian	Black	Latinx	Not Disclosed	Other POC	White	Total
Count	124	66	1	191	19	19	27	26	9	91	191
Percentage	64.9%	34.6%	0.5%	100.0%	10.0%	10.0%	14.1%	13.6%	4.7%	47.6%	100.0%

Firm: *ExlService Holdings*; Filing date: *2021-02-25*

***Diversity, Equity and Inclusion***

Our diversity, equity and inclusion philosophy is to create an inclusive work environment and leverage diversity to enable the organization to effectively capitalize on the differing views and contributions that each employee brings to the workplace.

We consider diversity, equity and inclusion to be a key factor in our recruiting goals and overall business growth strategy. As of December 31, 2020, of the United States reporting workforce, approximately 39.1% were racially/ethnically diverse individuals. As of December 31, 2020, our global workforce was approximately 39.5% female, with over 12,500 women employees globally.

EXL is committed to providing a supportive working environment and career opportunities for our employees. Our Diversity and Inclusion Council consists of a global, diverse mix of leaders and oversees our diversity, equity and inclusion program. We provide trainings to our employees on topics aimed at improving diversity, equity and inclusion, such as managing unconscious bias, and have formed employee resource groups for select employee communities that are aimed at supporting diverse groups and interests. For our female employees, EXL has several programs to promote career advancement, including leadership development for women at the mid- to senior- levels, a separate program to improve the retention and engagement of new mothers through employee friendly parental leave and similar policies, and our WE (Women at EXL) platform, which is designed to enable women at EXL advance their career and achieve professional growth through discussion, collaboration, networking, training, development and mentorship opportunities.

In addition, we maintain a supplier diversity program in the United States designed to provide opportunities for qualified diverse businesses.

Firm: *The Goodyear Tire & Rubber Company*; Filing date: *2019-02-08*

***Employees***

At December 31, 2018, we employed approximately 64,000 full-time and temporary people throughout the world, including approximately 38,000 people covered under collective bargaining agreements. Approximately 7,000 of our employees in the United States are covered by a master collective bargaining agreement with the United Steelworkers ("USW"), which expires in July 2022. In addition, approximately 1,000 of our employees in the United States are covered by other contracts with the USW and various other unions. Approximately 15,000 of our employees outside of the United States are covered by union contracts that currently have expired or that will expire in 2019, primarily in Luxembourg, China, South Africa, France and Turkey. Unions represent a major portion of our employees in the United States and Europe.

## Appendix 2: Variable Definitions

Variable	Definition	Source
Any Quant Metric	An indicator for whether the firm discloses at least one quantitative metric	10-K
SASB Metric	An indicator for whether the first discloses at least one quantitative metric recommended by the industry's SASB standard	10-K
Non-SASB Metric	An indicator for whether the first discloses at least one quantitative metric that is not included in the relevant SASB standard	10-K
Pre-Reg EEO-1 Disc	An indicator variable that takes on the value of one if the firm publicly discloses their 2018 EEO-1 report	Corporate Websites & ESG Reports
Pre-Reg ESG Report	An indicator variable that takes on a value of one if the firm publicly discloses an ESG report in at least one of the pre-regulation periods	Corporate Websites & ESG Reports
SASB HC Guidance Exists	An indicator variable that takes on a value of one if the firm belongs to an industry where SASB provides at least one recommended human capital metric in their industry standard	SASB 2018 Industry Standards
ROA	Net income before extraordinary items divided by total assets	Compustat
MTB	Market capitalization divided by total assets	Compustat
Log(Sales)	Log of Sales	Compustat
CapEx/Sales	Capital expenditures divided by sales	Compustat
COGS/Sales	Cost of goods sold divided by sales	Compustat
Institutional Ownership	Percentage of outstanding shares held by institutional investors	Thomson Reuters 13F
HHI	Sum of squared market shares of all firms in a given industry (where industry is determined by two-digit sic codes)	Compustat
Unemployment Rate	Annual unemployment rate over time	Bureau of Labor Statistics
Log(1 + Employees)	Log of 1 plus the number of employees	Compustat
Number of Countries	Number of unique foreign countries mentioned in a firm's 10-K filings	10-K
Number of U.S. States	Number of unique U.S. states mentioned in a firm's 10-K filings	10-K
Total Injury Rate	The total number of injuries (Form 300A Field M(1)) divided by the average annual number of employees	OSHA Injury Tracking Application
Negative OSHA Events	The number of negative health & safety events tied to a firm in a given year reported by RepRisk	RepRisk
Metric HHI	The sum of shared metric shares of metrics disclosed within a SASB industry. The metric shares are defined as the proportion of firms within an industry that disclose the specific metric in that year (for example, the proportion of firms that disclosed their workforce's female proportion in 2018). These metric shares are computed for all unique metrics disclosed within a SASB industry. The HHI is then constructed as the sum of these squared metric shares and represents the concentration of each metric within that industry.	10-K