Sustainable Investing: Evidence From the Field

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Abstract

We survey 509 equity portfolio managers from both traditional and sustainable funds on whether, why, and how they incorporate firms' environmental and social ("ES") performance into investment decisions. ES performance influences stock selection, engagement, and voting for over three quarters of investors, including nearly two thirds of traditional investors. Financial considerations are a primary reason, even among sustainable funds. Few are willing to sacrifice financial returns for ES performance due to fiduciary duty concerns, and voting and engagement are mainly driven by financial considerations. A second reason is constraints. Fund mandates, firmwide policies, or client wishes caused 71% to make stock selection, voting, or engagement decisions that they would otherwise not have. Some of these actions had financial consequences, such as avoiding stocks that would improve returns or diversification; others had ES consequences, such as avoiding stocks whose ES performance they could have improved.

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1. Introduction

Sustainable investing ("SI") – the practice of incorporating environmental and social ("ES") factors into investment decisions – seems to have become increasingly mainstream.[1] In 2006, the United Nations established the Principles for Responsible Investment ("PRI"), signed by 63 institutional investors managing a total of $6.5 trillion. By March 2023, this had grown to 4,841 investors with $121 trillion. However, some investors may sign the PRI or introduce funds marketed as "sustainable" without genuinely practicing SI; others may incorporate ES factors even in traditional funds.

One way to study how mainstream SI has actually become is through archival research, investigating investors' portfolios (e.g., Gibson et al., 2022; Pastor, Stambaugh, and Taylor, 2023) or voting and engagement (e.g., Michaely, Ordonez-Calafi, and Rubio, 2024). However, data only documents the outcome of an optimization problem and not the underlying beliefs, objectives, and constraints that led to it. Investors might prefer stocks with good ES performance because they believe that ES is financially material but undervalued, view it as immaterial but correlated with material factors, or have non-financial objectives. Similarly, investors might not engage on ES issues because they think they are financially immaterial, that engagement would be ineffective, or that it would crowd out non-ES engagement.

Understanding asset managers' beliefs, objectives, and constraints is particularly important to understand how well the asset management industry represents asset owners' preferences. Many asset owners have ES as well as financial goals. If asset managers have similar ES goals, or have a purely financial objective but believe that firms underinvest in ES, then asset owners' ES goals may be achieved. However, if asset managers are unwilling to sacrifice financial returns for ES performance, and if they view most companies as investing in ES optimally, their likely impact on ES is limited – regardless of how many sign the PRI or launch funds marketed as sustainable.

[1] "Sustainable investing" is sometimes referred to as "responsible investing." We use the former term throughout.

This paper surveys equity portfolio managers across the globe on these issues. Our first focus is on their *beliefs*, such as how material they view ES performance for firm value, whether they think ES is fully priced by the market, and whether they regard firms as over- or underinvesting in ES issues. The survey also elicits fund managers' *objectives* – are they purely financial, or do they put weight on ES performance? If the latter, what are their ES goals, and how do they trade them off with returns? The final focus is on whether investors' *actions*, such as stock selection, voting, and engagement, are affected by ES performance and why – due to investors' beliefs and objectives, or constraints such as fund mandates, firmwide policies, or client wishes?

We distributed the survey between November 2023 and February 2024, receiving responses from 509 active equity portfolio managers (479 who completed every question). We targeted both managers of funds marketed as sustainable ("sustainable investors") and funds that are not ("traditional investors"). We received responses from 290 traditional and 219 sustainable investors. 223 of the funds were marketed in the US, the others predominantly in the EU and UK. Importantly, and in contrast to other surveys, we did not survey stock analysts or governance/sustainability specialists, instead focusing exclusively on portfolio managers who make investment decisions.

The answers reveal several interesting results, organized into four groups, that point to a more complex model of investor behavior than currently used in the academic literature.

Beliefs

Our first question asked respondents to rank the importance of ES performance (actual performance, not ratings) for long-term firm value relative to five other value drivers: strategy and competitive position, operational performance, corporate culture, governance, and capital structure. ES received the lowest average support, with 73% ranking it fifth or sixth; its average ranking was lowest even among sustainable investors. Notably, ES ranks significantly below governance ("G"),

even though ESG factors are often bundled together; below corporate culture, another intangible; and below capital structure, even though the latter is irrelevant in perfect capital markets.

The low ranking of ES performance does not mean that investors view it as irrelevant. Many free text entries emphasized that all value drivers are interlinked, that ES can affect the firm's competitive position or operational performance, and that deficiencies in any of the value drivers are a concern. Others indicated that poor ES performance can be a signal of other problems, and that specific ES issues are highly material in specific industries. Thus, many portfolio managers have a nuanced view of ES that emphasizes granularity, omitted variables, and interactions with non-ES value drivers.

ES performance's low ranking also does not imply that investors view it as immaterial in absolute terms. We next asked respondents to rate the financial materiality of ES performance on eight dimensions. 85% (including 78% of traditional investors) rated at least one ES issue as material. Both investor types view ES performance on employee and consumer-related issues as most important, potentially because they are internalized even in the absence of regulation. More sustainable than traditional investors view environmental issues as material.

We next turned from long-term value to long-term returns, to study views on market pricing. 73% of sustainable investors expect good ES performers to deliver positive alpha, and a notable 45% of traditional investors agree. Unexpectedly, by far the most popular reason is that ES performance is correlated with other factors that improve shareholder returns, rather than mattering directly. The second is that ES is valuable but the market fails to price it in. Investor short termism and unawareness of the financial materiality of ES are seen as more important than insufficient information. There is even greater similarity in the two investor types' expectations for poor ES performers, with 61% (67%) of traditional (sustainable) investors predicting negative alpha. This suggests that some traditional investors view ES as a hygiene factor, where poor performance matters more than good.

We then asked investors whether, from a shareholder value perspective, firms over- or underinvest in the eight ES issues. For all eight, the modal response was that they invest at the optimal level, potentially explaining why investors are selective in their support of shareholder proposals and their engagements. Yet, for each issue, more than 40% of investors believe that firms either over- or underinvest; across all issues, 68% of investors believe that companies overinvest in at least one (most commonly greenhouse gas emissions), and 51% believe that they underinvest in at least one (most commonly ecological impacts). The most supported reasons for overinvestment are pressure from the media, the public, employees or investors; underinvestment is attributed to investor or company short termism.

Objectives and constraints

Our next set of questions asked about investors' objectives and the constraints they operate under. Only 27% of investors (24% traditional, 30% sustainable) would tolerate companies sacrificing even one basis point of annual return for ES performance; both types explained that fiduciary duty prevents them from doing so. This contrasts models where investors assign significant weight to social value. While plausible for asset owners, it does not describe delegated asset managers constrained by fiduciary duty. Instead of having an objective function that trades off social against financial value, fund managers take ES performance into account largely to improve financial returns or, as the next questions will show, to satisfy constraints.

71% of investors (61% traditional, 84% sustainable) report that ES constraints such as firmwide policies, fund mandates, and client wishes led them to make different stock selection, voting, or engagement decisions than they otherwise would. The most frequent consequences were that investors had to avoid stocks that they believed would improve returns or diversification; in 29-55% of cases, these constraints reduced financial returns. Paradoxically, ES constraints sometimes led investors to

take actions that reduced their ES impact, such as not investing in ES laggards whose performance they could have improved.

These responses show that the industry does not readily partition into traditional funds with a purely financial objective and sustainable funds with both financial and social objectives, nor into unconstrained traditional and constrained sustainable funds. Instead, both types of funds have a dominant financial objective but also face a range of formal and informal ES constraints. Since these constraints are imposed either by the funds or their clients, one may wonder why they exist. One explanation, reinforced by our interviewees, is that they are a second-best solution to a principal-agent problem. Writing a contract that requires asset managers to maximize their asset owners' weighted objective over ES and returns may be infeasible. Instead, asset managers offer a menu of funds with different constraints that they believe reflect clients' ES concerns. When selecting a fund, clients choose its constraints plus the manager's ability to maximize returns subject to those constraints, rather than its objective function. A model of sustainable investing with delegated asset management that features such an equilibrium has, to the best of our knowledge, not yet been written.

Actions

Our third set of questions investigates how ES considerations affect investor actions: stock selection, voting, and engagement.

Stock selection: 77% of investors (66% traditional, 91% sustainable) "often" or "very often" incorporate ES performance into stock selection. The reasons, however, differ. For sustainable funds, the fund mandate is most important, followed by alignment with client values, and firmwide policies. These three constraints rank higher than "to improve fund returns" or "to avoid downside risk." For traditional funds, the two financial reasons are most important, followed by the three constraints.

Despite these differences, financial reasons cause a majority of both investor types to regularly practice ES integration[2] in stock selection: 74% of sustainable and 51% of traditional investors do so to avoid downside risk, improve returns, or reduce volatility. Avoiding downside risk is a more common reason than improving expected returns, and much more important than reducing volatility. ES integration is correlated with fund managers' beliefs on whether ES is a source of alpha, which, as discussed earlier, does not divide neatly across traditional vs sustainable investors. Impact (affecting firms' cost of capital or rewarding / penalizing companies for ES performance) is less important, mattering for just 20% of traditional investors and a minority (41%) of even sustainable investors.

Voting: Consistent with the importance of fiduciary duty, only 27% of investors (24% traditional, 31% sustainable) have voted for a shareholder proposal that was even slightly negative for shareholder value, even though 78% have supported proposals that were value neutral. Such voting, especially for proposals with negative value implications, is driven more by constraints than the proposal's expected impact on society. The effect on other companies owned by the investor is least important, suggesting limited support for "universal owner" motivations.

Engagement: 76% of investors (64% traditional, 92% sustainable) have engaged with companies to improve their ES performance, motivated primarily by the expected impact on shareholder value. Marketing motivations, such as concerns for the fund's sustainability rating and reputation, are seen as least important. The main reasons why some investors never engage are their small stake and the costs of engagement, consistent with standard cost-benefit analysis. These responses suggest that asset managers are unwilling to undertake ES engagement that is not in their clients' financial interest.

Specific ES issues

[2] "ES integration" typically refers to the incorporation of ES factors into the investment process for the purpose of improving risk-adjusted financial returns. See for example https://www.unpri.org/investment-tools/definitions-for-responsible-investment-approaches/11874.article.

We finally asked investors whether and why they take into account carbon emissions or board diversity, two ES issues that receive significant attention. Despite their differences (diversity is a social issue whose effects are mainly internalized by the company, emissions are an environmental issue whose effects are mainly externalities), the responses are similar. Neither is considered of high importance, and the most common reason for considering either is its impact on society. Consistent with prior responses, reducing downside risk and complying with fund mandates, firm policies, and client values are more important reasons than improving returns. More investors associate emissions with lower returns and diversity with higher returns than the reverse, in contrast to academic research that shows the opposite or no link. In free-text fields, investors explain that they consider multiple forms of diversity, while most academic research focuses on demographic diversity.

Additional conclusions

We can draw four broader conclusions from the results. First, the asset management industry is unlikely to lead the charge in improving the aggregate ES performance of firms. Most investors do not place significant weight on ES objectives beyond what is required to improve financial returns, nor do they believe that firms are systematically underinvesting in ES. This may explain why academic research generally finds that SI has a limited impact on companies' ES performance (see Heath et al. (2023) for a causal study and Kölbel et al. (2023) and Gosling (2024) for overviews). This need not be because asset managers are greenwashing, but because they are bound by fiduciary duty and believe that most companies are investing in ES optimally.

The second is that differences between traditional and sustainable investors are smaller than commonly believed. Both types recognize fiduciary duty and the priority of financial returns, with similarly low proportions willing to sacrifice financial returns for ES performance or to vote for ES proposals that are even slightly negative for shareholder value. Both face ES-related constraints that affect their portfolio composition. Many of their beliefs are also similar. Both types rank ES

performance low relative to other value drivers, yet over three quarters of both view at least some ES issues as financially material. Both often tilt their portfolios based on ES performance to improve risk-adjusted returns, and both engage with companies to improve ES performance. Empirical studies on the effectiveness of SI often focus on funds labelled as "sustainable" or "responsible", or compare the actions of funds with and without such labels. However, the performance of sustainable *investors* may not be informative about the performance of sustainable *investing*. Some funds with sustainable labels do not integrate ES into stock selection or engage on ES performance; many funds without such labels do both.

Third, there is large heterogeneity of beliefs, and of actions driven by beliefs, within both traditional and sustainable investor types. For example, 45% of traditional investors expect good ES performers to deliver positive alpha, 44% no alpha, and 11% negative alpha. These beliefs affect behavior, with believers in ES outperformance much more likely to practice ES integration and engage with companies on ES. This contrasts prior research that attributes differences in investor behavior to different preferences, and suggests that it may be fruitful to incorporate heterogeneous beliefs into models of sustainable investing. For asset owners, it is important to understand that the use of ES performance in the investment process depends more on portfolio managers' beliefs and fund constraints than on fund labels.

The final conclusion is the need to better understand how asset managers reflect, or fail to reflect, their asset owners' preferences. Giglio et al. (2023) and Heeb et al. (2023) provide evidence that many retail investors care about ES performance. The vast majority of traditional and sustainable asset managers, however, prioritize financial returns. ES performance affects their investment decisions because of ES constraints, or because they view it as a predictor of returns. It is an open question whether self-selection of asset owners with different preferences to managers with different beliefs and constraints achieves asset owners' ES objectives.

Relation to the literature

This paper is most closely related to other surveys of investor behavior. Amel-Zadeh and Serafeim (2018) study how investors use ES information, but not their beliefs, motives, or constraints. They also do not differentiate between ES performance (a company's impact on wider society) and ES risks (society's impact on the company).[3] It is not surprising if investors take risks into account; as Edmans (2023a) argues, doing so is investing, not ES investing. Our questions focus exclusively on ES performance, because the debate surrounding SI is on whether ES performance benefits shareholder returns or is at their expense, and on whether investors are willing to sacrifice returns for ES performance.

Krueger, Sautner, and Starks (2020) survey institutional investors on their perceptions of climate risk and actions taken to mitigate it. We study multiple ES issues and focus on ES performance, rather than risk. In contrast to our findings, their respondents' main motives for incorporating climate risk into investing are reputation and moral or ethical obligations, rather than financial returns. This may be because only 21% of their respondents are portfolio managers; most are senior executives, analysts, and ES specialists.

Giglio et al. (2023) survey retail investors, who do not face constraints such as fiduciary duty, firm policies or fund mandates. Most of their respondents expect ESG stocks to underperform, and most ESG-oriented respondents are motivated by ethical considerations or climate hedging, in contrast to the professional investors in our sample. McCahery, Pudschedl, and Steindl (2022) investigate SI behavior among private equity and venture capital investors, Bancel, Glavas, and Karolyi (2023) study how finance professionals incorporate ES factors into firm valuation, and Bauer et al. (2024) survey investors on their beliefs about climate risk pricing and their return expectations.

[3] Among sustainable investors, the former is often referred to as "impact" and the latter as "dependency." We do not use these terms as they may not be familiar to non-ES investors. In addition, "impact" may suggest that this survey is about impact investing, and cause non-ES investors to quit the survey, believing it is not applicable to them.

Focusing on investor behavior other than SI, McCahery, Sautner, and Starks (2016) survey investors' choice between exit and voice in the pursuit of financial objectives. Gompers et al. (2020) investigate how venture capitalists make investment decisions, and Edmans, Gosling, and Jenter (2023) study how investors influence CEO pay. Away from investors, an influential literature starting with Graham and Harvey (2001) surveys corporate managers; see Graham (2022) for an overview.

A broader literature uses archival research to study fund managers' stock selection, voting, and engagement, surveyed by Edmans (2014), Edmans and Holderness (2017), and Dasgupta, Fos, and Sautner (2021) for traditional investors, and Matos (2020) and Starks (2023) for sustainable investors.

2. Motivation and Methodology

2.1 Surveys and Archival Research

The standard empirical methodology is archival research. This has several advantages, such as large datasets, objectivity, and the ability to control for multiple factors. However, it also has limitations. First, archival research can only document outcomes, not the underlying objectives that led to them. While objectives are almost always unobservable, this is a lesser concern in many finance settings as there is either a single objective (such as shareholder value) or two dominant objectives (investors care about risk and return, workers about wages and leisure, and consumers about price and quality) with a reasonably clear trade-off (forgoing one hour of leisure yields the hourly wage). Investors' objectives are unknown, they may have multiple, and it is unclear how they trade them off or whether they even perceive a trade-off.

Second, it is difficult to deduce investors' beliefs from their actions, especially when there is uncertainty about their objectives. For example, investors might buy ES leaders because they expect them to outperform, or because they believe that buying will lower their cost of capital. Third, it is similarly challenging to identify investors' constraints. While archival research can observe actions

that are not taken, the reasons are often unclear. An investor might avoid an industry because constraints preclude it, or because the investor expects the industry to underperform.

Fourth, a survey allows us to investigate the relative importance of various drivers of SI behavior. Archival research typically does so by putting them all in the same regression, but the one with least measurement error may end up most significant. For the same reason, our chosen set of responses were guided by what academic research and our beta-testers suggested are most important, irrespective of whether they can be measured by empiricists. For example, we included the investor's stake size as a determinant of engagement so that we can compare it against less observable factors. Finally, archival studies may be limited by the "academic paradigm," i.e., restricted to what existing research suggests is relevant. A survey that is beta-tested with practitioners, includes free text fields, and is accompanied by interviews can uncover new objectives, constraints, and determinants of SI that had not previously been documented.

The survey methodology itself has limitations, which we have endeavored to attenuate. First, respondents may interpret questions differently to how we envisaged. We engaged in extensive beta-testing of the survey and provide free-text fields after each question to detect any persistent misinterpretations. Second, the Friedman (1953) "as if" critique warns that investors may act in accordance with a theory but be unable to articulate it. Conversely, participants may choose a response because it sounds logical. We thus gave short, simple responses that exclude the underlying rationale; while including it might more precisely identify the mechanism, a respondent might choose an option because it seems logical, or reject it because it is too intricate.

Third, respondents may misreport their answers. In addition to guaranteeing anonymity, we tried to not ask questions that would likely lead to misreporting, such as whether personal values influence attention to ES performance (which may conflict with fiduciary duty). Fourth, responses may be limited by the options that we offer, and we may have unintentionally skewed them towards finding

that ES matters. Thus, we endeavored to be symmetric in our responses, rather than only including those we thought practitioners would select. For example, we included the possibility that ES constraints lead to an improvement in financial returns, rather than just a reduction.

A final potential limitation is generalizability. One concern is geographic generalizability, given that views on ES may differ across regions. We conducted a global study, with wide representation from funds marketed in the US, EU, UK, and elsewhere. We found remarkably few geographic differences. A second concern is that, even though we reached out to all funds, respondents might be mostly from sustainable funds. We address this by reporting results separately for traditional and sustainable funds wherever there are meaningful differences in their responses.

2.2 Survey Design and Delivery

We benefited from extensive feedback on our questions before launching the survey. We presented the questions to academic audiences and sent them to leading researchers. We beta-tested the survey with both traditional and sustainable investors to ensure that they were interpreting the questions as we intended, that the survey was not too long[4], and that we were not missing key dimensions. All of these beta tests occurred via Zoom, where the participants answered the questions "aloud," so we could observe how they were interpreting them.

The survey window was November 2023 to mid-February 2024. From Morningstar, we obtained names of 8,312 portfolio managers for active equity funds marketed in the US, UK and European Economic Area. We guessed their email addresses using standard email formats and internet research, leading to approximately 7,000 emails with no returned error message. Estimates from email marketing providers suggest that up to 50% of domains accept all emails without providing an error message, even if the address is incorrect and undelivered; thus, the number of successful emails could be as low

[4] Our target was 15 minutes; for the actual surveys, the median response time ended up being 17 minutes.

as 3,500. We also distributed the survey via CFA UK, various regional CFA Societies in the US, associations such as the Investment Company Institute, and our own networks. A sample invitation email contained the following subject line and text (emphasis in original)[5]:

Subject: Academic survey of equity portfolio managers

I would be grateful if you were willing to participate in a 15-minute confidential academic survey on whether and how active equity portfolio managers incorporate environmental and social (ES) factors into investment decisions. We are equally interested in funds that ***are not marketed as "sustainable"****/"ESG" as in funds with such a label, and in funds that* ***do not consider ES factors*** *as much as those that do. … Please forward the link to other equity PMs in your firm or network who might be interested in participating. However, please do not forward it to sustainability professionals or stock analysts as this survey is* ***only for equity PMs****.*

The text specified "active equity portfolio managers" to ensure that managers of passive funds (who do not engage in stock selection) or fixed income funds (who do not vote, and generally engage less) did not respond; we later describe a screening question that further ruled them out. The final sentence reiterated that the survey was only for portfolio managers.

The invitation emphasized that we were interested in funds not marketed as sustainable to reduce the selection bias described earlier; the subject line referred to a survey of equity portfolio managers rather than a survey on SI, to reduce the risk that traditional investors deleted the email upon seeing the subject. A related concern is that, among traditional funds, those who view ES as important might have been particularly likely to respond. We thus specified in bold that we were interested in funds

[5] We employed variations of the invitation depending on the recipient. For example, for UK investors, the subject line was "LBS/LSE academic survey of equity portfolio managers," since LBS and LSE are likely known to UK investors. Some asset managers only run sustainable funds, and so we did not include the second sentence.

that do not consider ES factors. Indeed, many free text comments claimed that ES is an immaterial distraction. Thus, even if investors who feel strongly about ES are more likely to participate, there seems to be no clear reason why investors with strong positive views will be more responsive than those with strong negative views.

To encourage responses, we donated £100 for each completed survey (up to a total of £25,000) to respondents' choice of the American, British, or International Red Cross (we also gave the option of no donation), and we offered the option to receive a draft of the working paper before its public release.[6] We administered the survey using the Qualtrics online platform, giving respondents a generic link to guarantee their anonymity. Except for the demographic questions, we randomized the order of responses within each question.

In total, we contacted between 3,500-7,000 fund managers directly; this excludes the number contacted through third party organizations, who may have also received the direct approach. We obtained responses from 509 investors; 479 answered every question.[7] This corresponds to a response rate of 7-15%, compared to 4.3% for McCahery, Sautner, and Starks (2016) and 6.5% for Gompers et al. (2020). We interviewed 12 respondents to explore the reasons behind their responses. The interviewees were selected because they filled in several free text responses and to obtain a diversity of views.

After the introductory page of the survey that thanked the participants and guaranteed their confidentiality (see Appendix A), the second page stated the following:

This is a survey on how active equity investors consider companies' environmental and social ("ES") performance. Please interpret ES performance as:

[6] To opt in to receive the draft, after completing the survey, participants were invited to add their email address. This final step was optional; approximately half the respondents filled it in. Many respondents were not identifiable from their email.
[7] The results presented are based on all responses, but do not change materially if we only include respondents who answered every question.

- *The effect of companies on the environment and society, not the effect of the environment or society on companies*
- *Companies' actual effects on the environment and society, not greenwashing, marketing, or disclosure activities to enhance ES metrics or ratings*

The answer to some of the questions might be "it depends." Please answer for your investment universe – the companies eligible for selection in your fund – in aggregate. If you run multiple funds, please answer considering one specific equity fund throughout.

The first bullet point highlighted that this survey focused on ES performance, the effect of companies on the environment and society (sometimes known as "impact materiality") rather than ES risks, the effect of the environment and society on companies (sometimes known as "financial materiality"). This is because we expect investors to take ES risks into account, since by definition they affect the company. What is less clear, and what much of the debate on SI concerns, is whether ES performance is financially material. For the same reason, the survey focused on ES rather than ESG, since there is a reasonable consensus that governance affects firm value.[8]

Table OA1 presents summary statistics on the respondents. 451 respondents manage active equity funds, with 58 running active multi-asset funds including equities. This question also allowed the respondent to select "index equity," "fixed income," or "other"[9]; if any of these were chosen, the survey ended. Almost 40% of respondents manage a fund with over $2 billion in assets under management, the highest out of five size brackets that we offered. This corresponds to the top size decile in the target fund population in Morningstar, suggesting good representation from the largest funds that matter most for asset prices. However, over 25% of responses were from funds below $250 million, which is also important since an investor's capacity to analyze ES factors may depend on fund size.

[8] We asked respondents to consider their investment universe rather than their portfolio, due to endogeneity issues with the latter. For example, even if ES and financial performance are not linked in general, some investors may select stocks in which they are linked. Still, it may be that sustainable investors' investment universe differs from traditional investors', for example if they are constrained not to invest in fossil fuel stocks. If so, some of our results are more striking: for example, sustainable investors believe that greenhouse gas emissions are more financially material than traditional investors, even though some may not be able to invest in the stocks where materiality is highest.

[9] "Other" might refer to a commodities or real estate fund, and the respondent was also excluded.

The modal respondent (44%) owns between 30-50 stocks, suggesting a high-conviction portfolio that allows them to consider ES factors if they wish to. 219 run funds marketed as responsible, sustainable, ESG, SRI, or ethical (which we refer to as "sustainable funds"); the remaining 290 manage traditional funds. 223 of the funds were marketed in the US, 311 in the EU, 264 in the UK, and 170 elsewhere, ensuring broad geographic coverage.[10] 59 of the funds were for retail clients only, 111 for institutional clients only, and 339 for both. 416 pursued a fundamental investment style, 55 a quantitative one, and 38 selected "other;" most free-text responses described a combination of both styles.

2.3 Presentation of Results

In what follows, we always report aggregate results for all survey respondents. Where there are important differences, we also report results separately for traditional and sustainable investors or describe them in the text. Sustainable funds are over-represented in our sample and so, if sustainable investors' views differ, the aggregate results will not be representative.

We also conducted stratifications between US vs. non-US funds, and funds above vs. below $2 billion in size. The results are remarkably consistent; any differences between US vs. non-US funds are largely explained by differences in the prevalence of traditional and sustainable funds. We describe the few responses for which there were meaningful differences.

Many questions are scored on a Likert scale, for example "Why do you think companies underinvest in some ES issues" with 0 representing "not at all important" and 4 representing "very important." This allows the mean response to be compared to the lowest option of 0. We often report results in the form "x%/y," where x is the percentage of respondents who selected 3 or 4, i.e., important

[10] These numbers add up to more than the total number of respondents because some funds are marketed in multiple regions. We focused on where funds are marketed rather than domiciled since domicile tends to be concentrated in a small number of locations driven by tax or regulatory factors (many European funds are domiciled in Ireland or Luxembourg). Where the fund is marketed is most relevant as it affects client wishes, fund mandates, and reputational concerns.

or very important (which we together refer to as "important" for brevity), and y is the average rating. For questions with an identifiably neutral response, we scaled the result to -2 to +2, so that the mean score can be compared to the neutral score of 0; x is then the percentage of respondents who selected 1 or 2. The response labels for each question are shown in the relevant table. Also to avoid cumbersome prose, we will sometimes say "our results suggest that x" rather than "our results suggest that investors believe that x;" however, it is important to bear in mind that our survey only reports investors' perceptions. Again for brevity, we will sometimes refer to "sustainable funds" rather than "portfolio managers who run funds marketed as sustainable."

3. Beliefs

3.1 The importance of ES performance

3.1.1 ES performance relative to other factors

Our first two questions explored whether investors view ES performance as financially material. The first question investigates this in relative terms. Specifically, we asked participants to "Rank the following by their importance for the long-term value of companies in your investment universe in aggregate." The six options offered were: strategy and competitive position, operational performance, corporate culture, governance, ES performance, and capital structure. We included capital structure as it is irrelevant in a Modigliani-Miller world; while capital markets are far from perfect in reality, it is unclear how substantial the deviations are.[11] We included governance ("G") since it is sometimes included with ES factors in the umbrella term "ESG;" however, the economic arguments for aggregation are unclear (see, e.g., Edmans, 2023a). We included corporate culture since it is also an intangible factor, but one with clearer financial materiality than some ES factors.

[11] For example, both the US and EU have imposed limits on the tax deductibility of interest, and evidence for the trade-off theory of capital structure is mixed (Graham and Leary, 2011).

Table 1 illustrates the results. Out of the six options offered, ES performance had the lowest average response, with a mean rank of 5.01. 73% of respondents ranked it fifth or sixth, and only 13% ranked it in the top half. Even among sustainable funds, ES performance ranked last, with a mean rank of 4.49 and 56% putting it fifth or sixth. While some ES funds are marketed on the grounds that ES performance is highly material to firm value, sustainable and traditional managers tend to rank value drivers similarly.[12]

Returning to the aggregate responses, the second lowest rank was 4.13 (for capital structure), significantly higher than the rank for ES performance.[13] Corporate culture and governance received average ranks of 4.12 and 3.71, respectively. Only 29% of respondents ranked governance fifth or sixth, highlighting that investors differentiate between ES and G in contrast to the common practice of combining them together. Investors thus see ES performance as less important than other intangible factors (corporate culture), other ESG factors (governance), and factors that do not matter in perfect capital markets (capital structure). The most highly rated responses were strategy and competitive position (1.67) and operational performance (2.36).

These results suggest that, if financial value is the goal, investors will not prioritize ES performance above other determinants of long-term value. A traditional investor wrote that "Any good company will do well on ES evaluation too, but not all good ES companies will do well on the other factors;" a sustainable investor highlighted that "A high ESG score/ranking will not rescue a poor business model;" and another noted that "If we don't think a business has a good strategy/competitive position, it won't make it into the fund regardless of how good their ES is."

[12] The average orderings for all six options were identical across the four subsamples of US traditional, US sustainable, non-US traditional, and non-US sustainable funds, except that traditional US funds ranked capital structure fourth and culture fifth whereas the other types had the reverse ranking.

[13] For sustainable funds, the average rank for capital structure was 4.41. This is not statistically significant from the 4.49 for ES performance, but the differences between ES performance and all other responses is statistically significant at the 1% level.

Since this is a relative ranking, these results do not mean that our respondents view ES performance as immaterial in absolute terms. Many free-text fields emphasized that all six factors are important. One traditional investor wrote that "although we can roughly rank the factors, the overall answer is that all factors need to be considered for any long term investment;" another that "it is difficult to drive long term value if you are doing any one of these items poorly."

The low relative ranking for ES also masks that many investors view ES in granular terms. Numerous free-text responses explained that different ES dimensions should not be lumped together as some matter more than others; moreover, those that matter vary across firms and industries.[14] Respondents stressed the need to differentiate even though our instructions noted that "The answer to some of the questions might be 'it depends'" and asked for aggregate responses; many found an aggregate response difficult because the importance of ES is situation-specific.

This granularity contrasts the common research approach of taking an aggregate ES(G) score and correlating it with firm outcomes in a pooled sample across many industries. If different ES factors matter more than others, and if their importance varies across firms, industries, and situations, aggregate studies may be unable to detect these links.[15] This also means that the weak evidence of a link between aggregate ES scores and financial performance (see Matos (2020) and Starks (2023) for surveys) does not necessarily mean that ES is immaterial.

Another common free text response was that it is difficult to disentangle ES performance from the five other determinants of value. ES may be indirectly material by affecting other factors, such as operational performance or corporate culture, or ES may be an indicator of other factors; for example,

[14] As a sustainable investor noted: "Hard to generalise and there is a lot of overlap / interplay between these categories. This answer would also be different by sector, because of the different risks facing each industry." A traditional investor wrote: "Our answers would also vary to a degree with sectors. For example, in mining, having a social licence to operate is crucial and would rank high on the list."

[15] While ESG rating agencies claim to weight ESG issues by their materiality for a company's industry, these weightings are the agencies' subjective judgement and may not be correct; indeed, they differ across agencies (Berg, Kölbel, and Rigobon, 2022).

strong ES may signal strong G. A traditional investor stated that "many of these factors are interlinked (for example, a company with a good strategy, corporate culture and governance is likely to have a better approach to ES performance and capital structure)." A sustainable investor wrote "I view operational performance and ES performance as linked and mutually reinforcing … I would therefore prefer to think of ES performance as a facet of operational performance."

This has nuanced implications for the use of control variables in ES studies. On the one hand, that ES may be an indicator of other value drivers highlights the importance of controlling for these drivers when attempting to identify a causal effect of ES on financial performance. On the other hand, that ES may affect firm value through other drivers highlights that "bad controls" may be a concern. This suggests that empirical researchers should report results both with and without controls, and that differences between these two estimates might be informative.

One final view commonly expressed in the free text responses is that ES performance matters less in isolation than when combined with good or bad performance on other dimensions. This contrasts the common approach of regressing firm outcomes on ES plus controls. In future research, it may be interesting to interact ES with other value drivers rather than only using them as controls.

3.1.2 ES performance in absolute terms

Although ES performance ranked below other value drivers in the first question, this does not mean that it is unimportant in absolute terms. The second question disaggregates ES into eight dimensions and asked respondents to assess their absolute importance: "How material is ES performance, on the following dimensions, to how you assess the long-term value of companies in your investment universe in aggregate?", from 0 representing "immaterial" to 4 representing "highly material."

Table 2 shows that many investors do consider ES performance to be financially material. 84% of respondents (including 78% of traditional investors) rated at least one ES dimension as material. The highest average ratings were for employee well-being (59%/2.59) and consumer health, welfare, and

privacy[16] (54%/2.53), potentially because effects on employees and consumers are often internalized, so impact materiality is likely to manifest in financial materiality. More than half of respondents also considered pollution and waste management (57%/2.49) and greenhouse gas emissions (54%/2.50) to be material, perhaps due to current and likely increasing future regulations. Demographic diversity (25%/1.68) was ranked as least material, consistent with the mixed evidence that demographic diversity improves financial performance (Fried (2021)).

This is a question where responses differed significantly between sustainable and traditional investors. Sustainable investors viewed every ES factor as more material, with mean scores that were higher by 0.24-0.95. The biggest differences (0.63-0.95) arose for the environment (greenhouse gas emissions, ecological impacts, and pollution), where regulation is typically needed for internalization, and for demographic diversity.

Overall, the responses to these initial questions suggest that practitioner views are more nuanced and granular than the approaches taken by some academic studies. Future research that takes granularity, context, and interactions into account may be particularly fruitful.

3.2 The link between ES performance and shareholder returns

While the first set of questions studied the link between ES performance and long-term firm value, the next set explores its relationship with long-term shareholder returns, which takes market pricing into account. Table 3 enquires "Do you expect good ES performers to typically outperform or underperform in long-term risk-adjusted total shareholder return? (-2=strongly underperform, 2=strongly outperform)." 57% of respondents answered "outperform" or "strongly outperform," with 8% predicting underperformance and 35% being neutral, resulting in a mean score of 0.57.

[16] We specified "employee well-being" rather than, for example, "employee engagement" as the former is more clearly a measure of ES performance (impact materiality); the latter has a clearer link to firm value. For similar reasons, we specified "customer health, welfare, and privacy" rather than "customer satisfaction."

This contrasts the weak academic evidence on the alpha of ES leaders. Interviewees highlighted two explanations. The first is that they focus on the ES issues that are material to each company when defining "good ES performers", in contrast to the aggregate approach taken by most academic studies. The second is that academic research typically uses ESG ratings, while our respondents assess ES performance through their own analysis, often focusing on qualitative factors unlikely to already be in the price. Several interviewees explained that ESG ratings depend on the resources a company devotes to answering ESG questionnaires rather than actual performance.

There were differences between traditional and sustainable investors, with 45% of the former and 73% of the latter believing that ES leaders will outperform. However, this difference is smaller than one might expect, with a mean score of 0.36 (significantly positive at the 1% level) even among traditional investors. On the other hand, 27% of sustainable investors do not believe that strong ES performance leads to alpha, and 4% even associate negative alpha. Thus, there is disagreement about the return implications of ES performance within both traditional and sustainable investors.

To the 285 investors who answered +1 or +2 to the previous question, we asked "Why do you think good ES performance leads to long-term outperformance? (-2=strongly disagree, 2=strongly agree)." Table 4, Panel A, illustrates the results. Surprisingly, "Good ES performance improves long-term value but the market underprices it in the short term" only ranked second (74%/0.91). By far the most popular response (95%/1.43) was: "Good ES performance is correlated with other characteristics that cause long-term outperformance." This response, which was most popular (94%/1.36) also among sustainable funds, is consistent with some of the comments accompanying Table 1, that ES is an indicator of other drivers of performance. Several respondents argued that ES signals that the firm is generally well-managed and forward-thinking. One traditional investor wrote that strong ES performance indicates "a proactive management … who are on the 'front foot' reinvesting in their business, shedding less attractive categories;" another that "it shows competent management with a

willingness and ability to adapt to changing business environment and investment climate." A sustainable fund manager wrote that "we find ES management as a proxy for management quality overall and the willingness for companies to take short term pain in exchange for long term gains."

The third most popular answer was "Increasing investor demand for good ES performers will drive their prices up over time" (56%/0.55): that changing investor tastes, rather than company fundamentals, drives ES alpha (see Pastor, Stambaugh, and Taylor (2021) for a model). However, as one traditional investor noted, "there is a limit to the outperformance from investor demand, otherwise it implies continuous multiple expansion, which is unrealistic."

To the 177 participants who agreed or strongly agreed with "Good ES performance improves long-term value but the market underprices it in the short term," we asked "Why do you think the market fails to fully price in ES performance?". The results are in Table 4, Panel B. The most popular option was "The market is too short-termist" (88%/1.36), with "The market does not recognize that ES performance is financially material" ranking third (72%/0.79).

Several response options elicited the importance of information. The second-most popular response was "Disclosed information is not comparable across companies" (79%/1.01). Free-text fields and interviews suggested that this is not because investors believe that information can and should be made comparable, but because ES information is inherently incomparable (for example, due to its dependence on a company's business model), making it difficult for investors to analyze. Responses relating to sufficiency (50%/0.43) and relevance (44%/0.29) of ES information received less support, suggesting that a lack of information is not the main barrier to prices fully incorporating ES performance (see also Edmans (2011)). Free-text responses highlighted that more information, or even greater reliability, may not have a large effect. A sustainable investor wrote: "What is easy to measure, may not matter; and what is hard to measure matters the most. What actually matters (corporate culture, flat hierarchies, meritocracy, genuinely equal opportunities, fairness) is much harder to measure." A

traditional investor responded that "the 'ES performance' people are looking for / measuring are simply not relevant, e.g. water usage at a shopping mall, compared to what really drives value."

The 39 investors who believed good ES performance leads to long-term underperformance in Table 3 were separately asked why they believed this. The results are reported in Table 4, Panel C. The most popular response was "Good ES performance is immaterial for long-term value but the market overprices it" (56%/0.51). Free-text fields included "Too much focus on ES indicates management is worried about the wrong things" and " 'Good ES performance' is generally non-economic and needlessly destroys shareholder value."

While Tables 3 and 4 studied good ES performers, Table 5 asked "do you believe that bad ES performers typically outperform or underperform in long-term risk-adjusted total shareholder return?" 64% of respondents believe that bad ES performers will underperform or strongly underperform, 29% predict no link, and 7% forecast outperformance. Free-text fields stated that bad ES performance directly matters by increasing the risk of regulatory action, media scrutiny or consumer backlashes, and indirectly because it is a sign of poor management. A sustainable investor wrote that "this [underperformance] is likely triggered by significant controversial events (for instance lawsuits, fines, bad press) rather than consistent underperformance through time." The idea that ES performance affects downside risk will also receive support in later questions.

Recall that more sustainable than traditional investors predicted outperformance for ES leaders (73%/0.85 compared to 45%/0.36). For ES laggards, the responses were more similar, with 67%/-0.73 (61%/-0.67) of sustainable (traditional) investors forecasting underperformance. Free-text fields and interviews highlighted two explanations for the greater symmetry. One is at the company level: some traditional investors view ES as a "hygiene" factor that matters more on the downside: failure to achieve a sufficiently level of hygiene can be highly detrimental to performance, but exceeding this level may have limited benefit. The second is at the market pricing level: ES leaders can become

overpriced, in part due to semi-automatic buying by some funds. In an interview, a sustainable investor explained that a "poster child for ESG" will nearly always be overvalued due to its "ESG sexiness."

3.3 Firm-level investment in ES

Our next set of questions study whether investors believe that companies typically set their ES performance at the optimal level and, if not, why. Table 6 asks: "How much do companies across your investment universe typically invest in improving ES performance on the following dimensions, compared to the level that would maximize long-term shareholder value? (-2=significantly underinvest, +2=significantly overinvest)." We included the same eight dimensions as in Table 2 – having asked about their financial materiality, we now explore their optimality. The responses were similar across traditional and sustainable investors, so we only report aggregate results.

The modal response for all eight options is "0: neither over nor underinvest," and for five of the eight dimensions, it is also the majority response. The average responses vary narrowly between -0.01 and +0.34. Only 12% of respondents believe that there is significant underinvestment in even a single ES issue, and only 18% believe there to be significant overinvestment in even one issue. Thus, most fund managers believe that, overall, companies invest in ES optimally for shareholder value. This may explain the declining support for ES shareholder proposals: the proportion of ES resolutions receiving majority support fell from 21% in 2021 to 3% in 2023.[17]

However, it is far from the case that investors believe that all companies are dealing with all issues perfectly. Only 13% of investors believe companies invest optimally in every ES issue. For each issue, at least 40% of investors believe that firms invest either too much or too little. This is consistent with investors selectively targeting their ES engagements to specific firms and issues. The responses also indicate that investors distinguish between different ES dimensions, rather than viewing ES

[17] See "Voting Matters 2023" by ShareAction. The report compared 257 ES proposals from across the world in 2023 to 146 in 2021.

performance as homogenous: 32% of investors cited both at least one ES dimension on which companies overinvest and at least one on which they underinvest.

The highest response for overinvestment was for greenhouse gas emissions (44%/0.34), suggesting that many investors believe that firms have already gone further in cutting emissions than optimal for shareholder value. The lowest response was for ecological impacts (27%/-0.04)

We asked the 68% of investors who responded +1 or +2 to at least one ES dimension: "Why do you think companies overinvest in some ES issues?" The most common reason (79%/3.02) in Table 7, Panel A was "The public, the media, or employees pressure them to overinvest," with "Investors pressure them to overinvest" (70%/2.76) second. In free text fields, many investors expressed the concern that these outside parties micromanage companies and pressure them to invest in immaterial issues. An interviewee explained how some investors do so due to their own reporting requirements: certain regulations require sustainable funds to demonstrate impact, and they can do so if companies improve quantifiable measures of ES performance even if irrelevant.[18]

We asked the 51% of fund managers who selected -1 or -2 to at least one ES dimension: "Why do you think companies underinvest in some ES issues?" Table 7, Panel B shows that the most popular responses were "investors are too short-termist" (70%/2.82) and "companies are too short-termist" (66%/2.72). It is interesting that respondents blame investors slightly more than companies, since any response bias might work the other way. These results are consistent with Table 4, Panel B, where "the market is too short-termist" was the most popular explanation for why it does not fully price in ES performance. Taken together, these results suggest that good ES performance may not be fully incorporated in the short-term stock price, so companies are not immediately rewarded for their ES investments.

[18] This investor gave the example of a company that is working on a brain-computer interface to help people with spinal cord injuries to walk. This company creates substantial benefits to society, but another investor had to disinvest because its ESG rating (according to one rating provider) was too low.

While ES targets in executive pay could be one way to overcome short-termism, compensation incentives were viewed as a driver of both overinvestment (44%/2.23) and underinvestment (46%/2.34) in ES to a similar degree. In both cases, free text comments argued that ES metrics in pay were not based on material factors and could be gamed. One investor commented that "companies don't need to incentivize ES issues specifically if they pay managers based on long-term TSR outcomes," consistent with Flammer and Bansal's (2017) evidence that long-term CEO pay has a positive effect on ES performance.

3.4 Summary

Our questions on investor beliefs yield the following conclusions:

1. Most sustainable investors expect ES leaders to deliver positive alpha and ES laggards negative alpha. Traditional investors are more likely to agree with the latter than the former, but overall hold surprisingly similar beliefs. The most common explanation of positive alpha is that ES is correlated with other factors that improve shareholder returns. The second is that the market fails to price in the value of ES, due to being short-termist or failing to recognize its financial materiality rather than lacking information.
2. On fundamental value, most investors believe that ES performance is less material for a company's long-term value than five other drivers, including governance, corporate culture, and capital structure. This aggregate result masks that investors view certain ES dimensions as material for certain companies, with most traditional and sustainable investors viewing at least some ES dimensions as material. This highlights the importance of granularity in academic research: to focus on particular ES dimensions in particular industries, and to separate out positive and negative ES performance.

3. Investors view ES performance as interlinked with other drivers of performance. Sometimes it affects other factors that improve financial returns; other times it signals performance on other value-relevant dimensions.
4. Investors believe that ES performance on employee and consumer-related issues are most material to long-term value, potentially because they are internalized even in the absence of government action. Demographic diversity is perceived as least material.
5. Investors believe that, on average, companies invest in ES at the optimal level for shareholder value, which may explain limited support for ES shareholder resolutions. However, at least 40% believe that firms over- or under-invest in each ES issue. The most common explanation for overinvestment is pressure from the media, the public, employees or investors; underinvestment is attributed to investor or company short-termism.

4. Objectives and Constraints

4.1 Objectives and trade-offs

The next question explores whether investors have objectives other than shareholder value. We asked "How much long-term risk-adjusted total shareholder return would you tolerate a company sacrificing to improve its ES performance?" Table 8 illustrates the results.

Only 26% of respondents would tolerate any sacrifice (i.e., of 1 basis point or above); even for sustainable investors, this proportion is only 30%. Just 5% of sustainable investors and 2% of traditional investors selected the highest sacrifice of 50 basis points or more. Even 50 basis points is a relatively small effect on the cost of capital, which is unlikely to have a major impact on corporate decision making. A 50 basis point change in the cost of equity will change the weighted average cost of capital by less than 50 basis points; in the context of climate change, Pedersen (2023) finds that a 50 basis point change in the cost of capital is equivalent to a carbon tax of only $5 per tonne. As one

sustainable investor wrote, “given that in emerging markets most stocks move by more than 50 bps most days, these numbers are generally rounding errors.”

Out of the 24 free-text comments accompanying a strictly positive sacrifice, seven said they would only accept a trade-off in the short term, even though our question referred to “long-term risk-adjusted total shareholder return.” Six comments stated that, despite their answer, there should be no trade-off for the right investments (which we will elaborate on later), and three said the sacrifice was imposed by mandates. Only five out of the 24 comments unequivocally stated a willingness to sacrifice long-term returns. Thus, the 27% of respondents stating that they would sacrifice returns is almost certainly an overestimate of the proportion of investors who genuinely act as if their objective function is a weighted sum of financial returns and ES impact.

33% of respondents explicitly stated “zero – I would not tolerate any sacrifice,” with multiple free-text fields highlighting fiduciary duty as the reason, even among sustainable investors. A typical comment from a traditional investor was “we are fiduciaries and cannot deviate from our mandate unless so instructed,” and a sustainable investor wrote “the answer for asset managers has to be zero long-term sacrifice. Ultimately we are managing other people’s money.” This attitude was particularly prevalent among traditional US funds, 54% of whom would not tolerate any sacrifice.

These results are interesting because many models of SI assume that shareholders place significant weight on ES objectives. While trading off financial for other benefits may be possible for asset owners, many asset managers believe that it is inconsistent with fiduciary duty. Note that our question asked whether respondents would passively “tolerate” a sacrifice by companies. In beta-testing, we asked a more active question, “How much long-term risk-adjusted total shareholder return would you sacrifice to improve ES performance?,” but all of our beta-testers answered zero due to fiduciary duty. Thus, the proportion of investors who would take actions that sacrifice financial returns, such as subsidizing negative-NPV ES investments or encouraging firms to make such investments, is likely

even lower than the proportion willing to tolerate sacrifices by companies. This does not mean that standard models of SI are invalid, but that they do not describe delegated fund managers. Similarly, some policymakers and activists expect asset managers to solve societal issues, such as climate change. However, our results suggest that fiduciary duty prevents them from doing so (see also Gosling and MacNeil, 2023).

The most common response, given by 40% of investors (35% traditional, 47% sustainable), was that "no sacrifice is necessary since there is no trade-off."[19] This is surprising, since any investment exhibits diminishing returns and trade-offs (Edmans, 2023b), and since most investors do not believe that companies are systematically underinvesting in ES (Table 6). Several free-text fields qualified this response and suggest that investors do not believe there to be no trade-off in general; rather, that there is no trade-off for particular ES investments undertaken within a reasonable range. For example, a sustainable fund manager wrote: "There might be a short-term sacrifice but our investment horizon is 5-10yrs and over this period the RIGHT investments should be return enhancing. I would not tolerate any sacrifice for investing in immaterial ES improvements or puff projects."[20] Traditional investors argued that "The two should be aligned, if done well – after all, that is management's challenge", and "sensible spending would mean there was no trade-off. Extreme ES spending could however massively impact share prices."

Interviewees explained that there is no need for a trade-off since there is a sufficiently large set of available projects that improve both ES performance and financial returns. One sustainable investor acknowledged that trade-offs exist in theory, but any CEO who took actions to sacrifice shareholder returns would not survive as CEO, and so there is no trade-off in practice. Another sustainable investor

[19] This was one of the few questions where there were differences across geography, with 27% of US traditional funds believing there is no trade-off vs. 43% for their non-US counterparts.

[20] Another potential explanation is motivated reasoning: investors might incorporate ES performance into investment decisions due to constraints, and then justify this by claiming there is no trade-off. If so, some of our later responses are particularly interesting, as investors state that constraints caused them to take financially costly investment decisions that they otherwise would not have.

argued that no sacrifice is necessary because there are many projects that CEOs can invest in that improve both ES performance and long-term financial returns, and added: "You should not reduce my cash flows because of some corporate pet project. You're a capitalist enterprise so you need to run your company efficiently." A third pointed out that "there's always a way to do it sensibly, and to do it creating value for shareholders."

4.2 Constraints

The next set of questions explore the ES-related constraints that fund managers face and their consequences. Table 9, Panel A summarizes investor responses to "Have firmwide ES policies, your fund mandate, your clients' wishes, or concern for your reputation or sustainability rating ever caused you to do any of the following more than you otherwise would? Select all that apply." This question aims to study the effect of ES constraints on stock selection, voting, and engagement.

71% of respondents have changed their behavior because of ES constraints. This figure remains high, at 61%, for traditional funds and at 52% even for US traditional funds: strikingly, ES concerns change their investment behavior despite not being marketed as sustainable. One interviewee said that all institutional clients have ESG teams that engage with fund managers about ESG, even traditional funds; others mentioned client-specific mandates that impose ES constraints on traditional funds.

By far the most common consequences of these constraints, each selected by approximately 30% of traditional and 50% of sustainable investors, were "avoid stocks we believed would outperform" and "avoid stocks that would improve portfolio diversification." One sustainable investor wrote that the EU Sustainable Finance Disclosure Regulation gives "an incentive for asset managers to create the greenest products to win money (rather than selecting companies based on expected outperformance)." Another stated that "We have avoided stocks we believe could outperform in the short term due to our sustainable investment mandate … our fund did not hold oil and gas companies in 2023, even though

there was a clear argument as to why certain of these companies were well positioned for strong short term performance."

25% of traditional and 32% of sustainable investors selected "engage with companies on ES issues that do not add shareholder value." Even if these issues are neutral (rather than negative) for firm value, engagement involves time and resource costs, as a future question confirms. One sustainable investor wrote that "firmwide commitments such as NZAM[21] or UK Stewardship Code mandate engagement, which then becomes something we 'must' do rather than do because we believe an engagement will add shareholder value."

Interestingly, ES constraints are sometimes detrimental to not only financial returns but also ES performance – the very outcome that ES constraints often aim to improve. For example, 33% of sustainable investors report that they had to "avoid owning ES laggards whose ES performance we could have improved," and 30% had to "avoid owning ES leaders in a laggard industry." The former hinders investors from engaging; as the manager of an Article 9 (sustainable) fund wrote, "our biggest gripe with the SFDR Article 9 classification is that, according to our lawyers, it does not allow to invest in 'ESG improvers,' which is really where any ESG alpha should come from"; a traditional investor wrote: "exclusion [is] by far the easiest way to show a cleaner portfolio, even though it changes nothing for the environment or the world at large." The latter prevents them from rewarding companies in brown industries for ES improvements, thus reducing their ex-ante incentives (Edmans, Levit, and Schneemeier, 2023). Around 20% of investors responded that constraints led to a "focus on visible dimensions of ES performance at the expense of more important ES issues." One sustainable investor wrote "Greenhouse gas emissions … are the best-reported ES data point out there but in many cases nowhere close to the most material for each company."

[21] NZAM stands for Net Zero Asset Managers initiative, an international group of asset managers that has committed to supporting the goal of net zero greenhouse gas emissions by 2050.

This result suggests that ES constraints, paradoxically, may hinder ES performance. The natural question is why firms or their clients impose such constraints.[22] One likely reason is frictions in delegated portfolio management. Most SI models feature asset owners with an objective function of α*financial returns + (1-α)*ES objectives (which may be impacts or tastes). In reality, most asset owners hire asset managers, and they are unable to contractually induce asset managers to maximize their objective function, since most ES objectives are non-contractible. A second-best solution might be to explicitly constrain funds, which allows asset owners to select funds that mirror their objectives. Even though asset managers know that the constraints may reduce financial returns or ES impact, they may help attract clients ex ante. Indeed, several interviewees said that mandates are critical for marketing and attracting fund flows. One pointed out that "mandates are commercial. They segment clients and grow AUM which you couldn't if you had an off-the-shelf fund", and another that a mandate is a differentiator in a crowded market.

When pressed on why mandates are valuable for marketing despite their potentially unintended consequences, interviewees cited several reasons. One is that clients "know what they're getting." Given the difficulty in contracting on outcomes, such as externality reduction, mandates instead restrict the action space, such as investing in fossil fuels – the familiar trade-off between rules and discretion. A second is that many clients are agents themselves, and their ultimate principals may not understand nuances, such as how divestment prevents engagement. Thus, if a fund has a fossil fuel-free mandate, a pension plan can invest in this fund and easily communicate it to beneficiaries. One interviewee explained that clients "want you to maximize return subject to not making their life a misery."

A third reason for constraints, stressed by several interviewees, is not to attract more clients but a particular type of client. If a fund manager's own values demand not investing in certain assets, making

[22] Almazan et al. (2004) ask a related question in the context of financial performance: why fund managers have mandates that potentially constrain them from maximizing financial returns (such as a mandate to invest only in the U.S.).

this explicit improves the matching between funds and clients. As a result, clients will not take up the fund manager's time asking why he has not invested in (say) fossil fuels despite them outperforming, and they are likely to show greater patience with short-term underperformance. Thus, even though constraints cannot force a fund manager to maximize α*financial returns + (1-α)*ES objectives, they may attract clients with similar preferences.

A fourth reason, particularly for firmwide policies, is to reduce reputational risk. An interviewee explained that, if white phosphorus ends up killing children in a warzone, then a fund family that owns a producer of white phosphorus may suffer substantial reputational damage – even if the white phosphorus is a tiny percentage of the producer's revenues, and even if the fund family's ownership had no impact on white phosphorus production. The public will not evaluate impact, only holdings, and "no amount of return will compensate for this." Thus, his firm has a policy prohibiting any fund from owning a company that produces any amount of white phosphorus.[23]

"None of the above" – i.e., ES constraints had no effect on their behavior – was the response given by 35% of investors, (39% traditional, 16% of sustainable). In free-text responses, many explained that their only mandate is financial returns and that their funds are not marketed as sustainable, so reputational concerns were not an issue. For sustainable investors who do not perceive constraints, sustainable investing appears to be an investment style, similar to value or growth investing, that the fund manager believes will improve long-term returns. An interviewee explained that "it [the mandate] is a constraint but it does not constrain us, because it is what we would do anyway."

Since Table 9, Panel A combined multiple ES constraints to explore their aggregate effect, Panel B disaggregated them. We asked "What caused you to take these actions? Select all that apply" to the 327 investors who selected at least one consequence in Panel A. Client mandates are a more important

[23] Due to this policy, this investor had to sell an air conditioning company that generates a tiny percentage of revenue from selling white phosphorus to its country's ministry of defense, and is required to do so due to a long term contract.

ES constraint for sustainable (cited by 70% of such respondents) than traditional funds (34%). More surprising is the importance of firmwide policies and client wishes for traditional funds, cited by 52% in both cases, close to the response rates of 63% and 45% for sustainable funds. Firms may have policies on, for example, board diversity or carbon emissions that apply regardless of each fund's mandate. Equally, clients may have ES wishes that fund managers accommodate even though they are not formally in the mandate. Thus, several mechanisms other than the fund mandate impose ES constraints on fund managers.

In Panel C, we asked the same 327 investors "What were the consequences of these actions for the risk-adjusted returns of your fund?" 41% of respondents (38% traditional, 45% sustainable) answered that there was a small, moderate, or large reduction in returns, with twice as many sustainable as traditional funds reporting moderate or large reductions. Combining these rates with Panel A shows that 38% of sustainable and 23% of traditional investors faced constraints that reduced returns. 35% of traditional and 38% of sustainable investors responded the impact on returns was "impossible to quantify." Nearly all interviewees who gave the latter response explained that the constraint reduced returns in expectation, but the probability distribution included the potential for an increase. For example, being unable to invest in fossil fuels lowers expected returns, but if the oil price drops, it may end up increasing realized returns. Since 84% of traditional and 61% of sustainable investors were affected by constraints and thus answered this question, this means that, 23-44% of traditional investors and 38-70% of sustainable investors (29-55% overall) have had to sacrifice financial returns, either in actuality or in expectation, to satisfy ES constraints.

Finally, 20% of all respondents reported no impact of their ES constraints on returns, and 3% claimed an improvement in returns. Out of these two sets of investors, by far the most commonly-reported action (45%) was "Engage with companies on ES issues that do not add shareholder value," which has little direct negative financial consequence.

4.3 Summary

Our questions on investor objectives and constraints yield the following conclusions:

1. Investors' main objective is financial performance: only 24% (30%) of traditional (sustainable) funds are willing to tolerate companies sacrificing any shareholder returns for ES performance. This casts doubt on asset managers pressuring firms to reduce ES externalities, as suggested by some models of sustainable investing and demanded by policymakers and activists.
2. 33% of asset managers explicitly stated that they would not tolerate the sacrifice of even 1 bp of return to improve ES performance, with fiduciary duty given as the main reason. 40% claim that no sacrifice is necessary, at least for well-chosen projects.
3. ES constraints are ubiquitous: 71% of investors reported that external or internal ES constraints caused them to take stock selection, voting, or engagement actions that they would not otherwise. Even for traditional investors, this proportion was 61%, with constraints mostly due to firmwide policies and client wishes. The most frequent consequences were avoiding stocks that they believed would outperform or improve portfolio diversification.
4. In at least 41% and up to 77% of cases, these actions led to a sacrifice of financial returns. Interestingly, constraints sometimes prevented investors from taking actions to improve or reward ES performance – the very goals that many ES constraints are designed to bring about.
5. The results in this section highlight the need for models of delegated sustainable investment management, analogous to the literature on delegated investment management with only financial objectives (see Dasgupta, Fos, and Sautner (2021) for a survey). For example, theories could explore how effective ES constraints, combined with endogenous matching of asset owners to funds, are in ensuring that asset managers maximize asset owners' (or their principals') objective function.

5. Actions

The next set of questions investigates the extent to which ES performance affects investor actions. Investors make three main decisions, stock selection, voting, and engagement, and we consider each in turn.

5.1 Stock selection

Table 10 asks: "Do you underweight poor ES performers / overweight good ES performers for any of the following reasons?" (0="never," 4="very often"). Most investors do: 77% of investors (66% traditional, 91% sustainable) "often" or "very often" under- or overweight stocks because of ES performance for at least one of the stated reasons. We order the responses into separate categories ("constraints", "financial motivations", "marketing motivations", "ES impact motivations") to highlight the differences.

Sustainable investors are significantly more likely than traditional investors to over- or underweight stocks based on ES performance for all of the reasons given. The most important reasons are the constraints from fund mandates (75%/3.04), firm values or policies (60%/2.58), and client values (60%/2.56). This underlines the pivotal role ES constraints play for sustainable investors, consistent with Table 9.

Surprisingly, constraints ranked even higher than financial motivations, although the latter remained popular. Sustainable investors rated improving returns 57%/2.46 and avoiding downside risk 56%/2.40. One wrote: "We only make portfolio decisions based on financial returns." Another explained: "Some institutional clients, privately, really don't care. It is all about the [financial] numbers."

For traditional investors, by contrast, financial motivations are most important, especially improving returns (36%/1.80) and avoiding downside risk (40%/1.91). The free text fields described several mechanisms. One traditional investor wrote "We focus on rate of improvement, delta. We look

for improving ES performers that screen poor today: supports a rerating and often not accurately priced in." Another wrote "We have sold stocks where we perceive social license issues represent a risk to cashflows." A third emphasized our earlier finding that ES is often correlated with other material factors: "Sometimes poor ES coincides with poor (or risky) operations. Therefore excluding a stock on the basis of poor operating risk/reward is the same as excluding for ES reasons."

61% of investors (51% traditional, 76% sustainable) responded 3 or 4 to at least one of the financial motivations. Such investors practice "ES integration" – using ES factors to improve risk-adjusted returns. Our results show that it is both widely practiced amongst traditional funds, and not practiced by a sizable minority of sustainable funds. ES integration is strongly linked to beliefs. 75% of investors who expressed their belief in positive ES alpha in Table 3 also practice ES integration, compared to only 41% of investors not holding that view. Beliefs are more strongly associated with ES integration than mandates: belief in ES alpha is associated with a 26 (34) percentage point increase in ES integration for traditional (sustainable) funds. By contrast, sustainable fund managers who believe (do not believe) in ES alpha are only 10% (18%) points more likely than traditional managers to practice ES integration. Thus, asset owners who desire ES integration need to pay attention to fund managers' beliefs.

For traditional investors, the second most important reason to consider ES performance in stock selection are ES constraints, in particular firm values or policies (34%/1.70) and client values (24%/1.65). One traditional investor observed: "Our clients are a very mixed bunch. Some care a lot about ES and some don't care at all. But we basically try to appeal to both camps!" This underlines that the stock selection of many traditional funds is shaped by the policies of the fund family and by soft constraints that arise, at least in institutional relationships, from client wishes beyond the mandate.

Both traditional and sustainable investors gave low scores to "avoiding stocks that are volatile" (15%/1.11 traditional, 23%/1.39 sustainable), while "to avoid downside risk" (40%/1.91, 57%/2.40)

was significantly more popular. Many models feature mean-variance investors, where downside risk is fully captured in lower expected returns and higher volatility. Investors, however, are particularly concerned with underperformance, perhaps because it could cost them their job. Alternatively, as suggested by prior results, investors may view ES performance as a hygiene factor, consistent with Hoepner et al.'s (2024) result that ES engagement reduces downside risk.

Marketing considerations – improving the fund's sustainability rating and improving the fund's reputation – do motivate under- or overweighting stocks based on ES performance for a significant number of sustainable funds (36%/1.83 and 30%/1.69, respectively). For traditional investors, these motivations tend to be much less relevant, with average scores below one.

The least popular responses amongst both traditional and sustainable investors were reasons relating to impact on investee companies. "Rewarding or penalizing them for ES performance" and "affecting their cost of capital" scored well below 2 even for sustainable investors and below 1 for traditional investors. The lowest-ranked response was "to affect companies' cost of capital" (13%/1.14). This could be because stock selection has a negligible effect on the cost of capital (Berk and van Binsbergen, 2024), or because firms' investment decisions are relatively unresponsive to the cost of capital (Gormsen and Huber, 2023). Interviewees highlighted the former concern: they acknowledged that their trading decisions have a very small effect on market prices.

5.2 Voting

Table 11, Panel A, explores two sets of questions: "Have you ever voted for a shareholder proposal when the proposal was even slightly negative for firm value?" and "Have you ever voted for a shareholder proposal when the proposal was neutral for firm value?" Only 27% of investors (24% traditional[24], 31% sustainable) had ever voted for a proposal that was even slightly negative for

[24] This is one of the few figures that differed significantly across geographies: it was 18% in the US vs. 29% outside.

shareholder value, while 78% of investors had supported a neutral proposal. In free-text fields and interviews, respondents highlighted that fiduciary duty constrains them from supporting negative proposals, and that clients do not pay them to destroy shareholder value.

We asked investors who supported neutral or negative proposals why they did so, and Panel B illustrates the results. Consistent with earlier findings, ES constraints were the most common response. Out of those who had supported a neutral (negative) proposal, 65% (55%) did so "to be consistent with our firm's values or policies." The corresponding numbers for "to be consistent with our clients' values" were 49% and 52%; "to be consistent with our fund's mandate" was chosen by 52% and 49%. These considerations were even more important than "I expected it to have a positive impact on society" (41% and 33%), the first-principles justification for such voting.

Free-text fields and interviews indicated that many ES proposals have a negligible effect on shareholder value, so the benefits to society were a consideration, even for traditional investors. One investor said: "Although we would not sacrifice value for a vote, it is very subjective as to whether it is value neutral or value enhancing - if we feel it will not harm but is good overall, then that is worthwhile. But subjective."

The least popular response was "I expected it to have a positive impact on other companies we own" (20% for neutral proposals and 16% for negative proposals). This suggests that few investors adopt a "universal owner" perspective, where they induce a company to reduce its negative externalities to benefit other companies in their portfolio. The percentages were similar (19% and 7%) when considering only diversified funds owning more than 100 stocks. Consistent with our findings, Gosling (2024) presents legal and conceptual arguments for why universal owners cannot engage in such behavior. For all responses, support differed by under ten percentage points between sustainable and traditional investors.

5.3 Engagement

Table 12, Panel A asked respondents "Do you ever engage with companies to improve their ES performance?" 76% of investors responded in the affirmative. This number was 64% even for traditional investors, even though their mandate is purely financial. Thus, ES engagement is not the exclusive domain of sustainable funds. Traditional funds are significantly more likely (76%) to engage if they practice ES integration than if they do not (51%). In other words, traditional fund managers who select stocks based on ES performance to improve returns are likely to also engage on ES. By contrast, investors with sustainable mandates appear to engage on ES whether they practice ES integration (93%) or not (88%).

To the 365 investors who answered "Yes" in Panel A, we asked "What determines whether you engage with a company on an ES issue?" Panel B shows that the two most popular responses were "How much the issue affects long-term shareholder value" (84%/3.34) and "Our stake in the company" (62%/2.58), which were also most popular among sustainable investors (83%/3.35 and 60%/2.52). Thus, the main motivation for ES engagement is financial performance, and the responses are consistent with any model of shareholder engagement in which an individual shareholder's benefit from engaging is the shareholder value uplift multiplied by its stake in the firm.

"How much the issue affects wider society" ranked third among all investors (48%/2.32) and second among sustainable investors (58%/2.56). Even among the latter, the difference with "how much the issue affects long-term shareholder value" is significant and highlights that sustainable investors remain constrained by fiduciary duty. As one sustainable investor wrote, "as a firm we are very good at staying true to our promise to clients which is that everything we do is focused on long-term returns." Another said: "We only engage on ES issues if we believe that it will have a positive impact on shareholder value in the long term," and a traditional investor said that "Our clients and our firm care about the issue if it affects risk-adjusted returns."

"How much our firm cares about the issue" (48%/2.29) and "How much our clients care about the issue" (44%/2.27) ranked fourth and fifth. (We did not ask about constraints from fund mandates since they rarely stipulate engagement.) The least popular responses were "How much our sustainability rating would be improved by engaging" (18%/1.26) and "How much our reputation would be improved by engaging" (18%/1.42), consistent with earlier evidence that reputational concerns and ratings are weaker constraints than firm policies, fund mandates, and client wishes. A sustainable investor observed: "Engagement has nothing to do with improving one's own fund's sustainability rating. It is simply good stewardship and exercise of fiduciary duty."

The 118 investors who have never engaged on an ES issue were asked "Why do you not engage with companies to improve their ES performance?" Again, economic reasons were the main justification. The first and third most popular responses were "Our stake in the company is too small to be effective" (56%/2.47) and "We can sell our stake if dissatisfied with ES performance" (53%/2.33), which indicate low benefits to engagement, and the second was "the time, resource, and financial costs of engagement" (55%/2.43) which suggest a high cost. Interestingly, 17 sustainable investors had never engaged on an ES issue; by far the most common reason was "the time, resource, and financial costs of engagement" (71%/2.82).

The least popular response was "We have insufficient information about ES performance" (21%/1.52), consistent with earlier responses that investors are generally well informed about ES issues, and suggesting that regulatory efforts to increase information disclosure may not increase engagement. In contrast with the literature on managerial entrenchment, "management is unlikely to be responsive" also had weak support (29%/1.74). While standard engagement may threaten executives' private benefits, such as high salaries or a quiet life, following the recommendations of ES engagement may benefit executives' reputation, which was a reasonably popular response for why firms overinvest in some ES issues (Table 7, Panel A).

5.4 Summary

Our questions on how ES performance affects investor actions yield the following conclusions:

1. ES constraints from fund mandates, firmwide policies, or client wishes significantly influence fund managers' stock selection, voting, and engagement. For sustainable investors, these constraints are at least as important as financial considerations. They also affect many traditional investors, although financial motivations are more important for them.
2. Financial considerations matter, with 74% (51%) of sustainable (traditional) investors often or very often adjusting portfolio weights based on ES performance for financial reasons. Reducing downside risk is a slightly more important driver of stock selection than improving returns, and significantly more important than reducing volatility. The least important motivations are those that seek to impact firm behavior, such as reducing the cost of capital.
3. ES integration (the under or over-weighting of stocks based on ES for financial reasons) is implemented (and not implemented) by significant proportions of both traditional and sustainable investors. The extent to which investors adopt ES integration is more strongly related to their beliefs in ES alpha than whether their mandate is traditional or sustainable, which makes these beliefs important for asset owners.
4. Only 27% of investors have voted for a shareholder proposal that was even slightly negative for shareholder value, consistent with the importance of fiduciary duty, while 78% have supported a neutral proposal. ES constraints are more important drivers than the proposal's likely impact on society. Effects on other companies owned by the investor are least important.
5. 76% of investors overall, and 64% of traditional investors, have engaged with companies to improve their ES performance. For both traditional and sustainable investors, the most important considerations are the effect on shareholder value and the investor's stake in the firm. Concerns for sustainability rating and reputation are least important. Traditional funds are

around one-third more likely to engage if they practice ES integration, while sustainable funds are highly likely to engage regardless.

6. Investors who have never engaged on ES issued cited limited benefits (too small a stake and the ability to sell if dissatisfied with ES performance) and high costs. Financial considerations are thus important determinants of both engagement and non-engagement.

6. Specifics

Our final set of questions focus on carbon emissions and board diversity, two ES issues that receive particular attention. We consider each in turn.

6.1 Carbon emissions

Table 13 asks investors "Do you consider a company's carbon emissions in your investment decisions for any of the following reasons?" In contrast to suggestions that investors care about carbon risk for financial reasons (e.g. Bolton and Kacperczyk, 2021), the only response out of 11 that received an average rating above the midpoint of 2 is "Carbon emissions are bad for wider society" (47%/2.11). This is consistent with our prior result that carbon emissions are the ES issue that investors are most willing to sacrifice financial returns for, and Krueger, Sautner, and Starks (2020) who find that investors incorporate climate risks primarily for non-financial reasons. However, given the Table 10 finding that few investors believe that they can affect the cost of capital, this response is likely due to a distaste for investing in stocks that harm society, rather than because investment decisions can reduce emissions. As one traditional investor wrote, "Carbon emissions ARE bad for wider society. I just don't believe that investment decisions of public funds, even exclusions, have any impact." A sustainable investor said in an interview that clients have a distaste for emitting firms, and that disinvesting would have no social impact; the only effect would be that "they [other investors] get the return and I don't."

For traditional investors, no response received an average rating above 2. For sustainable investors, "carbon emissions are bad for wider society" was also top (61%/2.62); "our clients track the carbon footprint of our portfolio" (58%/2.52), "our firm's values or net zero policies influence the carbon footprint of our portfolio" (54%/2.40), "higher carbon emissions increase downside risk" (54%/2.36), "our fund's mandate constrains the carbon footprint of our portfolio" (54%/2.32) and "our fund's reputation depends on the carbon footprint of our portfolio" (42%/2.12) also scored above 2. This is one of the few questions with meaningful differences between sustainable and traditional funds. It likely arises because many sustainable funds have a mandate that includes carbon emissions; in addition, carbon emissions are arguably the most common ES issue against which they are assessed.

The least popular response was "Higher carbon emissions increase returns" (4%/0.69), with "Higher carbon emissions lower returns" being markedly more popular (22%/1.45).[25] These results contrast the academic literature, which documents a positive or no relationship between emissions and returns. However, the financial motive of "higher carbon emissions lower returns" is significantly below 2 for both traditional (16%/1.23) and sustainable investors (31%/1.75), and less popular than many reasons resulting from constraints. This echoes earlier findings on the importance of ES constraints. Also notably, returns are significantly less popular than downside risk for both sets of investors. This echoes earlier findings that portfolio managers may not be mean-variance optimizers, but are particularly concerned with underperformance.

6.2 Board diversity

Table 14 enquires "Do you consider a company's board diversity in your investment decisions for any of the following reasons?" Even though board diversity is a quite different issue to carbon emissions – it is a social (S) rather than environmental (E) topic, and the effects are predominantly on

[25] We deliberately specify "returns," not "risk-adjusted returns" as for prior questions, as Bolton and Kacperczyk (2021) argue that higher returns to emitting companies are compensation for mispriced risk.

the firm in question rather than wider society – the responses are similar to Table 13, although diversity is considered less important than carbon emissions overall. While demographic diversity has received most attention from boards, investors, and regulators, we did not restrict our question to this aspect of diversity to allow investors to express their views on the dimensions that are important.

For investors in aggregate, the only response that received an average rating above the mid-point of 2 was "board diversity is good for wider society" (41%/2.02), with the joint second response being "board diversity reduces downside risk" (34%/1.78). For sustainable investors, "board diversity is good for wider society" (51%/2.31) also ranked first, with "our firm's values or policies require us to consider board diversity" (51%/2.25) second and "board diversity reduces downside risk" (46%/2.10) fourth. In general, constraints received less support than for carbon emissions, consistent with the greater attention paid to the latter, and fund mandates to exclude fossil fuels or meet decarbonization pathways being more common than board diversity mandates. However, constraints still exist for some funds: as the manager of an Article 9 (sustainable) fund wrote: "Gender diversity at board level is one of the 16 principal adverse indicators according to the SFDR." As with carbon emissions, traditional investors gave lower responses across the board than sustainable investors.

For investors in aggregate, the other joint second response was "board diversity increases returns" (31%/1.78) with "board diversity lowers returns" (3%/0.67) ranking a clear last. The return impact of diversity was viewed as more important than carbon emissions (the corresponding response for "higher carbon emissions lower returns" was 22%/1.45). These findings might seem surprising given the academic research is that board demographic diversity generally has no effect on returns, and a negative effect if it is mandated: see Fried (2021) for a survey. However, free-text fields consistently highlighted how investors view diversity in experience, skills, and cognitive style to be significantly more important than demographic diversity, which is why they expected it to be correlated with returns. This echoes the findings of Table 3, where a majority of investors believe that ES leads to alpha despite

the mixed academic evidence: they measure ES performance more accurately than the ESG ratings used by typical academic studies.[26]

6.3 Summary

Our questions on carbon emissions and board diversity yield the following conclusions:

1. Investors' views on the link between carbon emissions/board diversity and shareholder returns contrast academic findings. They are more likely to believe that higher emissions lead to lower than higher returns, and that board diversity leads to higher than lower returns, in contrast to academic research.
2. Despite the perceptions of a link to shareholder returns, the most common reason for considering carbon emissions/board diversity in investment decisions is their impact on wider society. Reducing downside risk is viewed as more important than improving shareholder returns.
3. Fund mandates, firmwide policies and client values are also more important than improving shareholder returns, and of similar importance to reducing downside risk. These constraints are more relevant for carbon emissions than board diversity.

7. Conclusion

This paper surveyed active equity portfolio managers of both traditional and sustainable funds on their beliefs, objectives, constraints, and actions related to sustainable investing. Our results suggest that many standard assumptions of sustainable investing research contrast with actual practices, and propose alternatives to bring research closer to reality.

[26] Edmans, Flammer, and Glossner (2024) and Fos, Jiang, and Nie (2024) study broader forms of diversity.

We have summarized our responses to the individual questions at the end of each section, so we instead highlight the general takeaways here. The first is the broad importance of constraints, which frequently dominate both financial and social considerations for incorporating ES factors. Standard SI models assume that actions are taken by asset owners (principals) who maximize an objective function that includes social returns. However, in reality most stock selection, voting, and engagement decisions are taken by asset managers (agents). Principals are unable to write a contract forcing agents to maximize their objective function, so constraints may be a second-best solution. Given fiduciary concerns, fund managers do not seem to be constantly optimizing a weighted sum of financial and societal objectives. Other than actions with limited effects on financial returns, such as voting for ES proposals that are neutral for shareholder value, they are unable to make large voluntary sacrifices of financial returns. Both traditional and sustainable investors are maximizing returns subject to the constraints that they face.

This suggests that a future theoretical direction is to develop models of SI under delegated portfolio management, and a future empirical direction is to study how such constraints affect stock selection, voting, and engagement. Practicing SI through constraints also has implications for the asset management industry's ability to change companies' ES performance. While constraints may be able to prevent errors of commission (e.g., investing in the fossil fuel sector), they are less above to prevent errors of omission and ensure that investors have positive impact, aside from quantitative issues such as improving board diversity (Gormley et al., 2023).

The second is the wide disparity of beliefs, and actions motivated by beliefs, among investors. For example, 13% rate ES performance as one of the top three drivers of firm value despite most ranking it in the bottom two; 10% view greenhouse gas emissions as immaterial while 26% view them as highly material; there are a range of views on whether good and bad ES performers will generate positive or negative alpha; and 10% rarely incorporate ES into stock selection while 44% do so very often.

Importantly, these differences do not polarize naturally across traditional vs. sustainable lines. These beliefs affect behavior, with investors much more likely to make investment decisions and engage with companies based on ES factors if they expect good ES performers to deliver positive alpha.

Prior research typically attributes differences in investor behavior to different preferences; for example, Bolton et al. (2020) use proxy voting records to "estimate institutional investor preferences." However, since variation in objectives may be constrained by fiduciary duty, differences in behavior may arise at least in part from differences in beliefs. While heterogeneous belief models have been used successfully in other areas of asset pricing, we are unaware of any such models for sustainable investing.

The third is that differences between traditional and sustainable investors are smaller than commonly thought. Both recognize the importance of financial returns and of delivering on their fiduciary duty. Only 23% of traditional investors and 30% of sustainable investors will tolerate companies sacrificing even 1 basis point per year to improve their ES performance. The proportions who have voted for a shareholder proposal that was even slightly negative for firm value are remarkably similar, at 24% and 31%. Both sets of investors viewed long-term shareholder value as by far the main reason for engaging on ES issues.

Many theories model two classes of investors, one whose sole objective is financial returns and another who place significant weight on social returns. Our results suggest that the few differences that exist result from different beliefs (e.g. on whether ES leaders outperform) or different constraints (e.g. from fund mandates) rather than different preferences or objectives. This suggests that differential constraints or beliefs may be a more realistic approach than different objective functions, particularly when investors are asset managers rather than asset owners.

The fourth, which is an implication of all the above findings, is that achievement of an asset owner's ES objectives via delegated fund management is far more nuanced than merely selecting a sustainable

versus a traditional fund. An asset owner's ES objectives may be achieved via their asset manager in one of two ways while respecting fiduciary duty. One is through imposing clear constraints within the mandate that prioritize ES objectives over returns. The other is through the asset manager pursuing ES outcomes as a way to increase returns, in other words practicing ES integration. ES constraints enable action independent of shareholder value consequences, but inevitably on a more restricted range of issues, likely not tailored to context. ES integration allows a wider range of ES issues to be addressed in a nuanced way depending on context, but to an extent limited by the portfolio manager's view on the shareholder value implications. While ES constraints are determined by the nature of the fund mandate and firmwide policies, the extent to which the fund adopts ES integration is determined by the fund manager's belief in, and pursuit of, ES as a source of alpha. The presence of ES constraints, beliefs in ES as a source of alpha, and the adoption of ES integration do not divide neatly across sustainable and traditional lines.

Clients seeking to implement ES objectives through delegated fund management are therefore not selecting asset managers based on the weights they apply to different societal objectives and financial returns. Instead they need to consider the combination of a complex range of issues: the constraints of the fund mandate and the fund family; the portfolio manager's investment beliefs and whether and how they practice ES integration; and the fund manager's ability to maximize financial returns given those constraints and beliefs. This suggests the need for development of more sophisticated models of SI under delegated management which takes into account the roles of constraints, investment beliefs, and fiduciary duty.

Finally, our results question the likelihood that the asset management industry will have a significant effect on companies' aggregate ES performance under their current mandates. Both traditional and sustainable fund managers are generally reluctant to sacrifice returns for ES performance, and do not believe that companies are underinvesting in ES performance from a

shareholder value perspective. To have greater impact on asset manager behavior, firmwide policies, fund mandates, and client wishes would need to be more restrictive.

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Table 1

Rank the following by their importance for the long-term value of companies in your investment universe in aggregate (1=most important, 6=least important)

All investors (n=509)

	Mean	1	2	3	4	5	6
Strategy and competitive position	1.67 [a]	59%	25%	11%	3%	2%	1%
Operational performance	2.36 [a]	25%	38%	21%	11%	4%	1%
Governance	3.71 [a]	6%	14%	19%	32%	23%	6%
Corporate culture	4.12 [a]	7%	11%	17%	18%	24%	24%
Capital structure	4.13 [a]	3%	9%	25%	22%	21%	21%
ES performance	5.01 [a]	2%	3%	8%	15%	26%	47%

The superscript reports whether the mean is significantly different from 3.5 (the average ranking). a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 2

How material is ES performance, on the following dimensions, to how you assess the long-term value of companies in your investment universe in aggregate? (0=immaterial, 4=highly material)

All investors (n=501)

	Mean	0	1	2	3	4
Employee wellbeing	2.59 [a]	6%	8%	27%	42%	18%
Consumer health, welfare, and privacy	2.53 [a]	5%	10%	30%	34%	20%
Greenhouse gas emissions	2.50 [a]	10%	10%	25%	29%	26%
Pollution and waste management	2.49 [a]	7%	12%	24%	40%	18%
Treatment of suppliers	2.31 [a]	5%	14%	37%	33%	11%
Ecological impacts (including biodiversity and water usage	2.23 [a]	9%	17%	29%	31%	14%
Community impact	1.99 [a]	10%	20%	37%	26%	6%
Demographic diversity (e.g. gender, race)	1.68 [a]	18%	25%	31%	21%	4%

The superscript reports whether the mean is significantly different from zero. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 3

Do you expect good ES performers to typically outperform or underperform in long-term risk-adjusted total shareholder return? (-2=strongly underperform, 0=neither under nor outperform, 2=strongly outperform)

The first row of responses for each option (in bold) is from all investors (n=499), the second row (not italicized) is from traditional investors (n=286), the third row (italicized) is from sustainable investors (n=213).

	Mean	-2	-1	0	1	2
Do you expect good ES performers to typically outperform or underperform in long-term risk-adjusted total shareholder return?	**0.57** [a]	**2%**	**6%**	**35%**	**48%**	**9%**
	0.36 [a,a]	2%	8%	44%	42%	4%
	0.85 [a,a]	*1%*	*2%*	*23%*	*56%*	*17%*

The first superscript reports whether the mean is significantly different from zero, the second whether they are significantly different between traditional and sustainable investors. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 4

Panel A: Why do you think good ES performance leads to long-term outperformance? (-2=strongly disagree, 0=neither agree nor disagree, 2=strongly agree)

Panel B: Why do you think the market fails to fully price in ES performance? (-2=strongly disagree, 0=neither agree nor disagree, 2=strongly agree)

Panel C: Why do you think good ES performance leads to long-term underperformance? (-2=strongly disagree, 0=neither agree nor disagree, 2=strongly agree)

All investors (n=285/177/39/174)

Panel A						
	Mean	-2	-1	0	1	2
Good ES performance is correlated with other characteristics that cause long-term outperformance	1.43 [a]	0%	0%	4%	47%	48%
Good ES performance improves long-term value but the market underprices it in the short term	0.71 [a]	1%	7%	29%	45%	18%
Increasing investor demand for good ES performance will drive their prices up over time	0.50 [a]	1%	10%	36%	45%	8%
Good ES performance is immaterial or negative for long-term value, but the market excessively discounts good ES performers	-1.04 [a]	33%	44%	19%	4%	1%
Panel B						
	Mean	-2	-1	0	1	2
The market is too short-termist	1.36 [a]	1%	2%	8%	36%	52%
Disclosed ES information is not comparable across companies	1.01 [a]	1%	6%	14%	51%	28%
The market does not recognize that ES performance is financially material	0.79 [a]	1%	10%	17%	54%	18%
Disclosed ES information is not reliable enough	0.60 [a]	1%	12%	27%	48%	12%
Companies do not disclose enough ES information	0.43 [a]	2%	15%	34%	38%	11%

It is too difficult to incorporate ES information into valuations	0.31 [a]	5%	24%	19%	40%	12%
Disclosed ES information is not relevant enough	0.29 [a]	3%	19%	3%	33%	11%
Panel C						
	Mean	-2	-1	0	1	2
Good ES performance is immaterial for long-term value but the market overprices it	0.51 [b]	8%	15%	21%	31%	26%
Good ES performance is correlated with other characteristics that cause long-term underperformance	0.38 [b]	5%	10%	33%	44%	8%
Good ES performance worsens long-term value and the market fails to price this in	0.00	18%	19%	23%	28%	13%
Good ES performance improves long-term value but the market overprices it	0.00	10%	26%	31%	21%	13%

The superscript reports whether the mean is significantly different from zero. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 5

Do you believe that bad ES performers typically outperform or underperform in long-term risk-adjusted total shareholder return? (-2=strongly underperform, 0=neither under nor outperform, 2=strongly outperform)

The first row of responses for each option (in bold) is from all investors (n=497), the second row (not italicized) is from traditional investors (n=286), the third row (italicized) is from sustainable investors (n=211).

	Mean	-2	-1	0	1	2
Do you believe that bad ES performers typically	**-0.70** [a]	**14%**	**50%**	**29%**	**7%**	**1%**
outperform or underperform in long-term risk-	-0.67 [a,–]	13%	49%	32%	7%	0.00%
adjusted total shareholder return?	*-0.73* [a,–]	*15%*	*53%*	*25%*	*7%*	*1%*

The first superscript reports whether the mean is significantly different from zero, the second whether they are significantly different between traditional and sustainable investors. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 6

How much do companies across your investment universe typically invest in ES performance on the following dimensions, compared to the level that would maximise long-term shareholder value? (-2=significantly underinvest, 0=neither over-nor underinvest, 2=significantly overinvest)

All investors (n=493)

	Mean	-2	-1	0	1	2
Greenhouse gas emissions	0.34 [a]	3%	16%	38%	34%	10%
Pollution and waste management	0.19 [a]	3%	17%	45%	32%	4%
Employee wellbeing	0.17 [a]	3%	13%	51%	30%	3%
Demographic diversity (e.g. gender, race)	0.16 [a]	2%	17%	49%	28%	4%
Consumer health, welfare, and privacy	0.14 [a]	3%	13%	54%	27%	3%
Community impact	0.05	2%	16%	58%	23%	1%
Treatment of suppliers	0.01	3%	17%	58%	21%	1%
Ecological impacts (including biodiversity and water usage)	-0.04	5%	24%	45%	24%	3%

The superscript reports whether the mean is significantly different from zero. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 7

Panel A: Why do you think companies overinvest in some ES issues? (0=not at all important, 4=very important)

Panel B: Why do you think companies underinvest in some ES issues? (0=not at all important, 4=very important)

All investors (n=335/250)

Panel A							
	Mean	0	1	2	3	4	N
The public, the media, or employees pressure them to overinvest	3.02 [a]	1%	5%	15%	50%	29%	335
Investors pressure them to overinvest	2.76 [a]	1%	8%	21%	54%	16%	335
Companies do not sufficiently distinguish between material and immaterial factors	2.50 [a]	3%	10%	36%	34%	17%	335
To improve executives' personal reputation	2.45 [a]	4%	13%	30%	42%	11%	335
Compensation provides incentives to overinvest	2.23 [a]	5%	19%	32%	36%	8%	335
Companies overestimate the financial benefits (e.g. increased returns, lower risk) of ES investment	1.96 [a]	7%	27%	35%	26%	5%	335
Executives themselves care about the environment and society	1.79 [a]	10%	28%	37%	23%	2%	335
Panel B							
	Mean	0	1	2	3	4	N
Investors are too short-termist	2.82 [a]	4%	9%	16%	41%	29%	250
Companies are too short-termist	2.72 [a]	4%	9%	22%	43%	23%	250
Companies underestimate the financial benefits (e.g. increased returns, lower risk) of ES investment	2.44 [a]	7%	14%	22%	44%	13%	250
Companies lack expertise in how to improve ES	2.35 [a]	5%	14%	31%	38%	11%	250
Compensation incentives place insufficient weight on ES issues	2.34 [a]	6%	16%	32%	31%	15%	250
The public, the media, and employees pay insufficient attention to ES issues	1.53 [a]	17%	35%	30%	14%	4%	250

The superscript reports whether the mean is significantly different from zero. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 8

How much long-term risk-adjusted total shareholder return would you tolerate a company sacrificing to improve its ES performance?

The first row of responses for each option (in bold) is from all investors (n=490), the second row (not italicized) is from traditional investors (n=281), the third row (italicized) is from sustainable investors (n=209).

	Zero – I would not tolerate any sacrifice	1-10 bp per year	11-50 bp per year	>50 bp per year	No sacrifice is necessary since there is no trade-off
How much long-term risk-adjusted total shareholder return would you tolerate a company sacrificing to improve its ES performance?	33%	14%	9%	3%	40%
	41% [a]	12%	9%	2%	35% [a]
	22% [a]	*16%*	*10%*	*5%*	*47% [a]*

The superscript reports whether the percentages are significantly different between traditional and sustainable investors. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 9

Panel A: Have firmwide ES policies, your fund mandate, your clients' wishes, or concern for your reputation or sustainability rating ever caused you to do any of the following more than you otherwise would? (select all that apply)

Panel B: What caused you to take these actions? (select all that apply)

Panel C: What were the consequences for the risk-adjusted returns of your fund?

The first column of responses for each option (in bold) is from all investors (n=485/348/327), the second column (not italicized) is from traditional investors (n=280/173/165), the third column (italicized) is from sustainable investors (n=205/175/162).

Panel A	All	Traditional	Sustainable
Avoid stocks we believed would outperform	**38%**	29% [a]	*51% [a]*
Avoid stocks that would improve portfolio diversification	**38%**	30% [a]	*49% [a]*
Engage with companies on ES issues that do not add shareholder value	**28%**	25% [c]	*32% [c]*
Avoid owning ES laggards whose ES performance we could have improved	**22%**	14% [a]	*33% [a]*
Avoid owning ES leaders in a laggard industry	**21%**	15% [a]	*30% [a]*
Focus on visible dimensions of ES performance at the expense of more important ES issues	**20%**	20%	*21%*
Vote for ES resolutions that do not add shareholder value	**19%**	15% [b]	*23% [b]*
Hold stocks we believed would underperform	**7%**	4% [b]	*10% [b]*
None of the above	**29%**	39% [a]	*16% [a]*
Panel B			
Firmwide ES policies	**58%**	52% [b]	*63% [b]*
Our fund mandate	**52%**	34% [a]	*70% [a]*
Our clients' wishes	**48%**	51%	*45%*
Concern for our fund's sustainability rating or reputation	**36%**	30% [b]	*43% [b]*
Panel C			
No impact on returns	**20%**	24% [b]	*15% [b]*
A small reduction in returns	**26%**	27%	*25%*
A moderate reduction in returns	**13%**	8% [b]	*17% [b]*
A large reduction in returns	**3%**	2%	*4%*
An improvement in returns	**3%**	4%	*2%*
Impossible to quantify	**36%**	35%	*38%*

The superscript reports whether the percentages are significantly different between traditional and sustainable investors. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 10

Do you underweight poor ES performance / overweight good ES performers for any of the following reasons? (0=Never, 4=Very often)

The first column of responses for each option (in bold) is from all investors, the second column (not italicized) is from traditional investors, the third column (italicized) is from sustainable investors.

	All (n=486)	Trad (n=279)	Sust (n=207)
Constraints			
To be consistent with our fund's mandate	**2.21 [a] (48%)**	1.59 [a,a] (28%)	*3.04 [a,a] (75%)*
To be consistent with our firm's values or policies	**2.07 [a] (45%)**	1.70 [a,a] (34%)	*2.58 [a,a] (60%)*
To be consistent with our clients' values	**2.04 [a] (40%)**	1.65 [a,a] (24%)	*2.56 [a,a] (60%)*
Financial motivations			
To avoid downside risk	**2.12 [a] (47%)**	1.91 [a,a] (40%)	*2.40 [a,a] (57%)*
To improve returns	**2.08 [a] (44%)**	1.80 [a,a] (36%)	*2.46 [a,a] (56%)*
To avoid stocks that are volatile	**1.23 [a] (19%)**	1.11 [a,b] (15%)	*1.39 [a,b] (23%)*
Marketing motivations			
To improve our fund's sustainability rating	**1.33 [a] (22%)**	0.96 [a,a] (12%)	*1.83 [a,a] (36%)*
To improve our fund's reputation	**1.25 [a] (19%)**	0.93 [a,a] (11%)	*1.69 [a,a] (30%)*
ES impact motivations			
To reward companies for improving ES performance / penalize companies for not doing so	**1.32 [a] (21%)**	0.98 [a,a] (13%)	*1.77 [a,a] (30%)*
To affect companies' cost of capital	**1.14 [a] (13%)**	0.91 [a,a] (9%)	*1.43 [a,a] (19%)*

Figures are the mean response for each option with, in brackets, the proportion of respondents selecting 3 or 4. The first superscript reports whether the mean is significantly different from zero, the second whether they are significantly different between traditional and sustainable investors. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 11

Panel A: Have you ever voted for a shareholder proposal when the proposal was even slightly negative for firm value?

Panel B: Have you ever voted for a shareholder proposal when the proposal was neutral for firm value?

Panel C: Why did you vote for such proposals? (select all that apply)

For Panels A and B the first column of responses for each option (in bold) is from all investors (n=485), the second column (not italicized) is from traditional investors (n=279), the third column (italicized) is from sustainable investors (n=206). For Panel C the first column of responses is for all investors who selected Yes in Panel A (n=129) and the second column is for all investors who selected Yes in Panel B (n=376)

Panel A – proposal even slightly negative for firm value	All	Traditional	Sustainable
Yes	**27%**	24%[c]	*31%*[c]
Panel B – proposal neutral for firm value	All	Traditional	*Sustainable*
Yes	**78%**	73%[a]	*84%*[a]

Panel C – why did you vote for such proposals?	Proposal was negative	Proposal was neutral
To be consistent with our firm's values or policies	55%	65%
To be consistent with our clients' values	52%	49%
To be consistent with our fund's mandate	49%	52%
I expected it to have a positive impact on society	33%	41%
Proxy advisor recommendations	30%	39%
To improve our fund's reputation or sustainability rating	19%	15%
I expected it to have a positive impact on other companies we own	16%	20%

The superscript in Panels A and B reports whether the percentages are significantly different between traditional and sustainable investors. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 12

Panel A: Do you ever engage with companies to improve their ES performance?

Panel B: What determines whether you engage with a company on an ES issue? (0=not at all important, 4=very important)

For panel A first column of responses for each option (in bold) is from all investors (n=483), the second column (not italicized) is from traditional investors (n=278), the third column (italicized) is from sustainable investors (n=205). For panel B the responses are for all investors who responded Yes in Panel A (n=364).

Panel A	All	Traditional	Sustainable
Yes	**76%**	64% [a]	*92%* [a]

Panel B	Mean	0	1	2	3	4
How much the issue affects long-term shareholder value	3.34 [a]	2%	4%	10%	25%	59%
Our stake in the company	2.58 [a]	9%	10%	20%	38%	24%
How much the issue affects wider society	2.32 [a]	8%	13%	32%	35%	13%
How much our firm cares about the issue	2.29 [a]	12%	10%	30%	33%	15%
How much our clients care about the issue	2.27 [a]	8%	13%	35%	32%	12%
The time, resource, and financial costs of engagement	2.08 [a]	13%	15%	34%	28%	10%
How much the issue affects other companies we own	2.07 [a]	16%	13%	33%	26%	13%
The need to prioritize given non-ES issues we are engaging on	1.77 [a]	20%	15%	40%	21%	5%
How much our reputation would be improved by engaging	1.42 [a]	29%	22%	31%	15%	3%
How much our sustainability rating would be improved by engaging	1.26 [a]	38%	17%	27%	15%	3%

The superscript in Panel A whether the percentages are significantly different between traditional and sustainable investors. The superscript in Panel B reports whether the mean is significantly different from zero. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 13

Do you consider a company's carbon emissions in your investment decisions for any of the following reasons? (0=not at all important, 4=very important)

All investors (n=479)

	Mean	0	1	2	3	4
Carbon emissions are bad for wider society	2.11 [a]	22%	10%	22%	28%	18%
Higher carbon emissions increase downside risk	1.98 [a]	22%	12%	25%	29%	12%
Our clients track the carbon footprint of our portfolio	1.82 [a]	28%	12%	24%	22%	14%
Our firm's values or net zero policies influence the carbon footprint of our portfolio	1.71 [a]	32%	13%	21%	20%	14%
Our fund's mandate constrains the carbon footprint of our portfolio	1.51 [a]	41%	11%	18%	15%	14%
Higher carbon emissions lower returns	1.45 [a]	32%	17%	28%	18%	4%
Higher carbon emissions increase return volatility	1.44 [a]	32%	18%	28%	18%	4%
Our fund's reputation depends on the carbon footprint of our portfolio	1.42 [a]	35%	18%	24%	16%	7%
Carbon emissions create a systemic risk to other companies in our portfolio	1.39 [a]	31%	21%	29%	14%	4%
Our fund's sustainability rating depends on the carbon footprint of our portfolio	1.37 [a]	37%	16%	24%	17%	5%
Higher carbon emissions increase returns	0.69 [a]	56%	23%	17%	3%	1%

The superscript reports whether the mean is significantly different from zero. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 14

Do you consider a company's board diversity in your investment decisions for any of the following reasons? (0=not at all important, 4=very important)

All investors (n=479)

	Mean	0	1	2	3	4
Board diversity is good for wider society	2.02 [a]	20%	11%	28%	30%	11%
Board diversity reduces downside risk	1.78 [a]	25%	15%	26%	26%	8%
Board diversity increases returns	1.78 [a]	23%	14%	32%	23%	8%
Our firm's values or policies require us to consider board diversity	1.74 [a]	29%	14%	22%	23%	11%
Board diversity reduces return volatility	1.36 [a]	34%	18%	29%	16%	3%
Our fund's mandate requires us to consider board diversity	1.31 [a]	40%	17%	19%	19%	5%
Our clients track the board diversity of our portfolio	1.19 [a]	37%	23%	25%	12%	2%
Lack of diversity creates a systemic risk to other companies in our portfolio	1.06 [a]	46%	19%	24%	8%	4%
Our fund's sustainability rating depends on the board diversity of our portfolio	1.02 [a]	46%	20%	24%	9%	2%
Our fund's reputation depends on the board diversity of our portfolio	1.00 [a]	46%	21%	24%	85%	1%
Board diversity lowers returns	0.67 [a]	58%	21%	17%	3%	1%

The superscript reports whether the mean is significantly different from zero. a, b, and c represent statistical significance at the 1%, 5%, and 10% level, respectively.

Appendix A: Additional Survey Contents

Below we include the text provided on the first page of the survey.

Thank you for participating in this survey. This is a joint research project by London Business School and the London School of Economics on how active equity investors consider companies' environmental and social ("ES") performance in their investment process.

The survey has 19 questions and should take 15 minutes to complete. Participation will result in a £100 donation to your choice of the American Red Cross, British Red Cross, or International Red Cross (up to a maximum of £25,000). You will be sent a preliminary version of the results in advance of publication if you provide an email address at the end. We will report only aggregate results, so your individual responses are confidential. You have the right to withdraw from the survey at any time.

The researchers are Prof. Alex Edmans (aedmans@london.edu), Dr. Tom Gosling (tgosling@london.edu) and Prof. Dirk Jenter (d.jenter@lse.ac.uk).

The only personal data collected in this survey will be any email address you optionally give in order for us to share the results with you. By participating in this survey you agree to us processing your data in line with GDPR, Data Protection Act 2018 and the London Business School data protection policy and privacy statements. For more information on how we will process the data you provide, please see this participation information sheet.

OA1 – Online Appendix

Respondent demographics

Q1. What type is your fund?

	%	N
Active equity	89%	451
Active multi-asset including equities	11%	58
Index equity	0.00%	0
Fixed income	0.00%	0
Other	0.00%	0
Total	100%	509

Q2. What are your fund's assets under management?

	%	N
Less than $100m	13%	65
Between $100m and $250m	13%	65
Between $250m and $500m	11%	54
Between $500m and $2b	24%	122
Above $2b	40%	203
Total	100%	509

Q3. How many stocks does your fund typically hold?

	%	N
<30	15%	74
30-50	44%	224
50-100	27%	137
100-500	11%	57
>500	3%	17
Total	100%	509

Q4. Is your fund marketed as responsible/sustainable/ESG/SRI/ethical?

	%	N
Yes	43%	219
No	57%	290
Total	100%	509

Q5. Where is your fund marketed?

	%	N
US	44%	223
EU	61%	311
UK	52%	264
Other (please specify)	33%	170
Total		968

Q6. Are the clients of your fund retail or institutional?

	%	N
Retail	12%	59
Institutional	22%	111
Both	67%	339
Total	100%	509

Q7 – How would you describe your investment style?

	%	N
Fundamental	82%	416
Quantitative	11%	55
Other (please specify)	7%	38
Total	100%	509