Institutional Investors, Alternative Asset Managers, and ESG Preferences

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Joseph A. McCahery
Tilburg University and ECGI

Paul C. Pudschedl
Tilburg University

Martin Steindl
Valoris Stewardship Catalysts

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Keywords: ESG, Institutional Investors, Private Equity, Venture Capital

JEL Classifications: G11, G12, G23, G3

Joseph A. McCahery*
Professor of Law
Tilburg University, Tilburg Law School
Prof. Cobbenhagenlaan 221
5037 DE Tilburg, Netherlands
phone: +31 13 466 2306
e-mail: J.A.McCahery@Tilburguniversity.edu

Paul C. Pudschedl
External PhD
Tilburg University, Tilburg Law School
Prof. Cobbenhagenlaan 221
5037 DE Tilburg, Netherlands
e-mail: P.C.Pudschedl@tilburguniversity.edu

Martin Steindl
Managing Director
Valoris Stewardship Catalysts
Vienna, Austria
e-mail: msteindl@valoriscatalysts.com

*Corresponding Author

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*Tilburg University, TILEC, and ECGI
**Tilburg University, TILEC, and University of Applied Sciences Wiener Neustadt
***Valoris Stewardship Catalysts

1. Introduction

The last decade has seen a rapid increase in the integration of environmental, social and governance (ESG) factors into the investment decisions of institutional investors. Data from Natxis Investment Managers indicate that the percentage of institutional investors that choose to integrate ESG factors into investment decisions increased by 18% between 2019 and 2021.[1] Despite the strong growth in ESG integration across investor types, however, many institutional investors still choose to integrate just one or two of the factors or have yet to consider ESG factors at all in their asset allocation process.[2] Moreover, while articles in this literature have focused on the ESG fund segment generally,[3] relatively little is known about ESG integration in private markets. And while much literature considers the implications of climate risk for investors[4] comparison between E, S, and G considerations for investors remain under-explored.[5] There are relatively few empirical studies examining ESG considerations for limited partners (LPs) and general partners (GPs).

There is a large literature on the effect of ESG integration into investment strategies.[6] We are motivated by three stands of the literature that reach different hypotheses on the integration of ESG factors. The first strand argues that that most institutional investors take ESG factors into account because they believe them to be linked to financial performance.[7] The second strand argues that the link between ESG and firms' financial performance is the combined effect of a sufficiently large number of investors acting on nonfinancial motives to slant their portfolios towards firms with strong ESG criteria and away from firms with poorer ESG quality. In these

[1] Natxis (2021).
[2] OECD (2020).
[3] See, e.g., Amel-Zadeh and Serafeim (2017); Hanson et al. (2017); Gibson et al. (2021); Eccles et al. (2011), Krueger et al. (2019); Bolton et al. (2022); Sautner et al. (2022).
[4] Krueger et al. (2019); Bolton et al. (2022); Sautner et al. (2022); Goldstein et al. (2022).
[5] Lopez-de-Silanes et al. (2022) considers these relative preferences for institutional investors in publicly traded securities.
[6] For a general overview of themes in the ESG related literature, see Gillan et al. (2021).
[7] Amel-Zadeh and Serafeim (2017).

models, the subset of investors acting this way needs to be just large enough to raise the cost of capital for firms with poor ESG quality in order to provide a financial incentive to invest in improving its ESG quality and, thus, to attract a larger number of investors.[8] The third stand argues that the positive relationship between ESG and financial performance involves considering the risk benefits that may accrue to individual firms due to their ESG characteristics, as well as the diversification benefits related to firms' ESG characteristics.[9] In these studies, the improved financial performance depends on how the portfolio manager uses ESG screenings.[10]

In order to shed light on these questions, we study the effect of institutional investors' perceived importance of ESG factors for their investments in private equity (PE) and venture capital (VC), as well as the factors that influence alternative asset managers to incorporate ESG factors into their portfolio allocations. In order to empirically study these questions, we introduced a new dataset from a 2020 survey of institutional investors. The survey data comprise information from 106 UK, European and North American institutions, as well as for a small percentage of respondents around the world, who are currently investing in private equity and venture capital. In the survey, we asked investors about their motivations for considering ESG factors, the relative importance of ESG criteria, their use in relation to risk and return considerations, how often ESG criteria are considered and in which stages of the portfolio management process, and for which screening or evaluative purposes ESG criteria are employed.

To assess the barriers to and motives for ESG integration, we first present basic statistics showing the reasons that these investors consider integrating ESG into their investment process. We find that, on average, 48% of institutional investors on average rate investment riskiness as their first or second important reason for considering ESG, compared to only 13% for diversification purposes. Meanwhile, 45% respond that they rate an ESG mandate as first

8 Heinkel et al. (2001).
9 Statman and Glushkov (2009).
10 Barnett and Salomon (2006); Sherwood and Pollard (2018); Hanson et al. (2017).

or second. This is consistent with evidence that institutional investors increase inflow of funds by signing onto the UN PRI even if they underperform financially.[11] We also evaluate investor views on the barriers to ESG usage in the investment asset management process. The results here indicate that the absence of accurate data and the weak comparability of data are the most important hurdles to the implementation of ESG criteria.

We asked LPs and GPs to rate the motivations that would influence them to adopt ESG factors in their investment decision processes. Although GPs recognize the correlations with financial performance, they are more motivated to respond to clients' demands (i.e., demand from LPs). Not surprisingly, we find that LPs are more motivated by the belief that there are correlations with investment risk generally.

We distinguish between PE and VC investment funds in order to proxy for the average age of portfolio companies and the added risk and uncertainty that accompanies investments in earlier stage companies. We find that PE firms use ESG factors more intensely than do VC funds regardless of geography. Moreover, we find that PE firms use voice and exit strategies more extensively than VC funds in an effort to promote ESG activities in companies. Considering that VC funds are generally investing in early-stage and newer companies while PEs are engaged in enhancing value in more established companies, our results are consistent with findings that investors with longer-term horizons engage more with the ESG quality of companies in their portfolios.[12]

Next, we study the complementary use of voice and exit strategies by PE and VC firms to manage their ESG issues with companies. We document that GPs use exit and voice more often than LPs. While our interview evidence confirms that LPs will address ESG concerns about a particular company with a GP, this is only for egregious concerns. Our findings highlight, among other things, that LPs do not have the same significant effect on governance that GPs have.

[11] Gibson et al. (2020).
[12] Starks et al. (2020).

We also study investors' views on the relative importance of the E, S and G scores individually. It is well known that institutional investors are increasingly implementing ESG scores into their portfolio management activities.[13] Surprisingly, this relation has not been explored in the literature until recently. We find that investors, when evaluating individual components of ESG scores, consider the governance score the most important component, followed by E, and then S. Our findings generally support the theoretical argument that ESG, particularly the governance dimension, is related to decreased risk.

The paper proceeds as follows. Section 2 reviews the related literature. Section 3 describes the methodology. Section 4 examines the summary statistics. Section 5 presents the results. Section 6 concludes.

2. Motivation and literature review

This section provides an overview of the existing theoretical and empirical literature, as well as the motivation for this research and the hypothesis development.

The ESG preferences of investors depend very much on the style and strategy investors of investors when integrating ESG. Strategies can vary from avoiding 'sin stocks'[14] to more active ways of involving ESG risk management into the investment decision process. They can also encompass a focus on broader measures of corporate social responsibility (CSR) or be more actively pursued strategies of sustainability (sustainable equity, credits, multi-asset or infrastructure debt) and/or impact (green bonds, impact equity, emerging market loans).[15] The studies to date have not differentiated their findings with regard to the strategy that investors deploy. There is also not a common definition of what the different strategies exactly entail.

[13] Barko et al. (2021); Amel-Zadeh and Serafeim (2017); Eccles et al. (2011); Hanson et al. (2017); Dyck et al. (2019).

[14] The term 'sin stocks' commonly refers to a publicly traded company that is either involved in or associated with an activity that is considered unethical or immoral such as the production of alcohol, tobacco or weapons.

[15] One way to classify different investment styles while at the same time explaining how an investor is making use thereof is shown by NN Investment Partners (2019) in their Responsible Investing Report 2019.

That is, at least in part, the evidence explaining the impact of ESG factors—for example, on financial performance—is mixed at best. Thus, we try to differentiate among the effects of the different styles, but also consider other aspects of ESG relevant to investors and firms; we then turn to the literature on ESG data and disclosure and finally explore the literature concerning investors' voting and other engagement strategies concerning ESG, which are relevant after the investment decision has been made.

A large literature on ESG investing has emerged in recent years. Two meta studies provide a useful overview on this literature up until 2015. Both studies find a remarkable correlation between ESG and economic performance. One study[16] explores the business case for ESG[17] by looking into the relationship between ESG and cost of capital and operational performance, as well as stock price effects of ESG, and the results of active ownership. The study reviews and categorizes more than 200 academic papers, industry reports, newspaper articles and books and concludes that 90% of the studies on the cost of capital show that sound ESG standards lower companies' cost of capital. Further, 88% of the research shows that solid ESG practices result in firms' better operational performance, and, finally, 80% of the studies show that companies' stock price performance is positively influenced by good ESG practices.[18]

The other meta study focuses exclusively on the effect of ESG on financial performance but captures even more academic resources.[19] It extracts all of the primary and secondary data from previous academic studies, thereby combining the findings of 2200 individual studies. This research shows that roughly 90% of the studies find a non-negative relation between ESG and corporate financial performance. The effect of ESG on financial performance is still the core question,[20] often presented in terms of whether a trade-off exists for investors between the financial and non-financial dimensions of the investment.

[16] Clark et al. (2015).
[17] This study uses the term 'sustainability' as an equivalent for ESG. In general, terms such as "sustainability", "environmental, social and governance (ESG)", and also "corporate social responsibility" (CSR) have been used interchangeably in the past, although they can mean different things. On the lack of a definition of sustainability, see Gray (2010).
[18] Clark et al. (2015).
[19] Friede et al. (2015).
[20] Bialkowski and Starks (2016).

2.1 ESG and its Impact on Investment Performance

In the following, we aim to distinguish between active and passive strategies of integrating ESG to see what impact they may have on firms' financial performance, as well as on investors' performance. This distinction is more commonly accepted: passive strategies focus on negative screening of certain industries, whereas active strategies are all other strategies that include some form of positive screening of ESG. Differentiating among those active strategies is more difficult. We make a distinction in the following between strategies that focus on ESG as an element of investment risk analysis versus those whereby the investor decides to focus more on an ESG-related opportunity or market segment, as with so-called sustainability or impact strategies (e.g., alternative energy as the main focus of a fund would fall under this category.)

Originally, the effects of ESG were examined only for negative screening strategies, commonly referred to as 'avoiding sin stocks'. Examples for such studies are manifold.[21] This type of negative screening, however, is now considered the most detrimental to financial performance and, nowadays, full integration of ESG into stock valuation, active ownership, and positive screening is considered much more beneficial.[22]

In this regard, a strand of literature examines financial performance of sustainable investment portfolios and generally fails to find any performance differences between SRI funds and conventional mutual funds,[23] which can be due to difference in investment styles.[24] It is questionable whether an investment in an SRI fund reflects a stable ESG profile over time and, indeed, offers higher exposure to ESG values than conventional funds do.[25]

2.2 Financial Performance with Active ESG Strategies—Tackling Investment Risk

The more active consideration of ESG factors often starts with the understanding that such factors can be negatively related to extreme downside risk. Shafer and Szado have shown that

[21] Hong and Kacperczyk (2009); Statman and Glushkov (2009); or, more recently, Bansal et al. (2018); Trinks and Scholtens (2017).
[22] Amel-Zadeh and Serafeim (2017).
[23] Riedl and Smeets (2017); Geczy et al. (2005). An outperformance of SRI funds is shown by Borgers et al. (2015).
[24] Amel-Zadeh and Serafeim (2017).
[25] Bialkowski and Starks (2016).

better ESG practices, as well as better practices in the individual E, S, and G pillar, significantly reduce *ex ante* expectations of a left-tail event.[26] Hamilton shows a significant negative impact of the announcements of the release of information about the use of toxic chemicals on stock prices in the US,[27] with similar effects being observed for other countries in Latin America and Asia.[28] In a similar vein, Hoepner et al. highlight that ESG issues can benefit shareholders by reducing firms' downside risk.[29]

There is general agreement among investors[30] that successful ESG investing depends on integrating ESG factors with the methods and data of traditional "fundamental" financial statement analysis. ESG concerns tend to show up as risk factors that can translate into higher costs of capital and lower values. Many fundamental investors view companies' effectiveness in managing such factors as an indicator of management "quality". Fixed-income investors are equally concerned as equity investors about ESG exposures, eventually generating "tail risks" that can materialize in both going-concern and default scenarios.[31] According to the view above, ESG integration is not different from any other analysis, it's simply a matter of integrating all relevant information.[32] Others, however, argue that ESG information presents itself as an extra level of intelligence that can also provide insight into future performance next to fundamental information, which relies heavily on a company's financial statements and technical information, and can be derived from a company's past performance in the stock market.[33]

Building on the growing investment practice of considering ESG as risk factors in financial analysis, ESG can also be used to diversify risks in portfolio construction. Sherwood and Pollard show that integrating ESG emerging market equities into institutional portfolios could provide institutional investors the opportunity for higher returns and lower downside risk than

[26] Shafer and Szado (2020); see also, Barnett and Salomon (2022).
[27] Hamilton (1995).
[28] Dasgupta et al. (2001).
[29] Hoepner et al. (2022).
[30] Hanson et al. (2017).
[31] Ibid.
[32] Ibid.
[33] Verheyden et al. (2016).

non-ESG equity investments.[34] This link has been also acknowledged in key studies such as UN Principles of Responsible Investment's (PRI) ESG and alpha study, which found that, in the US, ESG information offers an alpha advantage in equities portfolios across all regions.[35]

2.3 Financial Performance under Sustainability and Impact Strategies

In contrast to the literature on ESG risk management, studies on the impact of ESG on financial performance with opportunity-driven sustainability and impact strategies are scant. With such strategies, ESG is not only considered as a risk factor, but it also plays a role in the active selection or screening of investment opportunities. Strategies focusing on the UN Sustainable Development goals represent a new trend in this area.[36]

A large part of the existing literature that considers the ESG impact of these even more active strategies reviews the performance of green bonds[37], which are only one aspect of an impact-related strategy. Most empirical studies report that the investment returns of green bonds are not superior.[38] Martin and Moser conducted an experiment in which they found that managers' green investments have no impact on future cash flows in their experimental markets, but that investors respond favorably when managers make and disclose an investment and highlight the societal benefits rather than the cost to the company.[39] Moreover, Renneboog et al.'s results suggest that a subset of investors are willing to accept lower financial performance to invest in funds that meet social objectives.[40]

Beyond the impact of ESG on financial performance and the unclear results of impact- and sustainability-related strategies, investors may have other motivations of investors to consider ESG (more thoroughly), which we now explore.

[34] Sherwood and Pollard (2018).
[35] PRI Association (2018)
[36] United Nations (2022).
[37] Tang and Zhang (2018).
[38] Karpf and Mandel (2018); Baker et al. (2018); Factica et al. (2021). On the broader category of impact funds, see Barber et al. (2021).
[39] Martin and Moser (2016).
[40] Renneboog et al. (2008).

2.4 Other Motivations for ESG Consideration by Investors

Investors, in general, may be motivated for three reasons: performance motives (investment performance); financial motives (product strategy or client demand); or ethical considerations.[41] Originally, the last element was the core motivation and defined an investment stride independent of ESG, usually referred to as ethical investing. Over the last five to ten years, financial performance seemed to be the main driver, but as we have shown, results—except for the category of considering ESG as an investment risk—are mixed. Even with such results, client demand for investors will become more important over time and will convince even more investors.[42] Such demand may also be further reinforced by regulatory measures.[43]

2.5 Firm Returns from ESG Investments

What has been shown as investors' main motivation is also relevant for firms and their quest to integrate ESG into their managerial practices. Firms can be motivated by financial performance but also by the demand of investors, which in the case of firms would ultimately translate into lower costs of capital. With regards to the first aspect, financial performance, there are a number of studies look at the environmental management of the firm and associated higher returns[44], as well as at the cost benefit of higher environmental standards[45]. Most of these studies come to the conclusion that enhanced environmental practices or standards lead to higher financial performance.[46] Brummer offers a more critical view with regard to a company's social performance and its impact on the financial performance of the firm.[47] Regarding corporate governance, most of the available literature examines (in the most studies positive) the correlation between firm-level corporate governance practices and different measures of firm performance.[48]

[41] Amel-Zadeh and Serafeim (2017).
[42] Hainmueller et al. (2015).
[43] Zerbib (2019).
[44] Konar and Cohen (2001); Klassen and McLaughlin (1996).
[45] Dowell et al. (2000).
[46] See also, Derwall et al. (2005).
[47] Brammer et al. (2006).
[48] Love (2011).

Aside from the direct benefit of investing in ESG, firms can also be motivated by the preferences of investors rather than by the actual positive effect of ESG on their bottom line. If enough investors trigger a firm to present itself as not only profit-driven, that firm gains a competitive advantage in attracting investors, which in turn will lower its cost of capital. The existing literature often explains ESG investments as being driven by a subset of investors that have a non-financial component of utility.[49] In order to provide firm with a positive incentive to invest in ESG, this subset of investors just needs to be just large enough to raise the cost of capital for firms that do not invest in ESG.[50] Likewise also negative ratings also may ultimately influence firms to do more. It has been shown that firms that initially receive poor environmental ratings, improve their environmental performance more than other firms.[51] Finally, McWilliams and Siegel show how companies can offer the ideal level of ESG measures that maximizes profit, while at the same time satisfying stakeholder demand for ESG.[52]

2.6 ESG Data and Disclosure

As we have showed above, most of the literature finds it rewarding for firms to implement sustainable management strategies either because such strategies do, indeed, improve some measure of financial performance or because they lower the costs of capital due to strong investor demand for enhanced ESG practices. To successfully implement such strategies, companies are required first to identify the specific sustainability issues that are material to them. Unfortunately, the materiality of ESG issues differs substantially among industries. Mining has a different exposure to ESG than real estate has, for example.[53] The materiality of the different ESG issues likely varies systematically across firms and industries.[54] Firms nowadays release a wealth of information in the form of ESG data, but the number of ESG-related issues that attract investment raises the question of which of these ESG data are more or less material.[55]

[49] Fama and French (2007).
[50] Heinkel et al. (2001).
[51] Chatterji and Toffel (2010).
[52] McWilliams and Siegel (2001). The authors use the term 'CSR' though.
[53] Clark et al. (2015).
[54] Eccles et al. (2011).
[55] Khan et al. (2016).

Given the above, it is not surprising that the literature has identified several issues around ESG data. Such work implies that the ESG data universe is getting too complex and confusing. Several studies show that there is very little agreement among rating agencies and data vendors on how to construct and use ESG measures.[56] Similarly, such differences were shown earlier, exclusively for CG-related data[57] and environmental data.[58] In more recent work, Gibson et al. provide evidence on the impact of ESG rating disagreement on stock returns.[59]

Starting with Eccles and Stroehle, a number of papers have explored the root causes for data differences by looking at the different dimensions used for the definitions of sustainability and materiality, but also at the specific service offerings and methodologies used by data vendors.[60] In light of the existing variety and inconsistency, Kotsantonis and Serafaim suggest that companies should take control of the ESG data narrative, accept a baseline of ESG metrics, and self-regulate in ways that aim to provide comparability.[61] ESG disclosure driven by reporting standards of organizations such as the Sustainability Accounting Standards Board (SASB) also plays an instrumental role in defining a 'reasonable baseline'.[62]

In general, market interest in the level of a company's degree of transparency about its ESG performance and policies has grown continuously since the last decade.[63] Voluntary disclosure on ESG already showed lower costs of capital for those firms with superior standards, which works as an incentive for some firms.[64] A number of papers use a cross-country analysis and provide evidence of a strong relationship between the extent and the quality of a firm's ESG disclosure.[65] Also on the more specific disclosure of carbon emissions it has been shown that markets penalize all firms for their carbon emissions, but an additional penalty is imposed on firms that do not disclose emission information at all.[66]

[56] Eccles and Stroehle (2020). For a similar result on broader CSR measures, see Chatterji et al. (2016).
[57] Daines et al. (2010).
[58] Delmas et al. (2013).
[59] Gibson et al. (2021); Brandon et al. (2021).
[60] Eccles and Stroehle (2020).
[61] Kotsantonis and Serafeim (2019).
[62] Ibid.
[63] Eccles et al. (2011).
[64] Dhaliwal et al. (2011).
[65] Lopez-de-Silanes et al. (2020).
[66] Matsumura et al. (2013).

Regulatory measures, such as the passage of European Union (EU) Directive 2014/95 on disclosure of non-financial information has likewise motivated companies to provide more (and better) ESG information, as lead investors continued placing higher weight on ESG information in decision making.[67] With Sustainability-Related Disclosures ("Disclosure Regulation", [EU] 2019/2088) [68], the EU requires alternative investment fund managers to, among other things, consider and document the relevance of ESG to their investment policies and produce required disclosures in this regard. In addition, when preparing or updating their staff remuneration policies (including, where required, public or investor disclosures about their remuneration practices), managers are required to specify how these policies are consistent with the integration of sustainability risks.[69]

2.7 ESG and investor behavior/mandate

Beyond the question of how different investors integrate ESG criteria and information in their investment decision, ESG also plays a role during the holding period of an investment. As part of their portfolio-related work as equity investors (public or private), investors may be asked to vote on ESG-related matters or to engage informally to mandate sustainability-related change. The latter is also relevant for debt investors or passive funds. In the following, we first look at the literature on voting and then consider the literature focusing on other forms of investor engagement.

2.8 Voting on ESG matters

Overall, the growth of ESG investing has contributed to a stronger focus on ESG in corporate elections. ESG-specific shareholder resolutions focus on topics such as climate change, data protection, diversity, human rights, etc. Across all fund families, asset-manager proxy voting support for ESG-related shareholder resolutions has increased considerably over the past five years, with average support across 50 large fund families rising to 46% from only 27% in

[67] Grewal et al. (2019).
[68] European Union (2019)
[69] Maleva-Otto and Wright (2020).

2015.[70] Funds offered by Allianz Global Investors, Blackstone, Eaton Vance, and PIMCO were the most likely to support shareholder-proposed ESG resolutions in 2019, voting for these resolutions more than 87% of the time.[71]

After BlackRock's announced in January 2020 that it would elevate climate-related and social investment risk to its priorities,[72] researchers focused on the proxy statement of poultry processing company Sanderson Farms in Mississippi and how BlackRock, holding 10% of the company's stock, would react to the Company's Board rejecting the proposal that Sanderson Farms publicly report on climate-related water risks according to SASB standards.[73]

Others explored the voting record of BlackRock and Norway Fund to assess whether institutional investors engage with companies on corporate externalities such as greenhouse gas emissions. Brière et al. found that, in general, universal ownership as well as delegated philanthropy appear to provide incentives for institutional investors to combat negative externalities generated by firms.[74]

Institutional investors with higher sustainability footprints also tend to have longer investment horizons independent of whether the horizon is measured by investors' legal types or by their trading frequency; high sustainability-footprint investors also display higher risk-adjusted performance.[75]

With regard to index funds, however, Griffin shows that the three passive investment power houses, Vanguard, BlackRock and State Street, while being in a new and pivotal role as the framers of market-wide governance standards,[76] show little support for E&S proposals, despite a considerable marketing focus.[77]

[70] Cook (2020).
[71] Cook and Hale (2020).
[72] Fink (2020).
[73] Rissman (2020).
[74] Brière et al. (2018).
[75] Gibson and Krüger (2017).
[76] Griffin (2020a).
[77] Griffin (2020b).

2.9 Engagement

Apart from voting, investors also engage in other forms of ESG interventions with their firms. Concerning corporate governance, McCahery et al. have documented wide-spread behind-the-scenes intervention, as well as governance-motivated exits.[78] Investors face several impediments to engagement, however, principally because of liquidity concerns, free rider problems, and legal concerns. Long-term investors intervene more intensively than short-term investors, showing concerns about a firm's corporate governance or strategy rather than about short-term issues.[79] Barko et al. show that activism is more likely to succeed when targets have a good *ex ante* ESG track record, lower ownership concentration and growth.[80]

Stewardship codes are another approach designed to increase the consideration of ESG criteria by institutional investors; there is some evidence that this can drive improved ESG quality.[81] Dyck et al. look specifically at institutional investors and overall conclude that they drive the ESG agenda since their ownership is associated with higher firm-level E&S scores.[82] The revised UK stewardship[83] now makes explicit reference to ESG factors and signatories are expected to take into account material ESG factors, including climate change, when fulfilling their stewardship responsibilities. The Code is written for asset owners, asset managers and entities providing services to the institutional investment community, including investment consultants, proxy advisers and other service providers that want to demonstrate their commitment to stewardship.

3. Methodology

This section first describes our survey construction and methodology. We then discuss the survey delivery method, the response rate and the characteristics of the respondents. We also

[78] McCahery et al. (2016).
[79] Ibid.
[80] Barko et al. (2021); Broccardo et al. (2022).
[81] Lopez-de-Silanes et al. (2022).
[82] Dyck et al. (2019).
[83] UK Financial Reporting Council (2019).

describe the research design in which semi-structured interviews were used to collect qualitative data.

3.1 Survey development and delivery

We designed our survey to elicit responses from institutional investors and alternative asset managers on how and why they integrate ESG factors into their investment evaluation and decision-making processes. The questions concern who is responsible for considering ESG factors; how often ESG criteria are considered and in which stages of the investment decision making and management process, and for which screening or evaluative purposes ESG criteria are employed. We also asked respondents about their motivations for using ESG criteria and how they use ESG in relation to risk and return considerations. We also asked questions to ascertain the relative importance of the environmental, social, and governance components of ESG criteria. Since we are interested in how different categories of asset managers utilize ESG criteria, we have a final section requesting general and demographic information to classify our survey respondents according to investment strategy and to target asset classes, type of institutional investor, geographic location, and size of assets under management. To encourage higher response rates, we did not ask participants to identify themselves beyond these aggregate demographic statistics. We further emphasized that the individual responses would be treated as confidential.

Our questions were developed upon review of previous academic literature that conducted surveys of institutional investors concerning corporate governance and ESG-related topics.[84] We also based our survey on similar surveys conducted by industry groups and consultancies.[85]

While previous research has focused on ascertaining the ESG-related preferences of institutional investors, our focus is on specific types of institutional investors, such as LPs and GPs, and their preferences for ESG investing. Additionally, we look beyond the performance considerations surrounding the use of ESG data to focus on the particular risks that these fund

[84] McCahery et al. (2016); Amel-Zadeh and Serafeim (2018).
[85] Bfinance (2017); State Street Global Advisors (2017); MSCI (2018); FTSE Russell (2018); BNP Paribas (2019); Morrow Sodali (2020); EY (2021); Capital Group (2022).

managers attempt to manage and mitigate by considering ESG criteria. We also look at the relative role of voice and exit with regard to ESG, further extending the work of McCahery et al.[86] and Broccardo et al.[87] to consider how investors use voice and exit in connection with ESG concerns. Furthermore, our survey was designed to unpack the individual environmental, social, and governance components of ESG data to determine the relative importance of these factors for this category of investors.[88]

We drafted our survey questions in consultation with academics in finance and law as well as with academic experts in survey design. We then further refined our questions after an initial round of feedback and discussions with alternative asset managers and institutional investors.

We used a combination of electronic delivery, with a link to an online survey platform, and a paper version of the survey. The online version of the survey allowed for random ordering of response choices and sub-sections of questions. The survey was distributed via an email link to a list of the authors' personal contacts working in the asset management industry, as well as via a database of asset managers and institutional investors compiled by a research assistant and supplemented with contacts from our own industry contacts. We also distributed a paper version of the survey to distribute to the practitioner attendees at several conferences and industry events. We guaranteed anonymity in order to ensure honest responses; however, this means we are unable to map the responses to investor or fund performance metrics. A copy of the survey questions appears in Appendix B.

From a distribution to approximately 2,200 individuals, we received 106 responses. This overall response rate of 4.8% is similar to the response rates achieved in academic studies in finance.[89]

3.2. Semi-structured interviews

[86] McCahery et al. (2016).
[87] Broccardo et al. (2022).
[88] Lopez de Silanes et al. (2022).
[89] Brav et al. (2008); Dichev et al. (2013).

To confirm, explain, and otherwise contextualize some of the findings of our survey results and analysis, we conducted ten semi-structured interviews with a range of institutional investors: a US-based PE fund manager; a UK-based hedge fund manager; a portfolio manager for a multinational insurance company headquartered in continental Europe; a PE fund manager based in continental Europe; a New Zealand-based PE fund manager; three investment officers at a pension fund managers based in continental Europe; an investment officer at an asset manager for pension funds and other managed accounts based in continental Europe; and an investment manager for a continental-European development bank. While the agenda and set questions for the interviews were based on our survey questions, we allowed the interview to develop according to the interviewees' particular perspectives. We also wished to clarify the context of the particular results of our analyses of the survey data. The semi-structured interview instrument appears in Appendix C.

3.3. Methods

We consider firm characteristics as control variables, but we also focus on the geographical usage of ESG. While the majority of our analysis focuses on continental Europe, the UK and the US, we also use data from a number of countries outside of North America and Europe. The data allow us to consider investor type, broadly characterized as GPs and LPs. We classify GPs as investors who identified as a PE fund, VC fund, or hedge fund. All other investor types are classified as LPs since they are primarily LPs in alternative investment managers and funds. To characterize LPs' commitment to ESG, we view them as driving the implementation of ESG factors (which they also see as more strongly correlated with financial performance). While GPs do recognize the correlations with financial performance, they are much more motivated by client demand (i.e. demand from LPs). LPs are more likely to be motivated by the correlations with investment risk generally. However, when we ask specifically about the investors' reputational risk (*vis-à-vis* stakeholders), GPs are more likely to consider ESG data. The distinction between PE and VC can be used to analyze important risk differences between start-up/earlier stage investments in newer companies and industries and investments in more established companies.

We calculate mean responses to each answer and then use t-tests to compare motivations and barriers to each other, as well as results between categories of respondents (i.e. PEs and VCs).

We create index variables by encoding and summing up responses based on how often investors use ESG for various purposes. This then enables us to perform ordered logit regressions that allow us to examine correlations among many variables simultaneously. We utilize this method to test the statistical significance, magnitude, and direction of relationships, while employing control variables and examining cross relationships among variables

4. Summary Statistics

Table 1 provides an overview of the characteristics of the survey respondents. Our respondents represent a cross section of investors with a tilt towards alternative asset managers. The largest group of respondents work as asset managers for PE funds (39%), followed by pension funds (19%), and VC funds (17%). The remaining comprise asset managers for pension funds, endowments, and other managed accounts (13%), hedge funds (6%), and insurance companies (6%). Seventeen percent of the respondents in our sample work for those institutions with less than $1 billion in assets under management; 41% with assets between $1 billion and $20 billion; 24% with assets between $20 billion and $50 billion; and 18% with assets exceeding $50 billion. The respondents are concentrated in North America (29%), continental Europe (32%), and the UK (12%), and Asia (10%), with a small percentage of respondents are from South America (5%), the Middle East and Africa (6%), and Australia and New Zealand (6%). We asked respondents to report whether they have an ESG mandate--59% of reporting having such a mandate.

We examine the main motives for and barriers to incorporating ESG factors into the asset-allocation processes of institutional investors. To capture these motives and barriers, we asked investors to rank their top four reasons for incorporating ESG factors into their investment process. Table 2 presents some summary statistics for the sample split according to respondents' mean rankings of motivations and barriers to ESG usage by institutional investors. Panel A of Table 2 shows the percentage of respondents ranking the top one or two motivations for ESG usage. As Column 2 illustrates, 48% of institutional investors on average rank ESG factors related to investment riskiness, as either their first or second reason for considering ESG, compared to only 13% for diversification purposes. Other important

motivations for incorporating ESG factors include an explicit investment mandate, client demand and ESG data positively correlate with investment returns. Overall, the results presented in Table 2 are consistent with the proposition that ESG usage is associated with decreased risk.[90]

Our findings so far suggest that many institutional investors focus on ESG factors to evaluate financial risks when considering an investment decision and its future financial performance. To understand the challenges to ESG usage, we asked the respondents to rank the top four barriers to ESG usage, based on a five-point response scale (from "very important" to "not important at all"). Column 3 of Panel B reports that the respondents rank the barriers to ESG usage between 2.48 to 4.37. The evidence in Panel B suggests the important role that data providers and regulators, respectively, could play an important role in providing quality data and standardized metrics. Our findings are consistent with Amel-Zadeh and Serafeim, and Christensen et al.,[91] who claim that investors view the absences of comparable data as a major hurdle for examining firms' ESG factors.

In Table 3, we assess the importance of ESG integration for other institutional investors, broadly characterized as GPs and LPs. The evidence suggests that investor characteristics may help explain whether some institutional investors are more likely to include ESG factors in their investment management processes.[92] Prior research documents the positive association of LPs with ESG usage and financial performance.[93] In line with this, in Table 3 Panel A, we also find evidence that while GPs recognize the correlations with financial performance, they are much more motivated by client demand (i.e. demand from LPs). In contrast, LPs are more likely to be motivated by the correlations with investment risk generally. However, we asked specifically about the investors reputational risk (vis-à-vis stakeholders), and the results suggest that GPs are more likely to consider ESG data in this respect.

[90] Becchetti et al. (2015); Shafer and Szado (2020); Albuquerque et al. (2020).
[91] Amel-Zadeh and Serafeim (2018); Christensen et al. (2021).
[92] Kruger et al. (2019).
[93] Dyck et al. (2019).

While GPs and LPs do, on average, appear to see some links between ESG and financial performance, these links are more pronounced for LPs. GPs, on the other hand, rank client demand or client mandates as a higher motivation. So, while investors and stakeholders in pension funds, insurance companies, and other asset managers (i.e. sovereign wealth funds, endowments, etc.) also demand ESG considerations with respect to alternative asset classes, GP alternative asset managers are much more driven by client demand and less so by potential linkages to risk and returns. For example, at the extreme, one London-based hedge fund manager indicated that the addition of ESG considerations in their investment process is mostly a data-collection exercise to appeal to investor demand. In very few cases do ESG factors influence the actual investment decision or portfolio mix; however, LPs want the information. According to the hedge fund manager, this is not because they do not care about ESG; rather they simply rarely experience a situation in which there is sufficient ESG evidence alone to warrant a change in an investment decision based on traditional financial (i.e. non-ESG) metrics. At the same time, this sentiment is not necessarily inconsistent with the supposition that ESG metrics are correlated with financial performance.

Consistent with extant findings on barriers to ESG usage in PE, Table 3, Panel B shows that LPs also have difficulties incorporating ESG policies due to the lack of accurate and reliable data (2.37) and clear guidelines (2.77) required to facilitate predictable benchmarking and evaluation of portfolio companies.

5. Main Results

Institutional investors that weigh their portfolios toward high-ranked ESG assets reduce the risk of the investment. Through survey question 1.8, we examine how often investors use ESG in considering specific types of risks in their investment management process. Table 4 shows that, on average, the respondents rate tail risk, litigation risk and relationship risk between 1.80 and 2.21. In contrast, the risks related to compliance and portfolio company reputation are seen as somewhat less important (between 2.59 and 2.63). Interestingly, the investors in our study tended to realize the correlation of ESG factors with returns and the potential to use ESG indicators as leading indicators for the future financial performance of investments. However, the evidence in Table 4 also shows that the respondents gave a much higher weight to the

importance of ESG factors in measuring risks associated with investments. These results are consistent with expectations, and with the extant literature.

In Table 5, Panel A, we report on the motivations for incorporating specific risks into the investment process for a GP and an LP. To evaluate the intensity of ESG usage for specific risks, we asked investors how often, on a scale from 0 to 4, each type of risk motivates ESG considerations when making investments. The table also includes independent variables: "Assets under Management" (AUM) equals one (less than $1 billion), two (between $1 billion and $20 billion), 3 (between $20 billion and $50 billion), and 4 (greater than $50 billion). "Active" is the approximate percentage of assets under management invested actively versus passively In Panel A, we use dummy variables to distinguish between GPs and LPs. We classify GPs as investors who identified as a "private equity fund," "venture capital fund," or "hedge fund". We also control for all other investor types are classified as LPs (since they are primarily LPs in alternative investment managers and funds).

Table 5, Panel A focuses on the differences across investor types in terms of ESG intensity for specific forms of investment risk. The evidence suggests that reputational risk (vis-à-vis stakeholders) is the most relevant for GPs. In general, GPs are more strongly motivated by client demand (i.e. LP demand) than by an actual perceived link between risk and returns. This is consistent with the literature,[94] that investigates the correlations of ESG factors with the riskiness of investments. As Table 5 highlights, respondents regard ESG factors as correlated with the reputational risk, regulatory risk and litigation risks associated with investments. Investors recognize that firms that invest in improving their ESG factors decrease the associated risks of fines for environmental regulations and, therefore, are better prepared for coping with future tightening regulations concerning emissions, energy usage, and pollution. The resulting liabilities associated with litigation and reputational damage are also mitigated by firms that proactively invest in improving ESG through investments in green energy and environmental sustainability.[95]

[94] Hoepner (2010); De and Clayman (2015); Cornell and Damodaran (2020).
[95] Berger-Walliser et al. (2016).

In the case of larger companies, the evidence suggests that they care more about stakeholder risk. However, considerations of all risks drop in North America; companies with more active investments are less motivated by ESG considerations for stakeholder, litigation, and tail risk. This finding supports the view that ESG is a hedge for longer-term and extreme events since more-actively-managed assets can be adapted and re-allocated quickly to such situations.

Table 5, Panel B reports that the relationship between ESG factors and risks seem to be particularly strong for alternative asset managers in the VC, PE and real estate infrastructure space. Panel B shows that regulatory risk and litigation risks are strongest motives for VC. One possible interpretation of this finding is that the longer-term horizon of these fund managers, who know that they will not be able to exit investments for years to come, keenly understand the importance of investing in firms that are prepared for future changes in the regulatory environment. The respondents also indicate that investors in the United States are more concerned with litigation and reputation risk than non-US investors are. Empirical evidence on the significantly higher US litigation costs is consistent with analysis of our findings reported in Panel B.[96]

It is noteworthy that, despite findings of strong empirical evidence for a correlation between tail risk and ESG for public equities,[97] our survey respondents indicated that this is their least-motivating risk factor for using ESG when evaluating alternative assets. The evidence suggests that these investors are most likely using ESG as a hedge for various regulatory and litigation risks.[98]

It appears from the above analysis that institutional investors attach a higher importance to the role of ESG factors in mitigating tail risk and regulatory risk with respect to investments in their alternative asset portfolios.

Using ESG data in the Investment Process

[96] Lawyers for Civil Justice (2015).
[97] Shafer and Szado (2020); Alburquerque et al. (2020).
[98] Pastor et al. (2021); Barnett et al. (2020).

It is widely known that ESG data can convey material information that is related to financial performance.[99] To understand how investors use ESG factors in the investment management process, we asked our participants to rank, in Question 1.7, each of the following purposes: screening criteria for exclusion of new investments; weight towards/away/completely exit existing investments; indicator of future financial returns; for benchmarking purposes and engaging the company in ESG issues. We asked respondents to answer the question on a scale from "never" (score of 0) to "always" (score of 4). Table 6 reports that respondents' strongest motives for using ESG data for the purpose of benchmarking (1.92) and conveying some information about future financial performance (1.36). The results above are consistent with the hypothesis that investors are more likely to use ESG to measure financial issues.

We now examine the intensity of GP and LP usage of ESG factors in their investment management process. The regressions are reported in Table 7. We start by noting that there is little direct relationship between AUM, and the intensity of ESG usage (models 1-3). However, our estimates suggest that GPs are statistically more likely to have higher ESG intensity (model 4), but this is largely correlated with geography, with US funds using ESG less intensively than UK funds, and both using it less intensively than continental European funds (model 5). Focusing on funds from the rest of the world (ROW), the estimates suggest that ROW funds use ESG more often than US, UK and European funds. There are a number of reasons why we might expect to see some companies embrace ESG strategies. One possibility is that a company's strategic commitment to ESG goals may signal to investors that it is a high-quality company. Second, it is possible that it is simply a function of the large amount of capital being directed toward impact investing, which may benefit companies strongly affected by a positive investment environment. Models 6-7 report that PE funds use ESG more intensely than VC funds do, regardless of geography, though, again, US funds use ESG markedly less intensively (model 7). From the above analysis, it appears that the GP/LP distinction can also be interpreted as less-intense usage for earlier-stage investments.

To further examine the drivers of ESG intensity, we estimate regression models in Table 8, where the dependent variables are the rankings of respondents' perceived motivations and

[99] Amel-Zadeh and Serafeim (2019); Amon et al. (2021).

barriers to ESG usage of six topics. The dependent variables in Columns 1 to 3 are each respondents' rankings for explicit mandate, client demand, and ethics as motivations for ESG usage. In Columns 4 to 6, the dependent variables are the respondents' rankings for lack of standardized data, lack of reliable data, and poorly defined ESG factors as barriers to ESG usage. The values for all dependent variables range between one and five, and lower values indicate a more important motivation in columns 1 to 3 and a more important barrier in Columns 4 to 6. The results reported in Table 8 indicate that data availability and ethics motivations provide the greatest support to the stakeholder demand hypothesis. Our results conform to the view that MNEs operating in developing countries adopt more stringent environmental standards to signals companies' ESG responsiveness and, therefore, are more likely to be valued positively.[100]

Voice and Exit related to ESG

In this section, we focus on the complementary use of voice and exit strategies by PEs and VCs with respect to their alternative investments. Table 9 shows the results of ordered logit regressions. The dependent variable intensity of ESG voice is an index based on the response to survey question 1.7(6), which asked respondents how often they engage companies (either directly or via GP/fund manager) in ESG-related issues. Interestingly, our results indicate that there is no statistically significant relationships between firm size (AUM) and the active share of the portfolio that uses voice and exit with respect to ESG considerations (models 1-3).

The second noteworthy finding is that the exit and voice channels are more often used by GPs (models 3, 5, and 8). This makes sense since they are more directly engaged in companies and ultimately have the power to directly exit a company investment. Although our interviews do confirm that LPs will still address ESG concerns about a particular company with a GP, this is only for egregious reasons. Instead, most discussions with GPs about ESG characteristics focus on the fund level. In the main, most exit and voice interactions occur directly between GPs and target companies. This raises the issue of whether the implicit threat of exit by non-

[100] Chen et al. (2018); Flammer (2013).

participation in subsequent funds and coinvestment opportunities means the exit-voice interactions can and do still occur between LPs and GPs. However, our interviewers tell us this is generally understood as a means to pressure the GP to directly engage with the company.

On the other hand, we can see an analogy to the arguments advanced by Bebchuck et al.[101] that large institutional investors are incentivized to side with management on issues related to the public equities they hold. Consistent with this argument, LPs incentives are presumably aligned with GPs. Though we know from our interviews and our analysis here that GPs do engage directly with companies on ESG issues, they are generally of a secondary concern and depend on how egregious the ESG concern is. Instead, GPs may try to manage ESG at the fund level; similarly, LPs generally manage ESG concerns at the aggregate portfolio level. GPs and LPs can shuffle exposure internally among funds/accounts to ensure that ultimate investors/stakeholders' desired ESG profiles are met.

We also find that PEs use voice and exit more often than VCs do (models 4, 6 and 9). This makes sense since earlier-stage VC investments are generally less liquid than later-stage PE investments, and the focus of many interactions with nascent companies may also take a longer- term perspective on developing ESG. To be sure, this should not discount the role that voice and exit play with respect to ESG considerations, as it is statistically significant, but less so than with PE fund managers.

It is interesting to note that, geographically, exit and voice due to ESG concerns are used less frequently only in North America (models 5, 6, 8 and 9 in table 9) and, even then, are not universally robust and statistically significant across all models. Nonetheless, this is generally consistent with our other findings showing that, while still important, ESG is generally less important to US-based investors than to their counterparts in the rest of the world. These results are also consistent with survey results related to ESG considerations in the public-equities space.[102]

[101] Bebchuk et al. (2017).
[102] Amel-Zadeh and Serafim (2018), Eccles et al. (2011), Krueger et al. (2019); Brandon et al. (2021).

Furthermore, we document that GPs use exit and voice more often than LPs. While our interview evidence confirms that LPs will address ESG concerns about a particular company with a GP, this is only for egregious concerns. Our findings highlight, among other things, that LPs do not have the same significant effect on governance that GPs have.

Relative E, S, and G preferences

The results above demonstrate the importance of investors' engagement strategies to address ESG concerns about a particular company. In this section, we examine investors' beliefs about the relative importance of E, S and G scores individually. Table 10, Panel A reports our findings on investors' preferences with respect to the individual E, S, and G components. The respondents, on average, rate the three components between 1.82 and 2.46, which means that G is considered important.

The results reported in Table 10, Panel B indicate that G is more important to larger institutional investors. Our findings conform with recent empirical studies showing that institutional investors generally, and the Big Three in particular, are not only drawn to all firms with higher ESG scores, but are most significantly drawn to firms with high G scores.[103]

Conclusions

In this paper, we present the results of our survey of institutional investors and alternative asset managers to better understand the challenges and opportunities of incorporating ESG into their investment management processes. Our new data set is constructed based on a 2020 survey of 106 institutional investors from Europe and North America, as well as a small percentage of respondents from around the world. Our data allow us to shed light on the intensity and use of ESG by LPs and PE and VC firms. First, we find that LPs are motivated to incorporate ESG, because they believe that ESG usage is more strongly correlated with financial performance. GPs are motivated to integrate ESG factors into their investment strategies in response to increased client demand for sustainable products. Second, we find that PE firms use ESG

[103] Lopez-de-Silanes et al. (2022).

factors more intensively than VC firms regardless of geography. Third, we consider that investors can choose between voice and exit in their approach to ESG investing. We find that PE firms use voice and exit strategies more extensively than VC funds in efforts to promote ESG activities in companies. Finally, we find that the investors consider that the governance score the most important component of ESG.

The findings of this paper make three contributions to the literature. First, the paper provides new insights into the importance that LPs and GPs place on ESG, highlighting the motivations and barriers to ESG usage. Second, we contribute to the literature on ESG integration by PE and other alternative asset classes by showing the PE firms are more likely than VC firms to use ESG more intensively, regardless of where the alternative asset managers are located. Third, we contribute to the literature on investor engagement on ESG by analyzing the use of voice and exit by LPs and GPs and our findings that PEs use voice and exit more often than VCs.

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Appendix A - Tables

Table 1 – Survey respondents' demographic characteristics

This table provides summary statistics of the 106 survey respondents. Demographic data include institutional investor type (survey question 2.1); size measured in US dollar amount of assets under management (survey question 2.4); the approximate percentage of assets under management invested actively versus passively (survey question 2.3); geographic headquarters of institutional investor (survey question 2.2); the position title or titles of the primary person or persons responsible for the ESG factors in the investment process (survey question 1.1); the type of any ESG-related mandates the investor has (survey question 1.3); and the overall style of ESG usage in the investment process (survey question 1.4).

Survey respondents' demographic characteristics (n=106)

Investor type	Percentage
private equity fund	39%
pension fund	19%
venture capital fund	17%
asset manager	13%
hedge fund	6%
insurance company	6%

Assets under management	Percentage
less than USD 1 billion	17%
between USD 1 billion and 20 billion	41%
between USD 20 billion and 50 billion	24%
more than USD 50 billion	18%

Portfolio active share	
mean	0.815

Region	Percentage
Europe (ex-UK)	32%
North America	29%
United Kingdom	12%
Asia	10%
Australia / New Zealand	6%
Middle East / Africa	6%
South America	5%

Position(s) responsible for ESG	Percentage
investment analyst	44%
portfolio manager	38%
internal ESG specialist	37%
no specific person	9%

ESG mandate	Percentage
no ESG-related mandate	41%
ESG factors generally	48%
corporate governance focus	3%
environmental focus	3%
environmental and corporate governance focus	3%
environmental and social responsibility focus	1%
social responsibiltiy focus	1%

overall ESG usage style	Percentage
for every potential and existing investment	55%
for new investments only	6%
only on aggregate portfolio or fund level	5%
on a case by case basis	26%
rarely or never examine ESG criteria	5%

Table 2 – Motivations for and barriers to ESG usage

Panel A presents survey respondents' rankings of their top four motivations for incorporating ESG into the investment management process (survey question 1.5). Panel B presents the survey respondents' rankings of what they perceive as the top four barriers to ESG usage (survey question 1.6). A response of "1" indicates that the topic is the most important to the respondent. Responses with fewer than four rankings were permitted. Column 1 reports the percentage of respondents who ranked the topic as number "1"; Column 2 reports the percentage of respondents who ranked the topic as either "1" or "2." For statistical calculations in Columns 3-5, unranked topics were assigned a rank of "5," Column 3 presents the mean rank for that topic. Lower mean ranks imply that the topic is more important, on average, to the respondents (i.e., a bigger motivation for survey question 1.5 or a bigger barrier for survey question 1.6). Column 4 presents the results of a t-test of the null hypothesis that the mean rank for each topic is equal to "5" (*** indicate significance at the 1 percent level). Column 5 presents the results of a t-test of the null hypothesis that the mean rank for a given topic is equal to the mean rank for each of the other topics, where significant differences at the 10% level are reported.

		Percentage rank 1	Percentage rank 1 or 2	mean rank	test for Ho: mean rank = 5	significant differences in mean rank vs rows
	A. ESG motivations ranking (n=106)	1	2	3	4	5
1	explicit investment mandate	38%	45%	3.01	***	3-5,7
2	client demand / interest	16%	39%	3.31	***	3-7
3	ethical considerations	2%	8%	4.54	***	1-2,4-7
4	positively correlated with financial returns	6%	24%	3.86	***	1-3,5-6
5	diversification purposes	2%	13%	4.28	***	1-2,4,6-7
6	ESG is related to investment risk	30%	48%	2.78	***	2-5,7
7	part of fiduciary duty	6%	19%	3.73	***	1-3,5-6

		Percentage rank 1	Percentage rank 1 or 2	mean rank	test for Ho: mean rank = 5	significant differences in mean rank vs rows
	B. ESG barriers ranking (n=106)	1	2	3	4	5
1	lack of standardized data for comparability	34%	53%	2.48	***	2-7
2	negatively correlated with financial returns	9%	13%	4.37	***	1,4-7
3	unrelated to investment performance	6%	10%	4.52	***	1,4,6-7
4	conflicts with fiduciary duty	0%	4%	4.81	***	1-3,5-7
5	unrelated to risk	2%	4%	4.67	***	1,2,4,6-7
6	lack of trustworthy / reliable data	17%	46%	3.04	***	1,2,4-5,7
7	ESG factors are poorly / ambiguously defined	32%	44%	2.87	***	1,2,4-6

Table 3 – GPs versus LPs on motivations and barriers to ESG usage

Panel A presents a comparison of GP and LP respondents' mean rankings of ESG motivations (survey question 1.5), and panel B presents the same comparison for the mean rankings of barriers to ESG (survey question 1.6). We classify GPs as investors who identified as a "private equity fund," "venture capital fund," or "hedge fund" in their response to survey question 2.1. All other investor types are classified as LPs (since they are primarily LPs in alternative investment managers and funds). Column 1 reports the mean rank for all respondents, column 2 the mean rank for GPs, and column 3 the mean rank for LPs. (Lower mean ranks imply that the topic is more important, on average, to the respondents (i.e., a bigger motivation for survey question 1.5 or a bigger barrier for survey question 1.6)). Column 4 presents the difference in means between GP and LP scores for each topic. And Column 5 presents the results of a t-test of the null hypothesis that the mean rank for GPs is equal to the mean rank for LPs (** indicate significance at the 5 percent level).

		all respondents mean rank (n=106)	GP mean rank (n=66)	LP mean rank (n=40)	difference in mean ranks between GPs and LPs (GP-LP)	significant difference in means
	A. ESG motivations ranking	1	2	3	4	5
1	explicit investment mandate	3.01	2.66	3.58	-0.92	**
2	client demand / interest	3.31	2.97	3.86	-0.89	**
3	ethical considerations	4.54	4.43	4.72	-0.29	
4	positively correlated with financial returns	3.86	3.98	3.66	0.32	
5	diversification purposes	4.28	4.41	4.07	0.34	
6	ESG is related to investment risk	2.78	3.11	2.24	0.87	**
7	part of fiduciary duty	3.73	3.71	3.76	-0.05	

		all respondents mean rank (n=106)	GP mean rank (n=66)	LP mean rank (n=40)	difference in mean ranks between GPs and LPs (GP-LP)	significant difference in means
	B. ESG barriers ranking	1	2	3	4	5
1	lack of standardized data for comparability	2.48	2.55	2.37	0.18	
2	negatively correlated with financial returns	4.37	4.14	4.75	-0.61	**
3	unrelated to investment performance	4.52	4.41	4.70	-0.29	
4	conflicts with fiduciary duty	4.81	4.75	4.91	-0.16	
5	unrelated to risk	4.67	4.64	4.72	-0.08	
6	lack of trustworthy / reliable data	3.04	3.03	3.06	-0.03	
7	ESG factors are poorly / ambiguously defined	2.87	2.93	2.77	0.16	

Table 4 – ESG and specific risks

This table shows how often investors use ESG in considering specific types of risks in their investment management process (survey question 1.8). Answers can range from "never" to "always." Column 1 shows how many respondents answered "always" for each risk type, and Column 2 shows how many respondents replied either "always" or "most of the time." For statistical calculations in columns 3-5, we scored "never" responses as "0," "sometimes" as "1," "about half the time" as "2," "most of the time" as "3," and "always" as "4." Column 3 presents the mean scores for each risk type, with higher mean scores indicating more frequent usage in relation to that risk type. Column 4 presents the results of a t-test of the null hypothesis that the mean score for each risk type is equal to "4" (*** indicate significance at the 1 percent level). Column 5 presents the results of a t-test of the null hypothesis that the mean score for a given risk type is equal to the mean score for each of the other risk types, with significant differences at the 10% level reported.

		Percentage responding "always" (n=106)	Percentage responding "always" or "most of the time" (n=106)	mean score (n=106)	test for Ho: mean score = 0	significant differences in mean rank vs rows
	Types of risk motivating ESG considerations	1	2	3	4	5
1	regulatory / compliance risk	42%	60%	2.59	***	3-5
2	portfolio company reputational risk	35%	64%	2.63	***	3-5
3	investor (LPs, stakeholders, etc) relationship risk	22%	52%	2.21	***	1-2,5
4	litigation risk	27%	42%	2.02	***	1-2
5	tail risk	18%	34%	1.80	***	1-3

Table 5 – GPs versus LPs and PEs versus VCs across specific risks

This table shows the results of ordered logit regressions. The dependent variables are the survey's responses on how strongly ESG usage is based on considerations of specific risk categories (survey questions 1.8(1) to 1.8(5), asking respondents how often each type of risk motivates ESG considerations when making investments). We scored "never" responses as "0," "sometimes" as "1," "about half the time" as "2," "most of the time" as "3," and "always" as "4." As such, each dependent variable can range from 0 to 4. "AUM" indicates the size of an investor and takes the values 1 (less than USD 1 billion), 2 (between USD 1 and 20 billion), 3 (between USD 20 and 50 billion), and 4 (greater than 50 billion) (survey question 2.4). "Active" is the approximate percentage of assets under management invested actively versus passively (survey question 2.3).

Panel A uses dummy variables to distinguish between GPs and LPs. We classify GPs as investors who identified as a "private equity fund," "venture capital fund," or "hedge fund" (survey question 2.1). All other investor types are classified as LPs (since they are primarily LPs in alternative investment managers and funds).

In Panel B, we use dummy variables to separately distinguish between venture capital funds ("VC") and private equity funds ("PE"). This can be interpreted as a differentiation for early-stage ("VC") and later-stage ("PE") investments in private equity. Dummy variables are also used to distinguish geographic location of investors (survey question 2.2).

Panel A. Drivers of ESG motivations for specific risks with focus on GP/LP

Dependent variables: intensity of ESG usage for specific risks	regulatory risk	portfolio company reputational risk	stakeholder (investor, LP) relationship risk	litigation risk	tail risk
	1	2	3	4	5
AUM	0.26	0.18	0.45**	0.39**	0.38*
	(0.20)	(0.19)	(0.20)	(0.20)	(0.20)
active	-1.38	-0.69	-1.42*	-1.65*	-1.46*
	(0.86)	(0.81)	(0.79)	(0.86)	(0.82)
GP	1.10**	0.32	0.92**	0.85*	-0.09
	(0.45)	(0.42)	(0.42)	(0.44)	(0.42)
Europe	-1.12**	-1.18**	-0.14	-0.81*	-0.86*
	(0.56)	(0.52)	(0.48)	(0.49)	(0.50)
North America	-2.60***	-2.13***	-1.04*	-2.48***	-1.38***
	(0.59)	(0.56)	(0.53)	(0.57)	(0.52)
UK	-1.04	-1.05	0.13	-0.34	-1.17*
	(0.73)	(0.70)	(0.67)	(0.72)	(0.70)
n	106	106	106	106	106
pseudo R-sq	0.114	0.062	0.047	0.098	0.036

Standard errors appear in parentheses below coefficients

* significant at the 10 percent level; ** significant at the 5 percent level; *** significant at the 1 percent level

Panel B. Drivers of ESG motivations for specific risks with focus on PE/VC

Dependent variables: intensity of ESG usage for specific risks	regulatory risk	portfolio company reputational risk	stakeholder (investor, LP) relationship risk	litigation risk	tail risk
	1	2	3	4	5
AUM	0.25	0.21	0.46**	0.37*	0.45**
	(0.21)	(0.20)	(0.20)	(0.20)	(0.20)
active	-1.41	-0.53	-1.35*	-1.78**	-1.05
	(0.88)	(0.82)	(0.80)	(0.88)	(0.84)
VC	1.17*	-0.04	0.76	1.13**	-0.98*
	-0.61	-0.54	-0.55	-0.57	-0.55
PE	1.06**	0.57	1.03**	0.66	0.48
	(0.52)	(0.49)	(0.48)	(0.50)	(0.48)
Europe	-1.15**	-1.04*	-0.08	-0.92*	-0.54
	(0.58)	(0.53)	(0.50)	(0.51)	(0.52)
North America	-2.65***	-1.89***	-0.93	-2.66***	-0.84
	(0.66)	(0.61)	(0.58)	(0.62)	(0.57)
UK	-1.06	-0.9	0.21	-0.44	-0.88
	(0.74)	(0.72)	(0.70)	(0.72)	(0.70)
n	106	106	106	106	106
pseudo R-sq	0.114	0.065	0.048	0.100	0.055

Standard errors appear in parentheses below coefficients

* significant at the 10 percent level; ** significant at the 5 percent level; *** significant at the 1 percent level

Table 6 – ESG usage in the investment management process

This table shows how often investors use ESG for the following purposes in their investment management process (survey question 1.7). Answers can range from “never” to “always.” Column 1 shows how many respondents answered “always” for each purpose, and Column 2 shows how many respondents replied either “always” or “most of the time.” For statistical calculations in Columns 3-5, we scored “never” responses as “0,” “sometimes” as “1,” “about half the time” as “2,” “most of the time” as “3,” and “always” as “4.” Column 3 presents the mean scores for each purpose, with higher mean scores indicating more frequent usage for that purpose, on average. Column 4 presents the results of a t-test of the null hypothesis that the mean score for each purpose is equal to “4” (*** indicate significance at the 1 percent level). Column 5 presents the results of a t-test of the null hypothesis that the mean score for a given purpose is equal to the mean score for each of the other purposes, with significant differences at the 10% level reported.

	Percentage responding "always" (n=106)	Percentage responding "always" or "most of the time" (n=106)	mean score (n=106)	test for Ho: mean score = 0	significant differences in mean rank vs rows
Frequency of ESG usage for the following purposes:	1	2	3	4	5
1 screening criteria for exclusion of new investments	44%	57%	2.42	***	2-3,5-6
2 weight towards/away/completely exit existing investments	26%	42%	2.06	***	1,3-4,6
3 indicator of future financial returns	10%	23%	1.36	***	1-2,4-6
4 indicator of riskiness	29%	52%	2.36	***	2-3,5-6
5 for benchmarking purposes	23%	40%	1.92	***	1,3-4,6
6 engage company (directly or via GP/fund manager) on ESG issues	55%	71%	2.94	***	1-5

Table 7 – ESG Usage Intensity

This table shows the results of ordered logit regressions. The dependent variable "intensity of ESG usage" is an index based on the responses to survey questions 1.7(1) to 1.7(6), which ask respondents how often they use ESG for various purposes in the investment management process. We scored "never" responses as "0," "sometimes" as "1," "about half the time" as "2," "most of the time" as "3," and "always" as "4." As such, this variable can range from 0 to 24. "AUM" indicates the size of an investor and takes the values 1 (less than USD 1 billion), 2 (between USD 1 and 20 billion), 3 (between USD 20 and 50 billion), and 4 (greater than 50 billion) (survey question 2.4). "Active" is the approximate percentage of assets under management invested actively versus passively (survey question 2.3). We use dummy variables to distinguish between GPs and LPs. We classify GPs as investors who identified as a "private equity fund," "venture capital fund," or "hedge fund" (survey question 2.1). All other investor types are classified as LPs (since they are primarily LPs in alternative investment managers and funds). We also use dummy variables to separately distinguish between venture capital funds ("VC") and private equity funds ("PE"). This can be interpreted as a differentiation for early-stage ("VC") and later-stage ("PE") investments in private equity. Dummy variables are also used to distinguish the geographic locations of investors (survey question 2.2).

Dependent variable: intensity of ESG usage							
	1	2	3	4	5	6	7
AUM	0.17		0.17	0.39**	0.48**	0.48**	0.52***
	(0.18)		(0.18)	(0.19)	(0.20)	(0.20)	(0.20)
active		-0.03	-0.06	-0.96	-1.31*	-0.72	-1.09
		(0.64)	(0.64)	(0.72)	(0.73)	(0.73)	(0.75)
GP				1.30***	1.01**		
				(0.42)	(0.43)		
VC						0.41	0.5
						(0.54)	(0.54)
PE						1.76***	1.39***
						(0.46)	(0.49)
Europe					-1.12**		-0.91*
					(0.48)		(0.50)
North America					-1.42***		-1.13**
					(0.51)		(0.54)
UK					-1.09		-0.83
					(0.68)		(0.68)
n	106	106	106	106	106	106	106
pseudo R-sq	0.002	0.001	0.002	0.018	0.033	0.030	0.038

Standard errors appear in parentheses below coefficients

* significant at the 10 percent level; ** significant at the 5 percent level; *** significant at the 1 percent level

Table 8 – Drivers of ESG usage intensity outside of Europe and North America

This table shows the results of ordered logit regressions. The dependent variables are the rankings of investors' reported motivations for and barriers to ESG usage with regard to six topics. The dependent variables in Columns 1-3 are the rankings for explicit mandate (survey question 1.5(1)), client demand (survey question 1.5(2)), and ethics (survey question 1.5(3) as motivations for ESG usage. The dependent variables in Columns 4-6 are the rankings for lack of standardized data (survey question 1.6(1)), lack of reliable data (survey question 1.6(6)), and poorly defined ESG factors (survey question 1.6(7)) as barriers to ESG usage. The values for all dependent variables range from 1-5, and lower values indicate a more important motivation in Columns 1-3 and a more important barrier in Columns 4-6. "AUM" indicates the size of an investor and takes the values 1 (less than USD 1 billion), 2 (between USD 1 and 20 billion), 3 (between USD 20 and 50 billion), and 4 (greater than 50 billion) (survey question 2.4). "Active" is the approximate percentage of assets under management invested actively versus passively (survey question 2.3). "ROW" is a dummy variable for geographic location; it takes the value of "0" for investors located in North America, the UK, and Europe (ex-UK) and "1" for investors located in the rest of the world.

Dependent variables: rankings of specific hurdles and motivations for ESG usage	explicit mandate as a motivation	client demand as a motivation	ethics as a motivation	lack of standardized data as a hurdle	lack of reliable data as a hurdle	poorly defined factors as a hurdle
	1	2	3	4	5	6
AUM	0.01	-0.21	0.92***	-0.26	-0.18	-0.3
	(0.19)	(0.19)	(0.31)	(0.20)	(0.20)	(0.19)
active	0.08	-0.87	-0.85	-0.9	0.42	0.89
	(0.74)	(0.73)	(1.07)	(0.72)	(0.70)	(0.71)
ROW	-0.6	-1.32***	-0.85*	0.94**	0.82*	0.19
	(0.41)	(0.44)	(0.52)	(0.42)	(0.43)	(0.40)
n	106	106	106	106	106	106
pseudo R-sq	0.009	0.040	0.104	0.031	0.021	0.017

Standard errors appear in parentheses below coefficients

* significant at the 10 percent level; ** significant at the 5 percent level; *** significant at the 1 percent level

Table 9 – Voice and Exit related to ESG

This table shows the results of ordered logit regressions. The dependent variable "intensity of ESG voice" is an index based on the responses to survey question 1.7(6), which asks respondents how often they engage companies (either directly or via GP/fund manager) in ESG-related issues. We scored "never" responses as "0," "sometimes" as "1," "about half the time" as "2," "most of the time" as "3," and "always" as "4." As such, this variable can range from 0 to 4. "AUM" indicates the size of an investor and takes the values 1 (less than USD 1 billion), 2 (between USD 1 and 20 billion), 3 (between USD 20 and 50 billion), and 4 (greater than 50 billion) (survey question 2.4). "Active" is the approximate percentage of assets under management invested actively versus passively (survey question 2.3). We use dummy variables to distinguish between GPs and LPs. We classify GPs as investors who identified as a "private equity fund," "venture capital fund," or "hedge fund" (survey question 2.1). All other investor types are classified as LPs (since they are primarily LPs in alternative investment managers and funds). We also use dummy variables to separately distinguish between venture capital funds ("VC") and private equity funds ("PE"). This can be interpreted as a differentiation for early-stage ("VC") and later-stage ("PE") investments in private equity. Dummy variables are also used to distinguish geographic locations of investors (survey question 2.2). "Exit due to ESG" is an index based on the responses to survey question 1.7(2), which asks how often respondents have exited an investment due to ESG. We scored "never" responses as "0," "sometimes" as "1," "about half the time" as "2," "most of the time" as "3," and "always" as "4"; as such, this variable can range from 0 to 4.

Dependent variable: intensity of ESG voice									
	1	2	3	4	5	6	7	8	9
AUM	-0.05		0.29	0.26	0.43*	0.24		0.35	0.06
	(0.20)		(0.23)	(0.22)	(0.24)	(0.22)		(0.25)	(0.24)
active		0.6	-0.15	-0.66	-1.03	-1.1		-0.34	-0.36
		(0.76)	(0.81)	(0.86)	(0.88)	(0.91)		(0.94)	(0.98)
GP			1.62***		2.02***			2.33***	
			(0.56)		(0.60)			(0.64)	
VC				1.95***		2.11***			2.51***
				(0.64)		(0.65)			-0.69
PE				2.17***		1.90***			1.77***
				(0.53)		(0.57)			-0.59
Europe					-0.85	-0.87		-0.26	-0.45
					(0.58)	(0.58)		(0.61)	(0.61)
North America					-1.69***	-0.93		-1.25**	-0.63
					(0.57)	(0.63)		(0.60)	(0.66)
UK					-0.42	-0.25		0.24	0.18
					(0.80)	(0.81)		(0.85)	(0.83)
exit due to ESG							0.45***	0.53***	0.55***
							(0.15)	(0.17)	(0.18)
n	106	106	106	106	106	106	106	106	106
pseudo R-sq	0.001	0.003	0.037	0.088	0.076	0.101	0.041	0.120	0.142

Standard errors appear in parentheses below coefficients

* significant at the 10 percent level; ** significant at the 5 percent level; *** significant at the 1 percent level

Table 10 – Relative E, S, and G preferences

This table examines the relative importance of E, S, and G factors to investors based on responses to survey question 1.9, asking respondents to rank the importance of each factor. Answers range from "1," meaning most important, to "4," meaning not important. The same ranking can be used for factors that are equally important to the respondent. Note that a lower value for these responses indicates that the factor is more important and a higher value indicates that it is less important, with "4" indicating that it is not important at all.

Panel A shows summary statistics about the ranks given to E, S, and G factors based on the responses to survey questions 1.9(1), 1.9(2), and 1.9(3). Column 1 shows how many respondents ranked each factor as "1," and column 2 shows how many respondents ranked each factor as either "1" or "2." Column 3 presents the mean scores for each purpose, where lower mean scores indicate that the factor is more important, on average. Column 4 presents the results of a t-test of the null hypothesis that the mean score for each factor is equal to "4" (*** indicate significance at the 1 percent level). Column 5 presents the results of a t-test of the null hypothesis that the mean score for a given factor is equal to the mean score for each of the other factors, with significant differences at the 10% level reported.

Panel B shows the results of ordered logit regressions. The dependent variables are indices based on the answers to survey questions 1.9(1), 1.9(2), and 1.9(3), which ask respondents to rank how important E, S, and G factors are in evaluating investments. In models 1-3, the dependent variable is based on question 1.9(1) and indicates the rank of E factors; in models 4-6, the dependent variable is based on question 1.9(2) and represents the rank of S factors; and in models 7-9, the dependent variable is based on question 1.9(3) and represents the rank of G factors. "AUM" indicates the size of an investor and takes the values 1 (less than USD 1 billion), 2 (between USD 1 and 20 billion), 3 (between USD 20 and 50 billion), and 4 (greater than 50 billion) (survey question 2.4). "Active" is the approximate percentage of assets under management invested actively versus passively (survey question 2.3). We use dummy variables to distinguish between GPs and LPs. We classify GPs as investors who identified as a "private equity fund," "venture capital fund," or "hedge fund" (survey question 2.1). All other investor types are classified as LPs (since they are primarily LPs in alternative investment managers and funds). We also use dummy variables to separately distinguish between venture capital funds ("VC") and private equity funds ("PE"). This can be interpreted as a differentiation for early-stage ("VC") and later-stage ("PE") investments in private equity. Dummy variables are also used to distinguish geographic locations of investors (survey question 2.2).

Panel A

	Percentage responding "1" (n=106)	Percentage responding "1" or "2" (n=106)	mean score (n=106)	test for Ho: mean score = 4	significant differences in mean rank vs rows
E, S, and G importance rankings	1	2	3	4	5
Environmental Factors	24%	72%	2.16	***	2-3
Social Factors	23%	45%	2.46	***	1,3
Governance Factors	59%	68%	1.82	***	1-2

Panel B

Dependent variable: E, S, and G ranking	E ranking			S ranking			G ranking		
	1	2	3	4	5	6	7	8	9
AUM	-0.22	-0.32	-0.32	-0.15	-0.18	-0.23	-0.50**	-0.49**	-0.42*
	(0.20)	(0.21)	(0.21)	(0.20)	(0.21)	(0.21)	(0.23)	(0.23)	(0.24)
active	0.22	0.72	0.7	-0.05	0.08	-0.1	-0.15	-0.24	-0.02
	(0.74)	(0.78)	(0.80)	(0.75)	(0.79)	(0.81)	(0.82)	(0.87)	(0.90)
Europe	0.36	0.22	0.2	0.85*	0.82	0.66	0.8	0.82	1.05*
	(0.52)	(0.52)	(0.54)	(0.50)	(0.50)	(0.52)	(0.52)	(0.53)	(0.56)
North America	0.5	0.22	0.18	1.99***	1.94***	1.69***	0.05	0.1	0.48
	(0.52)	(0.54)	(0.59)	(0.53)	(0.54)	(0.59)	(0.57)	(0.61)	(0.66)
UK	1.09	0.73	0.7	1.16	1.06	0.95	-0.65	-0.58	-0.32
	(0.68)	(0.70)	(0.72)	(0.74)	(0.76)	(0.76)	(0.90)	(0.92)	(0.94)
GP		-0.99**			-0.23			0.14	
		(0.44)			(0.44)			(0.49)	
VC			-0.94			0.16			-0.44
			(0.58)			(0.58)			(0.66)
PE			-1.03**			-0.48			0.53
			(0.51)			(0.50)			(0.56)
n	106	106	106	106	106	106	106	106	106
pseudo R-sq	0.014	0.036	0.036	0.062	0.063	0.067	0.047	0.047	0.056

Standard errors appear in parentheses below coefficients

* significant at the 10 percent level; ** significant at the 5 percent level; *** significant at the 1 percent level

Appendix B – Survey instrument

Survey on investor preferences regarding ESG with respect to alternative asset classes

Introduction

We are a team of researchers from Tilburg University in the Netherlands. We are engaged in a research project that seeks to attain a better understanding of how investors consider ESG (environmental, social, and governance) factors in the investment-analysis and decision-making process, with a focus on alternative asset classes.

We kindly ask you to take the time to complete a short survey we have created.

We take the confidentiality of responses very seriously. All survey responses are strictly anonymous. We will not share your responses with anyone; nor will individual firms or respondents be identified. Only aggregate data will be made public. Moreover, we will not link the survey responses to any other data.

If you have any questions, please contact us at: p.c.pudschedl@uvt.nl or j.a.mccahery@uvt.nl

Thank you very much for participating in this survey.

Evaluating ESG factors of target investments

1.1: Which best describes the position(s) of the person(s) responsible for decisions related to ESG (Environmental, Social, and Governance) factors in your investment process? (Check all that apply.)

- ☐ Investment analyst
- ☐ Portfolio manager
- ☐ Internal ESG specialist
- ☐ External consultant / advisor
- ☐ No specific person
- ☐ Other: _____

1.2: Does your organization have a dedicated, in-house "ESG analyst" or similar professional to explicitly consider the ESG criteria of investments?

- ☐ Yes
- ☐ No
- ☐ Not sure / don't know

1.3: Do you have an investment mandate to invest in companies with regard to any of the following characteristics?

- ☐ environmental focus
- ☐ social responsibility focus
- ☐ corporate governance focus
- ☐ environmental and social responsibility focus
- ☐ environmental and corporate governance focus
- ☐ social responsibility and corporate governance focus
- ☐ ESG factors generally
- ☐ no ESG-related mandate

1.4: Which statement best describes how you consider ESG factors when evaluating an investment?

- ☐ on a case-by-case basis
- ☐ only on aggregate portfolio / fund level
- ☐ for every potential and existing investment
- ☐ for new investments only
- ☐ for existing investments only
- ☐ rarely or never examine ESG criteria

1.5: Of the following, please rank what you consider the four most important reasons for analyzing ESG factors when making an investment decision (1 being the most important).

- _____ explicit investment mandate (1)
- _____ client demand / interest (2)
- _____ personal ethical considerations (3)
- _____ ESG factors are positively correlated with financial returns (4)
- _____ diversification purposes (5)
- _____ ESG factors are related to investment riskiness (6)
- _____ part of fiduciary duty (7)

1.6: Of the following, please rank what you consider the top four barriers to considering ESG factors when making an investment decision (1 being the biggest barrier to considering ESG factors).

_____ lack of standardized ESG data for comparability (1)
_____ ESG factors are negatively correlated with financial returns (2)
_____ ESG factors are unrelated to investment performance (3)
_____ considering ESG factors would conflict with fiduciary duty (4)
_____ ESG factors are unrelated to investment risk (5)
_____ lack of trustworthy/reliable ESG data (6)
_____ ESG factors are poorly / ambiguously defined (7)

1.7: How often do you use ESG factors in the investment decision making process in the following manners?

	Always	Most of the time	About half the time	Sometimes	Never
as a screening criterion to decide whether or not to exclude potential investments from further consideration? (1)	○	○	○	○	○
to consider weightings towards/away as well as total exits from existing investments? (2)	○	○	○	○	○
as an indicator of future financial returns? (3)	○	○	○	○	○
as an indicator of riskiness of an investment? (4)	○	○	○	○	○
to benchmark / compare portfolio companies? (5)	○	○	○	○	○
to engage portfolio companies (directly or via GP/fund manager) on ESG issues? (6)	○	○	○	○	○

1.8: What types of risk motivate the consideration of ESG factors in the investment process?

	Always	Most of the time	About half the time	Sometimes	Never
regulatory / compliance risk (1)	○	○	○	○	○
portfolio company reputational risk (2)	○	○	○	○	○
Investor (LPs, other stakeholders, etc.) relationship risk (3)	○	○	○	○	○
litigation risk (4)	○	○	○	○	○
tail risk (5)	○	○	○	○	○

1.9: Please rank the importance of the following three factors in your investment decision-making process. Rank the most important factor as 1. If more than one factor is equally important, you can enter the same rank for the equally important factors. Enter a 0 for factors that are not important to your investment decision making process.

_____ environmental factors (1)
_____ social and corporate responsibility criteria (2)
_____ corporate governance structures or factors (3)

General information

2.1: The fund/institution where I work can be best described as:

☐ Hedge fund
☐ Pension fund
☐ Insurance company

- ☐ Private equity fund
- ☐ Asset management for pension funds, endowments, and other managed accounts
- ☐ Venture capital fund
- ☐ Other (please explain): _____

2.2: Where is your fund/institution geographically headquartered:

- ☐ North America
- ☐ United Kingdom
- ☐ Europe (ex-UK)
- ☐ Australia or New Zealand
- ☐ Asia
- ☐ South America
- ☐ Middle East or Africa

2.3: Approximately what percentage of your portfolio is invested actively versus passively?

___ % in active investment
___ % in passive investment

2.4: What is the total size of assets under management for your organization?

- ☐ less than USD 1 billion
- ☐ between USD 1 billion and USD 20 billion
- ☐ between USD 20 billion and USD 50 billion
- ☐ more than USD 50 billion

Appendix C – Semi-structured interviews instrument

ITEM	AGENDA	POSSIBLE QUESTIONS
	Demographic information	Position title, type of institutional investor, location, size (AUM), ESG-related mandates, types of alternative assets
1	Recap on the investor's approach towards ESG in investments in alternative assets	Do you treat ESG differently than any other material investment risk and if so why and how?
	Motivations for using ESG in the investment process; barriers to using ESG	
2	Specifics for institutional investors active in different asset classes	Questions for institutional investors who are primarily LPs in alternative investment funds
A	Differences in ESG approaches	How does your approach differ for the different asset classes you manage?
B	Selection of Investment Managers and ESG criteria there	Are the ESG-related criteria for selecting an investment manager or investment fund different per asset class you manage, and if so, how?
3	ESG during the holding period of the investment	Questions for all alternative asset managers
A	Engagement	How do you decide on which ESG topics/ degree of materiality the investor would engage?

B	Other follow-up/mitigation, etc.	How do you, in general, follow up on material/non-material ESG matters during the holding period of an investment? When would you consider exiting an investment because of ESG factors? What is the interaction like between GPs, LPs, and companies related to ESG issues?
4	Outside advice and how the investor deals with it	Recap on ESG data providers: how often do you follow/not follow their advice? How do you analyze and compare ESG data across asset classes?
A	ESG data providers	Do you use Proxy Advisors? How often do you follow/not follow their advice?
B	Proxy advisors and other ESG data providers	If you do not follow their advice, when does this happen?
5	Disclosure, reporting and preferred ESG standards	What form or method of ESG disclosure do you prefer?
A	Their own reporting	What form of ESG reporting do you consider most effective?
B	Reporting and disclosure of investees	What frameworks should companies focus on to best communicate ESG information?
		What steps do you take to verify the ESG related claims and disclosures?
6	ESG and climate risk	What connection do you see between ESG and climate risk?

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