

Can Limited Partners Mitigate Negative Externalities in Private Equity?

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Abstract

We show how Limited Partners' (LPs) environmental and social (E&S) concerns transmit to private equity (PE) firms through capital supply. E&S incidents in portfolio companies reduce PE fundraising, as E&S-concerned relationship LPs refrain from recommitting and are not easily substituted. Using a legal reform that expands E&S-concerned public pension capital to PE, we causally show that PE firms internalise LPs' E&S concerns, reducing dirty sector portfolio allocation and increasing ESG hiring. Additionally, PE firms with E&S-concerned relationship LPs engage with portfolio companies to manage E&S risks. Limited capital substitutability enables LPs to delegate E&S preferences, shaping PE allocation and engagement.

Keywords: private equity, fundraising, limited partners, relationships, ESG, sustainability

JEL Classification: G10, G24, M14

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1 Introduction

Private Equity (PE) ownership is associated with high-powered incentives and has been shown to improve firm performance and operational efficiency.¹ However, these efficiency gains may be accompanied by adverse effects on other stakeholders, including workers, communities, or the environment (Eaton et al., 2020; Bellon, 2022; Seymour et al., 2023; Aghamolla et al., 2023; Sorensen and Yasuda, 2023; Gupta et al., 2024a; Gornall et al., 2025). The potential adverse effects of PE ownership have received substantial attention from the media and have sparked extensive debates among policymakers. In this paper, we examine whether, in the absence of explicit regulation, PE investors (Limited Partners, or LPs) can act as a disciplining force by allocating capital in ways that incentivize PE managers (General Partners, or GPs) to internalize environmental and social externalities. Specifically, we ask whether LPs, through their capital allocation, provide effective incentives to GPs to mitigate negative environmental and social externalities when they select and engage with their portfolio companies.

The extent to which LPs influence PE firm behavior on environmental and social (E&S) dimensions is unclear *ex ante*, for two reasons. First, although some LPs claim to take into account ESG factors in their capital allocation decisions,² there is limited evidence that their investment behavior consistently aligns with these stated preferences. This concern about “greenwashing” is particularly pronounced in private markets, where ESG disclosure and external scrutiny are substantially lower than in public markets (e.g., Duchin et al., 2024). Second, even if LPs do incorporate E&S considerations into their allocation decisions, it is not clear whether these preferences ultimately affect the behavior of PE firms. If PE firms with low E&S alignment can easily replace the capital loss from E&S-concerned LPs with capital from less E&S-concerned investors, they may face limited incentives to incorporate E&S considerations.

In this paper, we provide novel evidence that E&S-concerned LPs reduce their capital allocation to PE firms with weaker E&S track records. More importantly, we show that the GP–LP relationship in Private Equity creates incentives for GPs to align with the E&S preferences of their relationship LPs, and that this effect is plausibly causal. The PE market is structured

¹See, e.g., Kaplan (1989); Boucly et al. (2011); Davis et al. (2014); Bernstein and Sheen (2016); Gao et al. (2025).

²In a survey conducted by Institutional Limited Partners Association and Bain (2022), 70% of surveyed LPs reported that their organizations’ investment policies include an ESG approach.

around long-term relationships between PE firms and their investors, due to search and information frictions (e.g., Lerner et al., 2007; Sensoy et al., 2014). GPs rely on relationship LPs, who have private information about GP quality, to raise follow-on funds. Losing these investors can result in significant capital losses.³ This limited substitutability of capital in PE creates incentives for GPs to align with their investors' E&S concerns.

Specifically, we first show that relationship LPs—especially E&S-concerned relationship LPs—do not recommit to follow-up funds after E&S incidents in a fund's portfolio companies, resulting in a decrease in capital raised in follow-up funds. Moreover, exploiting the “basket clause” legal reform—which exogenously increased New York (NY) public pensions' capacity to invest in alternative assets—we provide causal evidence that PE firms incorporate the E&S concerns of their relationship LPs. PE firms with an ex-ante relationship with NY public pensions respond to this shock by reducing portfolio allocation to “dirty” industries, and by enhancing their ESG practices, measured by hiring more ESG-related employees. We also find that portfolio companies experience fewer E&S incidents following investment by PE firms with E&S-concerned relationship LPs, consistent with greater post-investment engagement aimed at mitigating E&S issues. Together, our findings suggest that E&S-concerned LPs can discipline PE firms, shaping both the selection and management of their portfolio companies.

We start by examining whether private market investors take E&S considerations into account when allocating capital to PE firms. To do so, we combine RepRisk data—which provides daily indicators of firms' negative ESG-related incidents reported in media and regulatory or commercial documents—with Preqin data on buyout investments. This allows us to study how ESG incidents at portfolio companies affect a GP's ability to raise a follow-up fund, as capital for the current fund is already committed and unlikely to be affected. We find that E&S incidents in portfolio companies hurt PE firms' ability to raise a follow-up fund.⁴ We find that conditional on raising a follow-up fund, the follow-up funds are smaller for GPs experiencing E&S incidents in their portfolio companies.⁵ The magnitude is economically large—compared

³Hochberg et al. (2014) argue that uninformed LPs may interpret the lack of recommitment by informed relationship LPs as a negative signal about GP quality, further increasing GPs' dependence on existing relationships.

⁴Following prior work (e.g., Gantchev et al., 2022; He et al., 2023; Bisetti et al., 2023), we disentangle E&S incidents from G incidents and conduct separate analyses for G incidents.

⁵Using a proportional hazards model, we also find that the likelihood of raising a follow-up fund decreases following E&S incidents in the current fund.

to funds with no incidents in their portfolio, funds with above-median number of E&S incidents have 11.3%-15.6% smaller follow-up funds. Given that management fees scale with assets under management, this reduction has first-order consequences for GPs: a back-of-the-envelope calculation based on median fund sizes and standard fee structures implies that GPs facing above-median E&S incidents lose roughly \$33 million in management fees due to their inability to raise, or the reduced size of, follow-up funds. Importantly, we control for performance, size, series number and industry composition of the current fund, as well as granular current fund vintage year $\times$ follow-up fund vintage year $\times$ PE region fixed effects to absorb time-varying capital supply that affects fundraising, which suggests that the effect is unlikely explained by funds' heterogeneous skills, industry focus, or other characteristics. The result is robust to using alternative performance measures (fund multiple, internal rate of return) as controls in different functional specifications and to interim performance measures based on cash flow data, such as interim fund multiple and interim Kaplan-Schoar PME (Kaplan and Schoar, 2005).

Next, we show that the capital loss following E&S incidents stems from the lack of recommitment of existing relationship LPs, rather than an inability to attract new LPs. We define relationship LPs as those who committed to previous funds of the same PE firm before the current fund was raised. Using an LP-fund data structure, we find that relationship LPs are less likely to recommit to follow-up funds following E&S incidents at the current fund. In this analysis, besides the control variables discussed before, we also control for LP $\times$ Year fixed effects to absorb time-varying LP characteristics that may shape appetite for PE or influence fund selection (Lerner et al., 2007).

The effect is concentrated among LPs with stronger E&S concerns. European LPs, LPs from Democratic-leaning U.S. states, and publicly-listed LPs are significantly more likely to stop recommitting after E&S incidents. These groups often express stronger social responsibility and sustainability preferences, and may face greater scrutiny (e.g., Di Giuli and Kostovetsky, 2014; Gibson-Brandon et al., 2022). Thus, the decline in fundraising capacity reflects the role of E&S-concerned relationship investors, who break relationships with GPs to maintain a better E&S footprint. This evidence naturally leads us to ask whether PE firms adjust their behavior in response to these investors' concerns.

To answer this question, we examine whether PE firms internalize relationship LPs' E&S

preferences by adjusting their portfolio selection. This effect is empirically difficult to identify, because the portfolio selection of PE firms and LPs' commitment are jointly determined in equilibrium, and can be driven by many factors (e.g., liquidity or diversification preferences of LPs). As a result, cross-sectionally it is hard to pin down the causal effect of LPs' E&S concerns on PE firms' portfolio selection. To address identification, we leverage the New York public pension basket-clause reform, which exogenously increased capital from these large, E&S-concerned LPs to PE firms.

The New York public pension system—the second largest public pension system in the United States—operates under statutory “basket clause” provisions that historically capped the share of assets that could be allocated to alternative investments, including private equity. In 2005, lawmakers expanded this cap from 15 to 25 percent,⁶ creating a discrete and plausibly exogenous increase in New York pensions' capacity to invest in private equity. The reform, enacted as part of a broader debate about modernizing investment rules for public funds, was driven by macro-fiscal and portfolio-diversification considerations rather than by the behavior of individual PE managers. Importantly, New York's public pensions were also among the earliest and most vocal advocates of ESG-aligned investing in the early 2000s. Their shareholder initiative reports from 2004 and 2005 document campaigns urging portfolio companies to disclose climate-risk exposure, improve board diversity, and strengthen labor and human-rights practices.⁷ The combination of this E&S orientation and the exogenous expansion in investment capacity provides a unique setting to study whether PE firms internalize the E&S preferences of their relationship LPs when selecting portfolio companies.

We use this legal reform as a source of exogenous variation in E&S pressure from relationship LPs on PE firms with ex-ante relationships with New York public pensions, and examine how PE firms respond to this shock. As a first-stage test, we empirically confirm that the reform led to increased capital allocations from New York public pensions to the private equity industry, with disproportionately larger flows to PE firms with pre-existing relationships with NY public pensions. Moreover, we find no evidence of differential pre-trends in capital flows before the

⁶ Although the law was formally enacted in 2006, it passed both legislative chambers in 2005. We therefore code the reform as occurring in 2005, aligning with the timing of the legislative decision and the expectations of market participants.

⁷ For example, see: NYC Comptroller (2004), *Shareholder Proposals and Other Initiatives*; NYC Comptroller (2005), *Shareholder Initiatives of the NYC Pension Funds*.

shock, supporting the parallel trends assumption.

Using this reform in a difference-in-differences framework, we show that PE firms with prior relationships to New York public pensions respond more strongly compared to non-relationship PE firms. Specifically, these relationship GPs (i) tilt their portfolio allocation away from “dirty” industries, measured as the fraction of portfolio holdings in oil and gas, mining, transportation, power and utilities, and defence,⁸ and (ii) adopt better ESG practices, as indicated by hiring more ESG-related employees. The latter measure is based on textual analysis of PE firm employee job titles using LinkedIn profile data from Revelio Labs, which we match to PE firms in Preqin. Importantly, we find no evidence of differential pre-trends between treated and control groups prior to the reform, supporting the parallel trends assumption underlying our identification strategy.

Our results are robust to controlling for a stringent set of fixed effects. Besides PE firm fixed effects, and $\text{Year} \times \text{PE-strategy}$ fixed effects, our results are robust to including $\text{Year} \times \text{PE firm's country/state in the U.S.}$ fixed effects, which absorb local shocks or regional time-varying investment opportunities. The results are also robust to adding $\text{Year} \times \text{quartile of ex-ante share of LPs from New York state (not only public pension)}$, as well as $\text{Year} \times \text{quartile of ex-ante share of public pension LPs (not only New York)}$. This evidence suggests that our results are not driven by differential exposure to New York LPs or to public-pension LPs more broadly, but are specific to New York public pensions. In addition, the results remain robust when we control for PE firms' ex-ante share of E&S-concerned LPs, indicating that the effects are not explained by general time-varying differences between E&S-oriented and non-E&S-oriented PE firms.

The economic magnitude is also sizable. After the shock, the treated PE firms decrease allocation to dirty sectors by 1.4 percentage points, which is around 52% of the mean of portfolio allocation to these sectors. They also increase the likelihood of hiring an ESG-related employee by 4.5 percentage points, which is equivalent to 64% of the mean of having an ESG-related employee. As placebo tests, we also run the same analysis for a series of basket clause reforms in Republican-leaning states, for which we do not find similar results. In summary, these results show that E&S-concerned capital exerts a disciplining effect on PE firms, shaping where they invest and how they operate.

⁸The results are similar if we exclude defence.

Finally, beyond portfolio selection, we also examine whether PE firms relying on E&S-concerned relationship investors engage with their portfolio companies to manage E&S risks. In a difference-in-differences setting at portfolio company level, we find that portfolio companies' number of E&S incidents decrease after receiving investment from a PE firm with a higher proportion of E&S-concerned relationship LPs, compared to those receiving investment from PE firms with a lower proportion of E&S-concerned relationship LPs.⁹ This evidence indicates that, investors with E&S concerns threaten to exit (i.e., not recommit to the follow-up fund of the PE firm), which, in turn, induces the PE firm to engage with its portfolio companies to achieve better E&S outcomes.¹⁰ This result is in line with the theoretical model by Broccardo et al. (2022), where investors can transmit their preferences to intermediaries such as PE firms by voting with their feet (a form of exit) to induce voice.

Our findings highlight the materiality of E&S concerns in private equity and have clear policy implications. In private markets, capital flows away from GPs whose portfolio companies exhibit poor E&S performance, echoing patterns documented in public markets. Yet because of the illiquidity of private equity, this reallocation occurs primarily through reduced re-commitments to follow-up funds, driven by the withdrawal of E&S-concerned relationship LPs. Exploiting exogenous variation in E&S-concerned capital supply, we show that this threat of exit causally shapes GP behavior: exposed GPs tilt their portfolios away from dirty sectors, expand internal ESG capacity through hiring, and improve E&S outcomes at portfolio companies.

This market-discipline channel complements regulatory proposals such as the Stop Wall Street Looting Act (SWSLA), which would regulate PE conduct directly.¹¹ Yet the mechanism we document relies on LPs being both permitted and willing to take into account E&S considerations when allocating capital. Recent state “anti-ESG” statutes—e.g., Florida’s 2023 HB 3, which restricts state investment decision-makers from using ESG factors—and related policies

⁹The results are robust to controlling for time-varying ESG regulation risk at the geographical level, which highlights the role of E&S concerns of LPs beyond ESG regulation risk documented by Bellon (2022).

¹⁰In practice, PE firms can engage with their portfolio companies by providing advice, mandating compliance with internal guidelines, or influencing decision making through board seats. For survey evidence on different types of engagement, see Gompers et al. (2016).

¹¹Stop Wall Street Looting Act, 117th Congress, H.R.5648 (summary); see also Warren (2024) press release on reintroduction.

risk weakening this relationship-based disciplining channel.¹² Taken together, our evidence suggests that enabling LPs to incorporate material E&S considerations can complement targeted regulation (e.g., SWSLA) in curbing negative externalities, whereas statutory bans on considering ESG may impede an otherwise effective market-based enforcement channel.

2 Literature

Our paper contributes to several strands of the literature. First, we contribute to the literature on the effectiveness of divestment policies in reducing negative externalities. Prior work finds mixed evidence. In equity markets, Berk and Van Binsbergen (2025) document that divestment has little effect on the cost of capital because non-ESG investors reallocate capital toward divested firms, offsetting the withdrawal of ESG-motivated capital. Similarly, Sachdeva et al. (2025) examine a policy initiative limiting banks' lending to firms in controversial industries and find that this policy has little effect on firms, as the affected firms can substitute credit through non-targeted banks. On the contrary, Green and Vallee (2024) find that banks' coal exit policies lead to a reduction in new coal project financing, as affected firms are unable to secure alternative sources of credit, highlighting the limited substitutability of capital in this context. Gantchev et al. (2022) also find that the threat of exit from E&S-conscious investors can improve firms' E&S policies. We contribute to this literature by first demonstrating that "divestment" in the PE industry primarily occurs through LPs ceasing to recommit capital to subsequent funds managed by the same GP. Moreover, we show that, due to the relationship-specific frictions in PE—arising from information asymmetries and due diligence costs (Lerner et al., 2007; Sensoy et al., 2014; Hochberg et al., 2014; Gupta et al., 2025)—it is difficult for GPs to substitute LP capital when existing LPs withdraw. As a result, GPs internalize the ESG preferences of their relationship LPs. We establish the causal impact of LPs' ESG preferences on GP behavior by exploiting a novel, plausibly exogenous shock to LP capital supply. This is related to the theoretical work of Heinkel et al. (2001), which shows that the effectiveness of divestments depends on the substitutability of capital. Our paper is also related to the broad literature on the debates over "exit" and "voice" in ESG investment (Kahn et al., 2023; Broccardo et al., 2022; Dimson et al., 2015; Gupta et al., 2024b).

¹²Courts have begun to scrutinize such laws e.g., Reuters (May 8, 2024) on the temporary injunction against Oklahoma's anti-ESG law.

Second, our paper also relates to the literature on real outcomes of PE ownership. This body of research has documented that PE firms mitigate negative externalities when doing so aligns with their profit-maximization objectives. For example, Bellon (2022) finds that in the oil and gas industry, PE ownership reduces pollution only among firms in states with high environmental liability risks. Similarly, Kumar (2023) finds that when profitable, PE firms acquire “dirty” fossil fuel assets that can be utilized in “clean” solar power generation. Our findings extend this literature by demonstrating that, beyond considerations of liability risk and portfolio company profitability, E&S concerns of relationship LPs provide additional incentives for PE firms to actively engage with portfolio companies to manage E&S risks. Investors express their E&S concerns via reduced commitments to a GP’s follow-up fund. This provides effective incentives to PE firms as successful fundraising is directly linked to a large part of compensation in private equity. Our work also relates to the vast literature on real impacts of PE ownership, including increased growth and profitability (Boucly et al., 2011), TFP gains (Davis et al., 2014), long-run innovation (Lerner et al., 2011), pay inequality (Fang et al., 2022), and real economic outcomes in specific industries (Bernstein and Sheen, 2016; Eaton et al., 2020; Ewens et al., 2022; Gupta et al., 2024a).

We also contribute to the literature on the determinants of capital raising by private market intermediaries. Following the seminal work by Kaplan and Schoar (2005), which documents high performance-flow sensitivity, a large body of research has examined the factors influencing fundraising in private equity. The literature has documented the role of various macroeconomic conditions (Kaplan and Strömberg, 2009; Axelson et al., 2013; Robinson and Sensoy, 2016), interim fund performance (Chung et al., 2012; Hochberg et al., 2014; Barber and Yasuda, 2017) and nature of capital providers (Colonnelli et al., 2024) in fundraising. Our study extends this literature by identifying a new determinant—E&S incidents in portfolio companies—and demonstrates that these incidents have a significant negative impact on fundraising.

Our paper also contributes to the nascent literature on ESG and asset management in private markets. Previous work has examined various aspects of impact investing, including contractual terms, returns, the risk-return trade-off, and investment patterns of impact funds (Geczy et al., 2021; Barber et al., 2021; Jeffers et al., 2022; Cole et al., 2023), as well as its impact on future startup deal flow (Zhang, 2022). In addition, prior research has documented increasing voluntary

ESG disclosure by PE firms (Abraham et al., 2022; Campbell et al., 2024). Our contribution to this literature lies in providing novel evidence on the material impact of portfolio-level ESG incidents on PE firms. To the best of our knowledge, we are the first to document that negative E&S incidents in portfolio companies adversely affect a PE firm’s ability to raise capital and result in substantial financial losses for PE firms.

Our paper is also related to the broad literature on investor demand for ESG-conscious financial products. Investors exhibit social preferences when making investment decisions (Riedl and Smeets, 2017; Bauer et al., 2021; Anderson and Robinson, 2024), with evidence showing that social preferences influence capital flows in public markets (Bollen, 2007; Renneboog et al., 2011; Riedl and Smeets, 2017; Hartzmark and Sussman, 2019; Liang et al., 2022; Ceccarelli et al., 2023; Gantchev et al., 2024). For instance, sustainability labels drive investments into mutual funds (Hartzmark and Sussman, 2019) and mutual fund investors trade off performance and sustainability considerations when allocating capital (Gantchev et al., 2024). Responsible hedge funds attract greater inflows and charge higher fees (Liang et al., 2022). However, research findings from public markets do not necessarily generalize to private markets, due to private markets’ lower secondary market liquidity, reduced ESG scrutiny and distinct ownership structures (Nadauld et al., 2019; Duchin et al., 2024; Gompers et al., 2016; Shive and Forster, 2020). We contribute to this strand of the literature by documenting that private market fund investors react to E&S related incidents and this affects capital flows to PE funds through reduced recommitments to GPs’ follow-up funds, and PE funds internalize such concerns.

3 Data and sample

In this paper, we use private equity data from Preqin, including detailed data on funds raised by PE firms, portfolio companies of those funds, and LP commitments to the funds. We use RepRisk for ESG incidents of portfolio companies. We use Revelio Labs data to identify the ESG-related employees of a PE firm. This section describes the datasets in more detail.

3.1 Preqin

We collect our private equity data from Preqin, spanning from 2000 to August 2023. We keep funds with non-missing values for size, fund multiple, and fund series number. We supplement the fund-level data with the Limited Partner module, which allows us to identify the LPs that

invest in a given fund. For fund raising analysis, we require the funds to have information on at least one LP.

3.2 RepRisk

Our ESG incidents data comes from RepRisk, which produces daily indicators for negative ESG-related incidents at the firm level for both public and private firms. While prior research uses RepRisk incidents as negative shocks to ESG profiles of public firms (e.g., Gantchev et al., 2022; Gloßner, 2021; Derrien et al., 2023; Duchin et al., 2024; Bisetti et al., 2023; von Beschwitz et al., 2022), we extend the analysis to private firms. RepRisk collects ESG-related incidents via daily analysis of a large set of documents in 20 languages, obtained from public sources. The data go back to January 2007. RepRisk classifies ESG incidents according to 28 distinct issues, which are listed in Appendix Figure A1. Environmental issues include news about climate change, pollution, waste issues, etc. Social issues relate to child labor, human rights abuses, etc. Governance issues capture issues such as executive compensation, corruption, etc. Moreover, RepRisk also gives each ESG incident a label on its novelty, reach, and severity. The novelty, reach, and severity of incidents are measured on a scale from 1 to 3, where 3 represents the most novel, most influential, or most severe incidents. Our RepRisk data spans from 2007 to 2022.

By 2022, RepRisk covers ESG incidents for 155,519 firms worldwide, out of which 17,024 are public and 138,495 are private. Figure A2 shows the average number of annual incidents over time. For both public and private firms, the number of incidents increases over time, potentially due to the increasing attention to firms' ESG issues. Public firms have more incidents than private firms, potentially because public firms attract more media attention. In 2022, public (private) firms experienced 1.7 (0.2) ESG incidents per year. Figure A3 plots E/S/G incidents separately over time. The number of governance incidents is low at the beginning of the sample and increases to similar levels as social incidents by 2022. Environmental incidents are the least frequent of the three categories.

One illustrative example of an incident involving a private firm in our sample is the following. Quala Wash Holdings LLC is a private provider of container cleaning and environmental services to chemical and food industries in North America, which was acquired in 2016 by the PE firm Advent International via its buyout fund, Advent Global Private Equity VII.¹³ On December 28,

¹³The official statement for the investment can be found on Advent International's [official website](#).

2019, two Quala employees died at a Pasadena chemical transportation plant owned by Quala. The employees died while on duty, overcome by toxic fumes as they cleaned a tank containing a hazardous chemical. Neither worker wore a gas mask during the incident, and Quala was accused of failing to enforce safety protocols.¹⁴ RepRisk classifies the incident as a social incident with related issues “Occupational Health” and “Violation of National Legislation”. Appendix Table A1 provides a list of additional examples of incidents in our sample.

3.3 Revelio Labs

We use Revelio Labs to identify ESG-related employees at PE firms. The Revelio Labs database is a global workforce database, providing hundreds of millions of publicly available employment records from the universe of LinkedIn public profiles—including employees’ job history, titles, descriptions, start and end year of positions, among others. Using the start and end year of job roles, we first structure the data into a employee-year panel, in which for each year we can observe the employer, job title and seniority. We exclude entry-level positions (mostly interns) defined by Revelio to reduce the noise in the data.

We then identify a position to be ESG-related using a keyword search approach. In particular, we define a position to be ESG-related if there is any keyword in Internet Appendix A2 in the job title. We then aggregate the number of ESG-related employees to PE firm-year level. We note that this approach captures not only newly hired ESG-related employees but also internal transitions into ESG-related roles of existing employees at PE firm-year level. We match PE firms in Preqin with PE firms in Revelio Labs using PE firm names. We are able to match 97% of PE firms in Preqin to Revelio Labs. Appendix Figure A4 exhibits the evolution of ESG employees in PE firms in our sample. In 2001, only around 2% of PE firms have any ESG-related employees, and this number increases to around 22% in 2023 (subfigure (a)), and the number of ESG-related employees shows similar pattern (subfigure (b)).

¹⁴Several media sources covered the incident. A link to the article in the Houston Chronicle can be found [here](#).

3.4 Sample construction and summary statistics

3.4.1 Sample for ESG incidents and fundraising analysis

As there are no unified identifiers for private firms between Preqin and RepRisk, we match portfolio companies of PE funds from Preqin to firms in RepRisk using a fuzzy matching algorithm applied to firm names. We then manually verify the matches using other firm information (e.g., firm location, website, industry). We are able to match 1,515 portfolio companies, which corresponds to 14% of all Preqin buyout deals in the North America and Europe (after filtering for the existence of fund information) and approximately 1% of RepRisk firms. The low matching rate reflects limited overlap between RepRisk and Preqin, as firms are included in each database based on different criteria.

The matched portfolio companies have in total 11,414 ESG incidents over the 2007-2022 sample period. Panel A of Appendix Table A3 shows the distribution of E/S/G incidents, where one incident can relate to multiple types. Environmental incidents are the least represented category in the sample. Panel B of Appendix Table A3 illustrates the distribution of novelty, severity, and reach of the incidents. No incidents are labeled as novelty-3 incidents and only 2% of incidents are labeled as severity-3 incidents. Appendix Figure A5 subfigure (a) shows the detailed distribution of related issues in our sample, which closely resembles that of the full RepRisk database shown in subfigure (b).

The 1,515 matched portfolio companies receive investment from 727 funds from Preqin, raised by 385 PE firms and committed by 2165 LPs. Out of the 385 PE firms in our sample, 123 are based in Europe and 262 are based in North America. As of 2023, PE firms in our sample have raised 3,763 billion US dollars in buyout funds, which accounts for around 62% of buyout funds' AUM in Preqin. The average number of buyout funds per PE firm in our sample is 6.2, and the average age is 28 years as of 2023, which is higher than that for the full Preqin buyout universe (2.6 funds and 20 years). The PE firms in our sample are larger and older, which is probably not surprising. If anything, this selection would work against our results as larger and older PE firms are more adept at fundraising. LPs in our sample, on average, invest in 41 buyout funds and 15 PE firms, also exceeding the averages for the full Preqin LP universe (15 funds and 5 PE firms).

We only keep the buyout funds that have at least one portfolio company covered by RepRisk during the life of the fund. We then aggregate portfolio company-level incidents to the fund level. Since we do not observe the precise exit dates of portfolio companies, we assume a holding period of five years after the deal year of each portfolio company, reflecting the average holding period for buyout funds.¹⁵

For our analysis, we focus on E&S-related incidents, as E&S incidents and G incidents are quite different in nature (e.g., Gantchev et al., 2022; He et al., 2023; Bisetti et al., 2023). E&S incidents are more related to social responsibility and are, therefore, likely viewed differently by investors, as we confirm later in the paper through separate analyses using G incidents. The main measure in our paper is the average number of incidents per portfolio company per year. To construct this measure, we follow a two-step procedure. First, we divide the total number of incidents of a fund in a year by the number of portfolio companies of the fund covered by RepRisk in that year. We normalize the incidents by RepRisk coverage to account for size effects, as larger PE funds typically have more firms covered by RepRisk and thus more incidents. Second, throughout the paper, when we aggregate incidents over multiple years, we take the average across years. This is to avoid any mechanical effect that a longer holding period leads to more cumulative incidents.

We define follow-up funds as funds in the same series (*fund_series_id* in Preqin) that have adjacent fund series numbers. In most cases, these funds have unified names. For example, *Kinderhook Capital Fund II* is the follow-up fund of *Kinderhook Capital Fund I*, and *Kinderhook Capital Fund III* is the follow-up fund of *Kinderhook Capital Fund II*. This definition allows us to better compare the size of similar funds, as funds in the same series usually have a similar strategy and comparable size (Fraser-Sampson, 2011). Out of 727 funds, 505 have raised a follow-up fund. Conditional on follow-up fundraising (the sample used in main analysis), our sample includes 505 funds from Preqin investing in 1,164 matched portfolio companies, raised by 266 PE firms and receiving capital from 2,083 LPs. Figure A6 shows the distribution of vintage years of these funds.

¹⁵Kaplan and Strömberg (2009) provide statistics on average holding period; the median firm exits after five years. Recent holding periods seem to have increased to a median of six years (Joenväärä et al., 2021). We make the assumption that the holding period is five years, based on our 2007-2022 sample period.

In our analysis of change in relative fund size, we construct a dataset of fund pairs, with each observation representing a Fund N - Fund N+1 pair. This structure allows us to directly test how the relative size of fund N+1 and fund N is affected by E&S incidents of fund N. Panel A of Table 1 presents the summary statistics for this data structure. On average, each fund has 2.64 portfolio companies that are covered by RepRisk. In this analysis, we focus on the average number of incidents occurring two years before a follow-up fund is raised. Each year a fund experiences around 0.48 ESG incidents, 0.29 of them are E&S incidents and 0.20 are G incidents. These values are larger than those in the full RepRisk private firms sample, likely because we matched only larger firms that attract more media attention. Fund N has an average multiple of 1.86, an average series number of 4.25, and an average size of \$2.93 billion. On average fund N+1 is 1.42 times larger than fund N. In more than 75% of the sample, fund N+1 is larger than fund N. It takes on average 4.32 years to raise a follow-up fund. On average, a fund receives investment from 29 LPs, with a large heterogeneity across funds.

Table 1 about here.

To investigate how LPs react to E&S incidents, we also construct a fund-LP dataset using the LP module from Preqin. Preqin provides information on the LPs of most funds in our sample. The 505 funds and follow-up funds in our sample receive investment from 2,083 unique LPs. The data is structured in the form of a fund sequence with each observation representing a fund-LP pair with information on the follow-up fund raised. Thus, this data structure contains 1,051,915 observations, calculated as 505 funds $\times$ 2,083 LPs. To capture the relationship between PE firms and their LPs, we construct a measure of the number of previous buyout funds an LP has invested in with a given PE firm. The summary statistics are presented in Panel B of Table 1. As expected, in the fully expanded LP-fund data, only a small proportion (around 1%-2%) of LPs commit to a given fund. Around 2% of LPs have ever invested in a previous fund of a given PE firm. The distribution of incidents, fund size, fund multiple and fund series number are the same as in the fund sequence data structure in Panel A. On average, an LP commits to around 7 follow-up funds in this fund-LP data structure.

Among all the LPs, 62% are based in the United States, and 28% are based in Europe.¹⁶

¹⁶The remaining LPs are based in Asia (3%), the Middle East (2%), Canada (2%), Australia (1%), and less than 1% in Latin America or Africa.

Among US-based LPs, 74% are headquartered in Democratic-leaning states, and 26% are headquartered in Republican-leaning states, based on the 2016 election results. 8% of the LPs are publicly listed.

3.4.2 Sample for Public Pension Capital Shock and PE reaction analysis

To examine whether PE firms react to LPs' capital supply a difference-in-difference analysis, we structure the data as a PE firm-year panel by aggregating all the portfolio companies of all funds in each year to PE firm-year level. We focus on the industry composition of PE firms as our main measure of whether PE firms incorporate the E&S concerns of LPs. This measure has the advantage that it captures all portfolio companies in Preqin, rather than relying on the smaller subset matched to RepRisk. Moreover, because the identification shock occurs in 2005 and RepRisk data start only in 2007, we cannot directly use portfolio companies' E&S incidents as a measure of PE firms' E&S performance.

The industry classification in Preqin is different from classical industry classifications (e.g., SIC codes). We use Preqin industry classifications and define an industry as dirty if the portfolio company is in the following industries: oil and gas, mining, transportation, and power and utilities, which are widely perceived as polluting industries. We also include the defense industry due to persistent concerns regarding the human rights implications of weapons manufacturing and related activities. Our results remain similar if we do not include the defense industry in the definition. Unfortunately, we are unable to include other controversial sectors such as tobacco or alcohol, because Preqin does not provide separate industry classifications for those firms. Appendix Table A4 shows all the industry classifications in Preqin. To complement the industry-level measure, we also use a measure of whether PE firms have ESG-related employees at PE firm-year level, which we match to our PE firm-year panel from Preqin. To mitigate the impact of outliers, we winsorize all continuous variables at the 1% and 99% levels.

As we intend to compare PE firms with and without an ex-ante relationship with New York Public Pension funds, we focus on PE firms with at least one relationship LPs in 2004 (before the legal reform). We also require a PE firm to have on average more than 3 employees over the years to be included in the sample. This sample includes 608 unique PE firms, out of which 92 had a prior relationship (received any commitment from New York public pensions funds

before) with New York public pensions. Out of all the PE firms in this sample, 82% are in North America, and 13% are in Europe. Panel C of Table 1 provides summary statistics of other variables. On average, a PE firm holds 3% of portfolio companies in “dirty” industries. 7% of the PE firm-year observations have at least one ESG-related employees. This sample spans from 2001 to 2023.

4 E&S incidents, Fundraising, and LPs’ commitments

We begin by providing empirical evidence that capital commitments to PE firms incorporate E&S considerations. Using E&S incidents as events that alter the perceived E&S profile of PE firms, we examine their impact on fundraising. We find that E&S incidents negatively affect PE follow-on fundraising. This effect is driven by a lack of recommitment by relationship LPs—particularly those with E&S concerns—and the inability to replace these relationship LPs with new LPs.

4.1 E&S incidents and size of follow-up fund

We start by examining the effect of ESG incidents on the size of follow-up funds. In other words, we ask: Conditional on raising a follow-up fund, are follow-up funds smaller after E&S incidents? Following prior work (e.g., Gantchev et al., 2022; He et al., 2023; Bisetti et al., 2023), we split incidents into E&S incidents and G incidents as they are quite different in nature. In this analysis, we organize the data into a fund N-fund N+1 pair structure, in which each observation is a pair of fund N and follow-up fund N+1. We investigate how the relative size of fund N+1 is associated with E&S incidents of fund N. Panel A of Table 1 presents the summary statistics for this sample. Specifically, we estimate the following equation:

$$\begin{aligned}
 \left(\frac{Size_{N+1}}{Size_N} \right)_i &= \alpha + \beta \log(1 + E\&S \text{ incidents}_{N,i}) \\
 &\quad + \gamma \log(multiple)_{N,i} + \theta \log(size)_{N,i} + \eta \log(series \text{ num})_{N,i} \\
 &\quad + IndustryControls_{N,i} \\
 &\quad + Vintage_{N,i} \times Vintage_{N+1,i} \times Region_i,
 \end{aligned} \tag{1}$$

where i denotes a fund N - fund N+1 pair. N indexes the current fund and $N + 1$ indexes the follow-up fund in the same series raised by the same PE firm. The dependent variable is the relative size of fund N+1 to fund N, which reflects the growth in size of the follow-up fund. $E\&S \text{ incidents}_{N,i}$ is the average number of incidents two years ($[t - 2, t - 1]$) before fund N+1 is

raised.¹⁷ The coefficient of interest, β , captures the effect of E&S incidents on the size growth of fund $N+1$. We add multiple control variables to the regressions. $\log(multiple)_{N,i}$ is the natural logarithm of the multiple of invested capital (a performance measure) of fund N . $\log(size)_{N,i}$ is the natural logarithm of assets under management of fund N . $\log(series)_{N,i}$ is the natural logarithm of the series number of fund N . $IndustryControls_{N,i}$ denotes the ratio of investments of fund N in each industry before fund $N+1$ is raised.¹⁸ $Vintage_{N,i} \times Vintage_{N+1,i} \times Region_i$ denotes the interaction of {fund N vintage year, fund $N+1$ vintage year, PE region} fixed effects. For this analysis, we double cluster the standard errors by PE firm and by pairs of vintage years to correct for correlation of standard errors within PE firms and within vintage years (e.g. variation of capital supply). Our results are also robust to alternative standard error clustering (Appendix Table A5).

We include granular vintage years of fund N and $N+1$ as well as PE Region fixed effects to control for capital supply effects—that is, the fact that the availability of capital from investors tends to vary over time and across regions. We include control variables to isolate the effect of E&S incidents from performance, size and series number. For instance, we control for the size of fund N because larger funds may attract more attention and experience more E&S incidents. We also control for fund performance, which may be correlated with the quality of the GP, with worse performing GPs potentially experiencing more E&S incidents. Since the industry composition as well as the degree of specialization of fund N 's portfolio may affect the likelihood of E&S incidents as well as the growth in size, we also control for the industry composition of the portfolio of fund N .

Table 2 about here.

The results are presented in Table 2. The coefficients of all the control variables align with prior work: Larger funds and funds in older series grow less, and there is a strong performance-flow relationship (e.g., Kaplan and Schoar, 2005). In column 1, we present the results with only

¹⁷We define the variable *num E&S incidents* = $(\frac{\#E\&S \text{ incidents}_{t-1}}{\#Reprisk \text{ covered firms}_{t-1}} + \frac{\#E\&S \text{ incidents}_{t-2}}{\#Reprisk \text{ covered firms}_{t-2}})/2$, where t indicates the year fund $N+1$ is raised. We take the average, instead of sum, to have a fair comparison between funds with high vs. low number of firms covered by RepRisk.

¹⁸ $IndustryControls_{N,i}$ is a vector of 10 (10 industries), where each entry is the number of investments in a specific industry divided by total number of investments. The 10 industries provided by Preqin are: Information Technology, Consumer Discretionary, Natural Resources, Healthcare, Financial Insurance Services, Real Estate, Industrials, Energy Utilities, Telecoms Media, and Business Services.

vintage year fixed effects and PE region fixed effects. We find a negative and significant association between E&S incidents and the relative size of funds. This negative association is robust to interacting PE region fixed effects with vintage year fixed effects (column 2). The result remains robust and becomes economically stronger when controlling for the industry composition of fund N 's portfolio (column 3). The economic magnitude of the coefficient is meaningful. A one standard deviation increase in the log average number of incidents (0.27) leads to approximately 4.2% smaller follow-up funds. To better understand the magnitude, we categorize funds with incidents into two groups based on the median number of incidents, replacing the independent variable with dummy variables indicating high and low number of incidents. Funds with no incidents serve as the baseline group. Relative to funds with no incidents, funds with above-median incidents have 11.3% - 15.6% smaller follow-up funds (column 4-6). This effect is economically large. For example, to compensate for the 15.6% decrease in size resulting from having above-median number of incidents, the PE firm would need to increase its current fund performance by a factor of 1.7 (calculated as $1 + \frac{0.156}{0.213}$), which is a considerable magnitude for a fund manager. In summary, we find that the relative size of follow-up fund is smaller when the current fund experiences E&S incidents. We provide a series of robustness tests and additional tests in Section 4.3.

We then examine whether the negative effect of E&S incidents on fundraising differs across PE firms with heterogeneous levels of ex-ante reputation (e.g., performance and fundraising record). Prior research has shown that reputation plays an important role in the PE industry (e.g., Gompers and Lerner, 1999; Ljungqvist et al., 2020). For instance, GPs who are young and raise their first fund have a hard time attracting capital from investors, whereas GPs with longer and better performance history typically have an easier time fundraising (Demiroglu and James, 2010).

We postulate that the reputation of a PE firm moderates the impact of E&S incidents on its subsequent fundraising ability. One potential mechanism is that not committing to a follow-up fund managed by a high-reputation GP may entail higher costs for investors. Alternatively, investors may perceive GPs with established track records and longer histories as better equipped to manage portfolio-related incidents. These considerations suggest that firm reputation can mitigate some of the adverse consequences of environmental and social incidents on follow-up fundraising.

Following existing literature, we define PE reputation based on their age, size and performance. Specifically, we follow Barber and Yasuda (2017) and define a PE firm as low-reputation if (i) the number of funds raised is in the bottom three quartiles of all PE firms, (ii) total AUM raised in the past is in the bottom three quartiles, and (iii) the PE firm has no top-quartile performing funds older than five years. We also define a combined measure of low-reputation if (i), (ii), and (iii) hold at the same time. PE Firms not meeting all three conditions are classified as high reputation.

Table 3 about here.

We then estimate equations similar to equations 1 and 5 but split the coefficients of interest into high and low-reputation groups based on the different reputation measures. The results are presented in Table 3. The negative effect of E&S incidents is primarily concentrated among smaller PE firms (column 1), younger PE firms (column 3), and worse-performing PE firms (column 5). This is also consistent with the results for the combined reputation measure (column 7). These results support our hypothesis that PE firm reputation mitigates the adverse impact of E&S incidents.

4.2 Lack of relationship LPs' recommitment after E&S incidents

4.2.1 Relationship LPs vs. New LPs

The private market is characterized by the existence of relationships between GPs and their LPs. LPs that invested in a prior fund of a GP are more likely to commit to future funds raised by the same GP.¹⁹ In this section, we investigate whether the observed decline in capital commitments arises from the loss of relationship LPs, or difficulty in attracting investments from new LPs.

To test which LPs reduce their capital commitments to the follow-up funds after E&S incidents, and in the spirit of the relationship banking literature (e.g., Chodorow-Reich, 2014), we structure the data as a fund $N+1$ - LP network structure, where each observation is a pair

¹⁹Relationships arise for example due to search frictions and informational asymmetries on the two sides of the market (Lerner et al., 2007; Sensoy et al., 2014; Maurin et al., 2023)

of fund $N+1$ and an LP. We include all LP-fund pairs in the sample.²⁰ We then estimate the following regression:

$$\begin{aligned}
 D(Invest)_{l,N+1} = & \alpha + \beta Relationship LP_{l,N+1} \times \log(1 + E\&S incidents_N) \\
 & + \theta Relationship LP_{l,N+1} + \psi \log(1 + E\&S incidents_N) \\
 & + Controls_N + \\
 & + \gamma_{l,vintage,region} + \varepsilon_{l,N},
 \end{aligned} \tag{2}$$

where l denotes an LP, N denotes current fund, and $N+1$ denotes the follow-up fund. $D(Invest)_{l,N+1}$ is a dummy variable indicating LP l invests in fund $N+1$.²¹ $Relationship LP_{l,N+1}$ is a dummy variable which equals 1 if LP l invested in any other fund of the PE firm before fund $N+1$ was raised. $\gamma_{l,vintage,region}$ denotes LP $\times$ fund raising year $\times$ region fixed effects, which control for supply of capital at an investor level that may cause LPs to invest more or less (or to specialise) in certain regions in certain years. Coefficient θ captures the persistence of the LP-GP relationship, i.e., the likelihood of investing in a fund if an LP has a relationship with the GP. β captures how E&S incidents affect this relationship.

Table 4 about here.

First, columns (1) and (2) in Table 4 confirm the existence of an LP-GP relationship. Column (1) shows that an LP that invested in a previous fund of a GP is 31.1 percentage points more likely to commit funds to a follow-up fund raised by the GP, compared to other GPs raising funds in the same vintage year and region. The Fund $N+1$ Vintage Year $\times$ PE Region $\times$ LP fixed effect absorbs LP characteristics that could influence allocation decisions, such as LP size, investment preferences, board composition with time-varying political representation (Andonov et al., 2018), the timing of investments, differential access to deals, and LP skill in investment selection (Lerner et al., 2007; Hochberg and Rauh, 2013).

²⁰Our results remain similar if we only use an “active” LP sample, in which we restrict to LPs making at least one investment in a year (Appendix Table A6).

²¹We note that we only use as dependent variable the dummy indicating commitment instead of amount committed because in Preqin, the amounts committed from LPs are largely missing. In the overall LP-Fund sample, for 65.2 % of the observations the commitment amount is not reported. What we estimate using a dummy is likely underestimating the loss of relationship LPs, as on average, conditional on commitment, relationship LPs commit more than non-relationship LPs (see Appendix Table A7 using the available amount committed from full Preqin universe).

In column (2) we also include Fund FE, which absorbs underlying fund characteristics such as size, performance, series of a fund, and overall GP style focus. The interpretation of the coefficient in column (2) is that an LP is 31.4 percentage points more likely to invest in a GP's follow-on fund (Fund N+1) if they have a prior relationship with that GP, compared to other GPs raising funds in the same vintage year and region, and relative to other (non-relationship) LPs investing in the same fund.

In column (3), we add the logarithm of one plus number of incidents in the equation and do not observe any significant overall effect. In column (4), we interact *Relationship LP* and *E&S incidents* and find that the interaction is negative and statistically significant. This suggests that E&S incidents lower the likelihood of relationship LPs recommitting to a follow-up fund. This effect remains robust to controlling for fund fixed effects (column 5). In terms of economic magnitude, a one standard deviation increase in the log number of E&S incidents implies a 9.6% ($0.27 \times 0.120 / 0.336$) decrease in the re-investment propensity. Another observation is that the coefficient on the log number of incidents is weakly statistically significant and positive in column (4), suggesting that PE firms are trying to replace the loss of relationship LPs with new LPs.

4.2.2 E&S concerns of relationship LPs

Our analysis so far indicates that E&S incidents decrease the likelihood of recommitment by relationship LPs. We next explore which subgroups of relationship LPs are more sensitive to E&S incidents. We hypothesize that LPs with greater E&S concerns are more likely to break relationships with GPs following such incidents. These E&S concerns may stem from the LPs' inherent preferences, the preferences of their investor base, pressures induced by public scrutiny.

First, we classify LPs into broad regional categories: *Europe*, *US* and *Others* based on the headquarters of the LP. Since institutional investors in Europe exhibit more sustainability interests than their U.S. counterparts (Gibson-Brandon et al., 2022), we expect that European LPs are more E&S-concerned and, therefore, more likely to break a relationship following E&S incidents. Moreover, we classify U.S. LPs as Democratic-leaning or Republican-leaning based on the political affiliation of the state where they are headquartered. We define Republican-

leaning and Democratic-leaning states based on the 2016 presidential election results.²² Di Giuli and Kostovetsky (2014) show that firms located in Democratic-leaning states invest more in corporate social responsibility and have higher E&S scores. We expect LPs headquartered in Democratic-leaning states to be more E&S-concerned and, as a result, more likely to break relationships with GPs following E&S incidents.²³ We also classify LPs as public or private based on their listing status. We hypothesize that public LPs are more E&S-concerned due to disclosure requirements and public market pressure, compared to private LPs.

To test the hypotheses, we run regressions similar to Equation 2 but split the LP coefficients into subgroups based on the definitions above. Table 5 presents the regression results and Figure 1 plots the key coefficients of interest. In column 1 of Table 5 and subfigure (a) of Figure 1, the results show that European LPs are more likely to break relationships with GPs following E&S incidents. The economic magnitude of the coefficients for European LPs is around 5 times larger than those for U.S. LPs. LPs in other regions have a propensity to break relationships that is similar to that of U.S. LPs.²⁴ Within the U.S., LPs located in Democratic-leaning states are over three times more likely to cut relationships than LPs located in Republican-leaning states following E&S incidents (column 2 and subfigure b). Finally, public LPs are three times more likely to cut relationships compared to private LPs (column 3 and subfigure c).

Table 5 about here.

Figure 1 about here.

In Appendix Figure A7 Panel (a) we repeat the estimation of Democratic-leaning and Republican-leaning LPs after removing “swing” states, i.e., states that have changed their voting pattern during our sample period.²⁵ The conclusion remains similar. In Figure A7 panel (b),

²²Our results remain robust to excluding swing states in our sample.

²³Recently, some Republican-leaning states (e.g., Texas and Florida) have adopted anti-ESG legislation limiting ESG considerations in public asset allocation (Garrett and Ivanov, 2022).

²⁴The top five countries in the *Others* category of LPs are Canada, Australia, Israel, Japan, and South Korea. In total, they account for about 60% of the number of LPs in the *Others* category.

²⁵States that have changed their voting pattern in our sample are: Arizona, Florida, Georgia, Iowa, Michigan, Ohio, Pennsylvania and Wisconsin.

we split the coefficients by whether the LP is a Principles for Responsible Investment (PRI) signatory. The PRI signatories and non-PRI signatories have similar tendency to end relationships with GPs following E&S incidents. This finding is similar to prior research showing that PRI signature does not strongly correlate with ESG footprint of investors' portfolio holdings (Kim and Yoon, 2023; Liang et al., 2022; Gibson-Brandon et al., 2022).

Overall, the results show that LPs with higher E&S concerns are more likely to stop committing to GPs after E&S incidents. This result also explains why E&S incidents reduce the size of follow-up funds, as documented in Section 4.1. This reduction is driven by E&S-concerned relationship LPs ceasing to recommit to follow-up funds of PE firms.

In Section 4.1, we demonstrated that the capital decline is particularly strong for low-reputation PE firms. In this subsection, we examine how LPs' recommitment to PE firms following E&S incidents differ by PE reputation to better understand the reason why reputation can mitigate the impact of E&S incidents. Specifically, we estimate a model similar to the one presented in Table 5 separately for low and high-reputation PE firms, defined as young, small and low-performing PE firms, as described in Section 4.1.

The results are presented in Table 6. Investors with both low and high E&S concerns break relationships with low-reputation PE firms following E&S incidents (columns 1, 3 and 5). In contrast, only investors with high E&S concerns break relationships with high-reputation PE firms after E&S incidents (columns 2, 4 and 6).

Table 6 about here.

These results suggest that, following E&S incidents, investors may trade off their E&S concerns with the cost of breaking relationships. For low reputation PE firms (for which the financial cost of breaking relationships is low), both low and high E&S-concerned investors break relationships.²⁶ In contrast, for high-reputation PE firms (for which the financial cost of breaking relationships is high), LPs with low E&S concerns choose to re-commit because the cost of breaking a relationship is too large compared to their E&S concerns. As a result, only LPs with

²⁶Using our E&S concerns proxy, we capture the relative E&S concerns of LPs. We do not claim that the low E&S concerns LPs (non-Europe, Republican-leaning and private LPs) do not have any E&S concerns.

high E&S concerns (European, Democratic-leaning and Public LPs) break relationships with high-reputation PE firms.

Moreover, in Table 6, the coefficient on $\log(1 + \text{num.E\&S incidents})$ is positive and statistically significant only for high-reputation PE firms. This suggests that it is easier for high-reputation PE firms to replace a relationship LP with a non-relationship LP to compensate for the lost capital. This is not the case for low-reputation PE firms. This finding provides another rationale for the heterogeneous effect of capital decrease by PE reputation in Table 3. E&S incidents have a larger impact on low-reputation PE firms because it is less costly for investors to break relationships with them. Furthermore, even though some E&S-concerned relationship LPs break relationships with high-reputation PE firms, these PE firms are more capable of finding substitutes for the capital loss.

4.3 Robustness and Additional tests

We conduct a series of additional tests as well as robustness tests. We briefly discuss them below.

Incidents: We start by confirming that our results are mainly driven by severe, novel, and high-reach incidents, while non-severe, non-novel, and low-reach incidents have limited effect on fundraising, which is shown in Appendix Table A8. In Appendix Table A9, we change the horizon at which we accumulate incidents from 2 years to 1-6 years. Our results remain robust and the magnitude decreases as we expand the window of incidents, suggesting that incidents closer to fundraising have a slightly stronger impact on the size of follow-up funds. In Table A10, we examine the effect of G incidents. We do not find any significant effect of portfolio-level governance incidents on relative follow-up fund size. This is perhaps not surprising as corporate governance is quite different in nature from environmental and social incidents, which relate more closely to social responsibility.

Fund Performance: One may worry that the logarithm of fund multiple cannot fully control for the effect of current fund performance in Table 2. We conduct a battery of additional tests and show that our results are robust to a wide range of fund performance controls. In Table A11, we replicate the same regressions while controlling for different functional forms of fund multiple to take into account any non-linear effects of (log) fund multiple. Our results

remain robust across all specifications. Furthermore, our result is also robust to using IRR as the measure of fund performance (column 1-2 in Appendix Table A12). Another concern is that fund performance may not be fully observable at the time of raising the follow-up fund. Following Harris et al. (2014), we use Preqin cash flow data to construct interim fund multiple and Kaplan-Schoar public market equivalent (PME). Our result is robust to controlling for the observed fund multiple or PME at the time of raising a follow-up fund (column 3-6 in Appendix Table A12). We also directly test whether E&S incidents correlate with fund performance. Appendix Tables A13 and A14 show no significant correlation between E&S incidents and fund performance. However, we do not aim to rule out the possibility of such a correlation, as the lack of statistical significance may stem from limited statistical power to detect it. Importantly, even if E&S incidents correlate with fund performance, this mechanism cannot fully explain our baseline finding of decreased fundraising. Our results suggest that E&S-concerned investors respond more strongly to these incidents, indicating that investors' E&S concerns play an important role.

Extensive Margin: We also test whether E&S incidents affect the likelihood of raising a follow-up fund. Using a proportional hazards model similar to Barber and Yasuda (2017), we find that E&S incidents also decrease the likelihood of raising a follow-up fund (Appendix Table B1). The economic magnitude, relative to the fundraising effect from better performance, is comparable to that observed for the intensive margin. The effect is stronger for low-reputation PE firms (Appendix Table B2). In addition, there is no statistically significant effect for G incidents (Appendix Table B3). These results are highly consistent with the intensive margin results we show in Section 4.1. We provide details on the specifications of the analysis in Internet Appendix B.

This extensive margin result also alleviates the endogeneity concern potentially driven by media attention. Larger or superstar PE firms may face more media scrutiny, possibly inflating reported E&S incidents. However, such firms typically raise follow-up funds more easily. If media attention drove E&S incidents, we would expect a positive association with likelihood of fundraising. Instead, we find that E&S incidents are associated with a lower likelihood of raising a follow-up fund, suggesting media attention is unlikely to account for our findings.

Estimated Cost to PE firms: We estimate the implied cost of management fee losses for PE firms by performing a simple back-of-the-envelope calculation. We assume that there is no discounting and that a flat management fee is charged annually during the life of a

fund. The expected management fee from raising a follow-up fund can then be calculated as $f = \text{Likelihood of Fundraising} \times \text{Size of Fund Raised} \times \text{Annual Management Fee} \times \text{Fund Life}$. Using the simple expression we can estimate the costs of E&S incidents for the median fund in the extensive margin sample given high versus no E&S incidents.

The estimates suggest that there will be a drop in the probability of fundraising from 0.79 to 0.67 (See Internet Appendix Figure B2, and details of the calculation in Appendix Internet Appendix B). And conditional on fundraising, there will a drop in size growth from 1.42 to 1.27 following high level of incidents (column 6 of Table 2). The median fund size in our sample is \$810 million (the extensive margin sample), and we assume an annual management fee of 1.5% and a fund life of 10 years. Then the expected total management fee over the life of the follow-up fund, if the current fund has no incidents is: $0.79 \times \$810 \times 1.42 \times 1.5\% \times 10 \approx \136 million. Conditional on high number of incidents in the current fund, the expected total management fee of the follow-up fund is $0.67 \times \$810 \times 1.27 \times 1.5\% \times 10 \approx \103 million. Abstracting from carry and performance considerations, this simple calculation demonstrates that a high number of E&S incidents is associated with an estimated loss of approximately \$33 million for managers, compared to those with no incidents. This represents a substantial financial impact for PE firms.

Overall, in this section, we show that E&S incidents harm PE fundraising. The loss of capital is driven by relationship LPs—particularly those with E&S concerns—who cease to recommit to follow-up funds following E&S incidents. Given the relationship characteristics of PE capital, it is difficult for PE firms to fully replace these LPs with new LPs, resulting in reduced follow-up fundraising ability.

5 Do PE firms internalize relationship LPs' E&S concerns?

We have established that relationship LPs may refrain from recommitting capital to PE firms with a poor E&S footprint. A natural follow-up question is: Do PE firms internalize the E&S concerns of their relationship LPs, such as by adjusting portfolio selection? Empirically identifying this effect is challenging, because the portfolio selection of PE firms and LPs' commitment are jointly determined in equilibrium, and can be driven by many other factors. For example, the portfolio selection can be affected by GPs' expertise across different industries, and may also be affected by LPs' illiquidity tolerance, as well as the matching between PE firms and LPs. As

a result, in the cross section it is difficult to pin down whether PE firms take LPs' E&S concerns into account when they select portfolios.

To address this identification challenge, we exploit a novel and plausibly exogenous shock to LPs' capital supply to identify the impact of LPs' E&S concerns on PE firms' portfolio selection through capital supply. Specifically, we leverage a legal reform of public pension plans in the U.S. state of New York, which substantially increases the capital available to the PE industry. Given New York public pensions have been investors with strong E&S concerns, we then examine how PE firms with ex-ante relationships to New York public pension plans adjust their portfolio selection in response to this capital supply shock, relative to PE firms without such relationships. This framework allows us to identify the transmission of LPs' E&S concerns to PE portfolio decisions via capital supply.

Our identification strategy builds on the following intuition. Consider two PE firms, one that has an existing relationship with treated public pensions and another that does not. Following an exogenous expansion in capital supply from these public pensions, the relationship PE firm will receive a disproportionately larger share of this additional capital, owing to the relationship nature of PE fundraising. In a difference-in-differences framework, this capital supply shock generates exogenous variation in the extent to which relationship PE firms need to internalize the E&S concerns of these public pension funds.

We hypothesize that, following the treatment, relationship PE firms reduce their investments in portfolio companies with poor E&S footprint more than non-relationship PE firms. Furthermore, we expect this effect to be more pronounced among PE firms with a low ex-ante share of ESG-concerned relationship LPs. In contrast, for PE firms with a high ex-ante share of such LPs, E&S considerations are likely already reflected in their portfolios. As a result, additional capital from public pensions has a limited impact on their incentive to further adjust portfolio composition and ESG practises.

5.1 Institutional Background

U.S. public pension systems operate under state statutes that historically constrained investments in private equity. These limits were typically enforced through (i) legal lists specifying approved asset classes, such as public equities and bonds, and (ii) a "basket clause" that per-

mitted a small share of the portfolio to be allocated to unlisted assets not explicitly authorized. The basket clause thus functioned as a cap on private equity exposure. Because these statutory parameters vary across states and change only at discrete points in time, they create plausibly exogenous, state-by-year variation in the ability of public pensions to invest in private equity. We exploit these legal changes as the basis for our identification strategy. When basket limits are raised or exemptions introduced, affected pensions gain additional capacity to allocate capital to private equity. These shifts are typically unrelated to any individual fund manager's actions, yet they materially expand the supply of public capital entering the private equity market.

Though several states transitioned to a prudent investor rule by 2000 (Kortum and Lerner, 2000), many continued to operate under a legal list framework. Table A15 summarizes basket-clause reforms across U.S. states. Anecdotally, these policy changes were driven by broad fiscal and political dynamics rather than fund-specific considerations. Following the early 2000s equity market downturn, pension returns declined and funding shortfalls widened. At the time, public plans were heavily concentrated in public equities and fixed income. As interest rates remained low and equity markets underperformed, pension officials and lawmakers faced increasing pressure to diversify portfolios and seek higher returns (see Ewens and Farre-Mensa (2022) for an overview of the shift toward private markets and rising institutional allocations to PE). They argued that loosening statutory constraints would facilitate access to private equity and help close funding gaps. While there is no definitive evidence on what motivated these legal changes, it is highly unlikely that they were driven by shifts in the E&S footprint of PE firms, providing a plausibly exogenous source of variation in E&S-concerned capital, allowing us to examine its effect on the outcome of interest.

Among all basket clause changes, we do not classify states moving from zero to positive allocations as treated, since our focus is on the response of PE firms with pre-existing relationships with public pensions. Moreover, we distinguish between Democratic- and Republican-leaning states, since we expect the effect to arise only in Democratic-leaning states, where public pensions exhibit stronger ESG concerns. As a result, we will use New York public pensions' reform as our main treatment in the paper, which is the only democratic-leaning state with a basket-clause change during our sample period. We use Republican-leaning states—Michigan, Florida, Kansas, North Carolina, Mississippi—for placebo tests.

New York (under the New York Retirement and Social Security Law §177(9) as of April 8, 2006) expanded the statutory basket clause from 15 percent to 25 percent. New York had long operated under a legal-list regime, capping public equities at 70 percent (with a 10 percent sub-cap on international holdings), real estate at 5 percent, and private equity within a 15 percent “other investments” basket. In 2005, lawmakers debated a broader shift to a prudent-investor standard but advanced a narrower reform to raise the basket cap. Although the bill was signed in 2006,²⁷ we code the reform as occurring in 2005 to align with the timing of the legislative decision and contemporaneous market expectations. Two features justify this assignment: (i) *headroom*—pension systems’ PE allocations were below the 15% ceiling in 2005, allowing expansion to begin before the legal change; and (ii) *legislative passage and expectations*—the increase gained significant momentum in 2005, including passage by both chambers in June 2005 (A.8970) and contemporaneous policy/trade-press coverage.²⁸ Though it was vetoed by the Governor in July 2005, the bill was reintroduced and enacted in 2006.²⁹

The reform created a discrete and plausibly exogenous expansion in New York’s capacity to invest in private equity. The state’s public pension systems collectively manage over \$700 billion USD in assets, making them one of the largest institutional investor blocs in the country. Three of the ten largest public pension funds in the U.S.—the New York State Common Retirement Fund, the New York State Teachers’ Retirement System, and the New York City Employees’ Retirement System—are from New York. The reform thus constituted a substantial shock to the supply of capital flowing into the private equity market.

Beyond size, New York’s public pensions were early advocates of ESG-aligned investing in the early 2000s. The Shareowner Initiatives report published by the Office of the New York City Comptroller outline the New York City pension funds’ corporate governance and shareholder engagement efforts and documents a broad program of ESG-related initiatives, including proxy proposals filed on issues such as climate risk disclosure, board diversity, executive compensation,

²⁷Chapter 22, Laws of 2006 (enacting S.6806-A / A.10058-A). <https://a860-gpp.nyc.gov/downloads/3r074w28b>.

²⁸Empire Center FiscalWatch Memo: <https://www.empirecenter.org/publications/the-biggest-public-pension-investment-policy-shift-youve-probably-never-heard-of-2/>; and trade-press report, *PERE News*, “New York seeks ‘prudent’ change”: <https://www.perenews.com/new-york-seeks-prudent-change/>.

²⁹New York State Assembly, Standing Committee on Governmental Employees, *2005-2006 Annual Report* <https://nyassembly.gov/comm/GovEmp/20061215/>

and labor standards in global supply chains.³⁰ This ESG-oriented posture is further exemplified by the funds' actions throughout the 2000s, including campaigns to screen out companies with ties to countries associated with terrorism, such as Iran and Syria, and pressure on firms to divest from Sudan over human rights concerns. The funds also engaged in shareholder activism targeting environmental and social accountability—for instance, urging Freeport-McMoRan to review its mining practices in Indonesia and calling on Dow Chemical to address liabilities stemming from the 1984 Bhopal disaster.

5.1.1 First stage

We empirically confirm that this legal reform expands capital supply of New York public pension's capital commitments to private equity and this capital tends to flow more to those PE firms with an ex-ante relationship with New York public pensions. We assume a 10-year fund life, and use a 10-year rolling window to proxy the “steady state” capital commitment to PE industry. Appendix Table A16 shows that after the reform New York public pensions commit more capital to the PE industry, using a difference-in-differences regressions with LP and year fixed effects. On average, each New York public pension fund commits USD \$3 Billion, or around 70% more capital to the PE industry after the reform.³¹ More stringent fixed effects in even-numbered columns show that this effect is not driven by general trend differences between Democratic- and Republican-leaning states. Importantly, the dynamic coefficient estimates (Appendix Figure A8) show no pre-trend before the legal reform, and a sharp increase afterwards, consistent with the reform representing a shock to the capital supply.

We then confirm that this additional capital flows disproportionately to GPs with an ex-ante relationship with New York public pensions. We estimate difference-in-differences regressions at the GP-year level, where the treatment indicator equals one for GPs with prior ties to New

³⁰NYC Comptroller. 2004. *A Report on the 2004 Shareholder Proposals and Other Shareowner Initiatives*. Office of the Comptroller, City of New York.; NYC Comptroller. 2005. *Shareholder Initiatives of the New York City Pension Funds: Enhancing Shareholder and Long-Term Value*. Office of the Comptroller, City of New York.

³¹This analysis includes 336 public pensions in Preqin across United States, out of which 9 public pensions are from New York: New York State Nurses' Association Pension Plan, New York State Common Retirement Fund, Teachers' Retirement System of the City of New York, New York City Employees' Retirement System, New York City Police Pension Fund, New York City Fire Department Pension Fund, New York City Board of Education Retirement System, and New York State Teachers' Retirement System. In Preqin, we can observe the amount of capital commitment for around 80% of the commitments by public pensions, so we also conduct analysis using the dollar amount of capital commitment.

York public pensions and for years equal to or after 2005. The results are presented in Appendix Table A17. Across specifications, the results consistently show that GPs with an ex-ante relationship with New York public pensions receive more capital commitment from New York public pensions after the reform. On average, the relationship PE firms receive USD \$70-\$80 million from NY public pensions compared to non-relationship PE firms. We discuss the details of the set of fixed effects controlled in Section 5.2.

Taken together, these results confirm the first stage of our empirical design. The legal reform substantially increased New York public pensions' allocations to private equity, with the additional capital flowing disproportionately to PE firms that had pre-existing relationships with the reformed pensions. This evidence supports the assumption that the reform constitutes an exogenous shock to the capital supply from ESG-oriented investors, enabling us to examine how relationship PE firms respond to such shocks in the next section.

5.2 Empirical specifications and results

To test whether LPs' E&S preferences transmit to their relationship PE firms, we structure the data at the PE-year level and examine how PE firms adjust their portfolio composition in response to their relationship LPs' capital supply shock. As we do not have a firm-level measure of E&S footprint for a large sample of portfolio companies, we rely on industry-level portfolio composition adjustment for our analysis. Specifically, we run the following regression:

$$\begin{aligned} \text{FracDirty}_{i,t} = & \alpha + \beta \text{Post}_{i,t} \times \mathbf{1}\{\text{Relationship with NY Public Pension}\} \\ & + \gamma_i + \theta_{\text{strat} \times t} + \eta_{\text{cty/state} \times t} + \delta_{\text{NY LP} \times t} + \tau_{\text{PubPen LP} \times t} + \zeta_{\text{ESG LP} \times t} + \epsilon_{i,t}, \end{aligned} \quad (3)$$

where $\text{FracDirty}_{i,t}$ is the fraction of holdings in dirty industries, defined as the proportion of portfolio companies in the oil and gas, mining, transportation, power and utilities, and defence industries of PE firm i and in year t . $\text{Post}_{i,t}$ is a dummy variable indicating year t is equal to or after 2005, when NY public pensions have legal reforms that expand capital supply to PE. $\mathbf{1}\{\text{Relationship with NY Public Pension}\}$ is a dummy variable indicating PE firm i has built ex-ante relationships (i.e., received capital commitments from) with any of the New York public pension funds up to 2004. γ_i indicates PE firm fixed effects. $\theta_{\text{strat} \times t}$ indicates PE firm main strategy interacted with year fixed effects. $\eta_{\text{cty/state} \times t}$ indicates PE firm country (for non-US PEs) or state (for US PEs) interacted with year fixed effects.

This specification examines the portfolio allocation to dirty sectors of PE firms before and after 2005 when the legal reform happens (first difference), and compares the before/after change in portfolio allocation for PE firms who had a relationship with NY public pensions versus those without such relationships (second difference). $\theta_{\text{strat} \times t}$ ensures the comparison is within PE firms of the same strategy (buyout, VC, etc). $\eta_{\text{cty/state} \times t}$ ensures the comparison to be among PE firms headquartered in the same country/state, which alleviates the concern that the effect might be driven by “local” investments of PE firms. We cluster standard errors by PE firms.

In more stringent specifications, we also add $\delta_{\text{NY LP} \times t}$ and $\tau_{\text{PubPen LP} \times t}$, which represent quartile of share of NY-based LPs (all LPs located in NY, not only public pensions), and quartile of share of public pension LPs (all public pensions, not only NY) in 2004 interacted with year fixed effects. These fixed effects control for ex-ante exposure to New York and to public pensions, absorbing potentially time-varying capital supply from New York LPs or from public pension LPs, and highlight the shock from New York public pensions. We also add $\zeta_{\text{ESG LP} \times t}$, representing quartile of share of ESG-concerned LPs (i.e., European, Democratic-leaning, and publicly-listed LPs), which controls for the potentially heterogenous time-variation in portfolio allocations by PE firms’ ex-ante exposure to overall share of ESG relationship LPs (e.g., more polarised ESG views by democratic- and republican-leaning PE firms).

Intuitively, we are comparing two PE firms using the same strategy, located in the same country/state, with similar share of ex-ante relationship LPs in NY, similar share of ex-ante relationship public pension LPs, and similar share of ex-ante ESG relationship LPs, but one PE firm has an ex-ante relationship with NY public pensions, and the other doesn’t have an ex-ante relationship with NY public pensions. We test whether the two PE firms adjust portfolio allocation differently after NY public pensions exogenously expand their commitment to PE. The coefficient β captures this difference.

Table 7 about here.

Figure 2 about here.

Table 7 presents the results. The coefficient of interest is significantly negative, and is of similar magnitude as we add more stringent fixed effects across specifications from column 1 to column 5. The economic magnitude is also significant. Taking the point estimate from column 5, the treated PE firms decrease the allocation to dirty sectors by 1.4%, which is equivalent to around 50% of the unconditional mean of allocation to these sectors (2.8%). Subfigure (a) of Figure 2 plots the dynamic coefficient estimates for each year relative to the year of the legal reform. There is no evidence of a pre-trend prior to the reform, while a decline in allocations to dirty sectors emerges thereafter. The adjustment is gradual, consistent with the long investment horizons and slow portfolio rebalancing typical of private equity.

In columns 6–10, we further split PE firms by their ex-ante share of ESG-concerned relationship LPs. Consistent with our hypothesis, the effect is primarily driven by PE firms that initially relied less on ESG-concerned LPs, whereas firms with a high ex-ante share of such investors exhibit little change. PE firms already heavily financed by ESG-relationship LPs may have previously internalized investor preferences, leaving limited scope for further adjustment. In contrast, for firms less exposed to ESG-concerned relationship LPs, the legal reform increased capital commitments from New York public pensions, thereby strengthening ESG-related investor pressure and prompting portfolio reallocation. Subfigure (b) and (c) of Figure 2 the dynamic coefficient estimates for each year relative to the year of legal reforms, for low and high ex-ante share of ESG-concerned relationship LPs, respectively. There is no pre-trend, and there is a slow decline only for the low share group (subfigure (b)), but not for the high share group (subfigure (c)). Appendix Table A18 shows that our results remain similar if we exclude the defence industry.

To further corroborate that the portfolio adjustments are driven by ESG concerns, we directly measure PE firms' ESG effort through the employees they hire. We use employee job titles using LinkedIn profile data from Revelio Labs, which we match to PE firms in Preqin, and employ text analysis to identify whether a PE firm hires any ESG-related employees. Detailed description of construction of this measure is provided in Section 3.3. We then examine whether PE firms with relationships to NY public pensions respond to the reform by hiring ESG-related employees. To test this, we replicate the regression in Eq.3 but replace the dependent variable with a dummy indicating whether the PE firm has any ESG-related employee.

Table 8 about here.

Figure 3 about here.

Table 8 presents the results. PE firms with an ex-ante relationship with NY public pensions are more likely to hire any ESG-related employee after the legal reform. In terms of economic magnitude, PE firms with ex-ante relationship with NY public pensions increase their likelihood of having any ESG-related employee by 4.8%, which is around 74% of the unconditional mean of having at least one ESG-related employee (6.5%). Consistent with prior results, as shown in column 6 to column 10, the effect is stronger for PE firms who have a low ex-ante share of ESG-concerned relationship LPs. Figure 3 presents the dynamic coefficient estimates relative to the reform year. There is no pre-trend before the reform, and there is an increase in ESG employees over time, which is consistent with prior results. In Appendix Table A19, we replace the dependent variable with the number of ESG employees, which leads to the same conclusion.

As placebo tests, we also test whether PE firms respond in a similar way when their relationship public pension LPs in Republican-leaning states—Michigan, Florida, Kansas, North Carolina, Mississippi—have similar reforms. Appendix Table A20 presents the results in a staggered difference-in-difference specification. We do not observe a similar reaction as in our main results. Subfigure (a) and (b) of Appendix Figure A10 presents the dynamic coefficients relative to the years of the legal reforms, and there does not seem to be any effect. Subfigure (c) and (d) of Appendix Figure A10 reports coefficient estimates using the estimator developed by Sun and Abraham (2021), following the recent literature on the econometric issues in staggered difference-in-difference analysis. The results lead to the same conclusion.

Overall, by using the basket clause law change for public pensions in NY, we show that their relationship PE firms react to such capital supply shock by decreasing their portfolio allocation to dirty sectors and hiring ESG-related employees. This is particularly strong for those PE firms with low ex-ante ESG-concerned relationship LPs. This analysis provides clear causal evidence that PE firms internalise LPs' E&S concerns under capital provision pressure.

6 Managing E&S risks in portfolio companies

In the previous section, we document that PE firms internalize relationship LPs' E&S concerns by adjusting their portfolio holdings. In this section, we turn to examine whether PE firms internalize relationship LPs' E&S concerns by engaging with their portfolio companies on E&S issues post-investment to achieve better E&S outcomes.

We turn to portfolio company level data, and structure the data as a portfolio company-year panel, in which for each year we observe the number of E&S incidents and the RepRisk Index of the portfolio company. The RepRisk Index reflects the risk of a firm having future incidents. The index ranges from 0 to 100, with 0 indicating the lowest risk. We employ a difference-in-differences specification to test whether portfolio companies of GPs with higher share of E&S-concerned relationship LPs decrease E&S risk post-investment, compared to portfolio companies of GPs with lower share of E&S-concerned relationship LPs. Portfolio companies of GPs with an above median proportion of E&S LPs (European, Democratic-leaning and public LPs) are considered to be "treated", while those of GPs with below median proportion of E&S investors form the "control" group. In this analysis we restrict the observation window to $[-2, 6]$ years around PE investments.

We estimate the following specification in a portfolio company-year panel:

$$Y_{i,t} = \beta (\text{Post-investment}_{i,t} \times \text{High proportion of E\&S-concerned LPs}_i) + \theta_{\text{deal year} \times t} + \gamma_i + \epsilon_{i,t}, \quad (4)$$

where $Y_{i,t}$ is the number of E&S incidents of portfolio company i in year t or RepRisk index of portfolio company i in year t . $\text{Post-investment}_{i,t}$ is a dummy variable that takes the value 1 in all years after investment by a PE firm, and 0 otherwise. *High proportion of E&S-concerned LPs* is a dummy variable that takes the value 1 for PE firms with an above median proportion of E&S-concerned relationship LPs one year before the investment. E&S-concerned LPs are defined as LPs headquartered in Europe, LPs headquartered in a Democratic-leaning state in the U.S. or LPs that are publicly listed. γ_i indicates portfolio company fixed effects which control for time-invariant characteristics at the portfolio company level. $\theta_{\text{deal year} \times t}$ indicates deal-year $\times$ year fixed effects. Intuitively, we compare the change of E&S risk of two portfolio companies (before and after receiving PE investment) that receive PE investment in the same deal year, where one portfolio company (treated) receives PE investment from a GP with a high proportion of E&S-concerned relationship LPs, and the other (control) receives investment from a GP with

a low proportion of E&S-concerned relationship LPs. In other words, if there is any effect on E&S risk brought about by PE investment in general, it will be absorbed by the deal-year $\times$ year fixed effect, as it will affect both our treated and control group.

Table 9 about here.

The results are presented in Table 9. Columns 1-3 of Table 9 report the results with number of E&S incidents as the dependent variable and columns 4-6 report the results with RepRisk Index as the dependent variable. The results indicate that there is a decrease in E&S risk post-investment by GPs with E&S-concerned investors. The coefficient in column 1 indicates that post-investment by a GP with E&S-concerned LPs, the number of E&S incidents decrease by 0.065, which is equivalent to 22% of the unconditional mean of number of E&S incidents (0.30) in the sample. The result is robust to different specifications and the magnitude of the coefficient remains similar as we add further controls. Industry $\times$ year FE controls for aggregate shocks at the industry level that may lead to higher incidents in an industry in a given year. Column 3 includes country/state $\times$ year FE in addition to industry $\times$ year FE.³² This specification controls for country or state specific regulatory risk that may incentivize PE firms to engage with their portfolio companies as in Bellon (2022). We show that PE firms with E&S-concerned relationship LPs engage with their portfolio companies to improve E&S outcomes over and above the effect that may come from state/country specific ESG regulation risk.

In columns 4-6, we run the same specification using RepRisk Index and find similar results. The RepRisk Index is an index developed by RepRisk that captures the risk exposure of a company to ESG issues. We find that post-investment by GPs with above median proportion of E&S-concerned investors, the RepRisk index of portfolio companies significantly decreases. The effect is economically significant. The coefficient in column 4 implies a decrease of 0.77 in the RepRisk Index post-investment by GPs with E&S-concerned LPs, which represents a decrease of 21% relative to the mean RepRisk Index of 3.70. The result is robust to including industry $\times$ year FE and country/state $\times$ year FE. The coefficient remains very stable across different specifications.

³²The country/state variable is defined as the respective country for countries outside the US and as the respective state for the US.

Figure 4 about here.

Figure 4 presents the dynamic results relative to the year of PE investment. There is no pre-trend before PE investments, and there is a decline in the number of E&S incidents at portfolio companies after receiving investment from PE firms with a high proportion of E&S-concerned LPs. It takes some time for the effect to show up, and we see a decline starting in year 3 from the year of the investment. Our interpretation is that it takes time to put in place policies and procedures to change E&S outcomes at portfolio companies. Along similar lines, we see a decline in the RepRisk index in the dynamic specification in event time in Panel B of the Figure.

We attribute the decrease in E&S risk at portfolio companies of GPs with E&S-concerned LPs to engagement by the PE firm on E&S issues. In practice, PE firms can engage with their portfolio companies by providing advice, mandating compliance with internal guidelines, or influencing decision making through board seats. We acknowledge that we cannot fully rule out the possibility of a screening channel, i.e., PE firms with a high proportion of E&S-concerned LPs screen investments based on firms' (expected) future decrease in E&S risk. Our results align more closely with an engagement channel, particularly since the decrease in E&S risk takes time to emerge. This evidence is consistent with the vast literature on PE firms' engagement with portfolio companies to add value (e.g., Boucly et al., 2011; Davis et al., 2014; Lerner et al., 2011).

Overall, the evidence suggests that PE firms with E&S-concerned relationship investors engage with their portfolio companies to improve E&S-related outcomes. This result is in line with the theoretical model by Broccardo et al. (2022), in which investors can transmit their preferences to intermediaries such as PE firms by voting with their feet (a form of "exit") to induce "voice". This mechanism is effective because it operates by shrinking the asset base of the PE firm, making it material to the firm. LPs with E&S concerns threaten to exit—i.e., not recommit to the next fund raised by the PE firm—inducing the firm to engage with its portfolio companies to improve their E&S outcomes.

7 Conclusion

This paper provides novel evidence on how ESG concerns affect capital flows and the associated outcomes in the PE industry. Relationship LPs with E&S concerns tend to steer their capital

away from PE firms with a low E&S footprint. Due to the relationship feature of private equity fundraising, PE firms are not able to substitute the loss of relationship LPs with new LPs, and as a result E&S incidents can lead to substantial financial losses for PE managers.

Importantly, PE firms internalize the E&S concerns from their relationship LPs. We provide causal evidence by leveraging the basket clause reform of New York public pension funds, which expanded New York public pension allocation to private equity, as a source of exogenous variation in E&S-concerned capital supply. PE firms with ex-ante relationships to the reformed pensions respond to the reform by reallocating their portfolios away from dirty sectors and improving ESG practices to align with the E&S concerns of the additional capital supply. We also show that the relationship LPs drive the PE firms to better manage E&S risks of their portfolio companies after making investments.

Overall, our results highlight an important channel through which responsible capital supply influences PE firm behavior in private markets. This channel may complement direct regulation of the PE industry in mitigating negative externalities associated with PE ownership.

Declaration of generative AI and AI-assisted technologies in the manuscript preparation process: During the preparation of this work the author(s) used ChatGPT in order to generating a list of ESG keywords and proof-reading the paper. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

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Figures

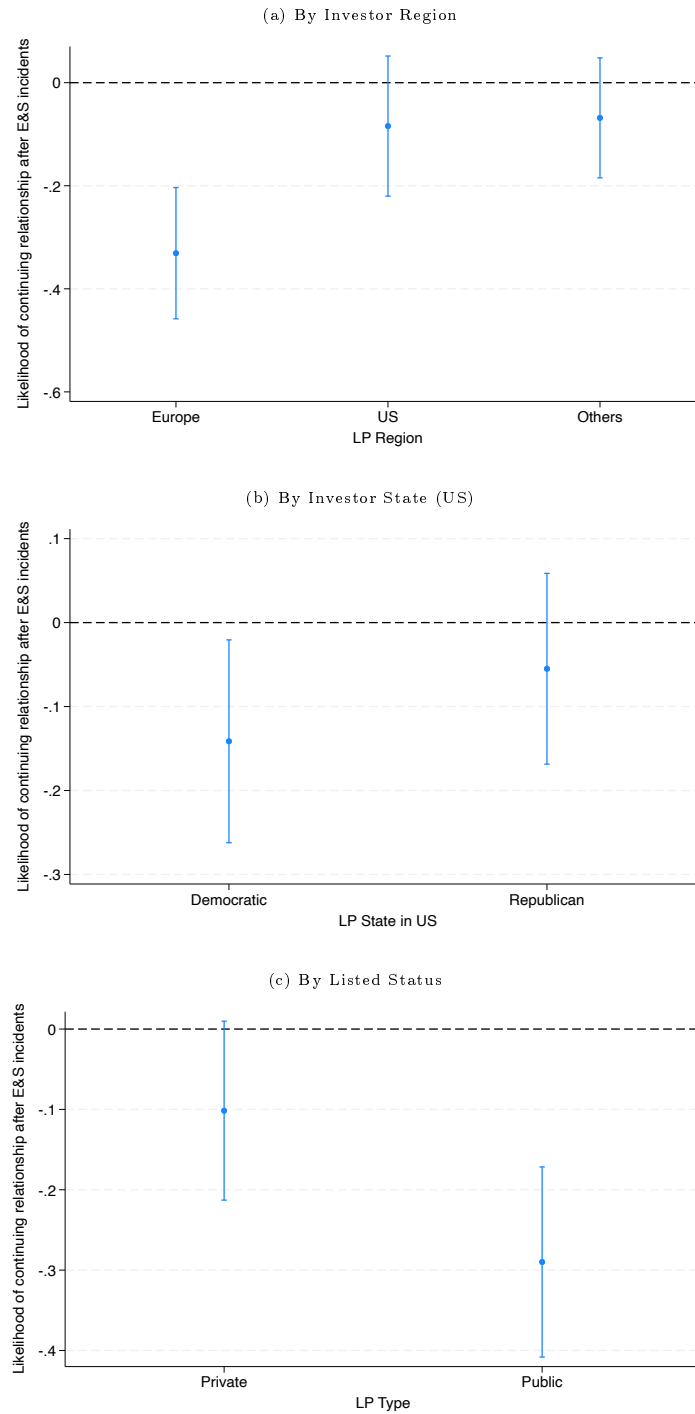
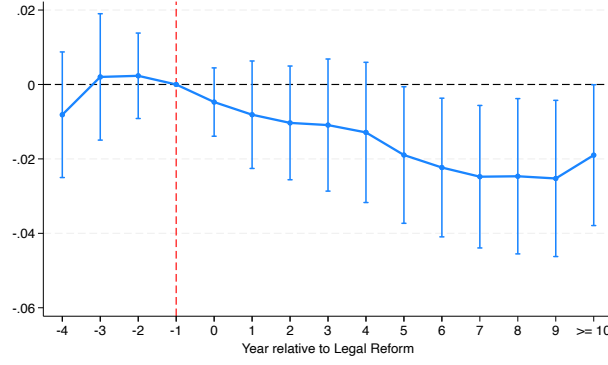
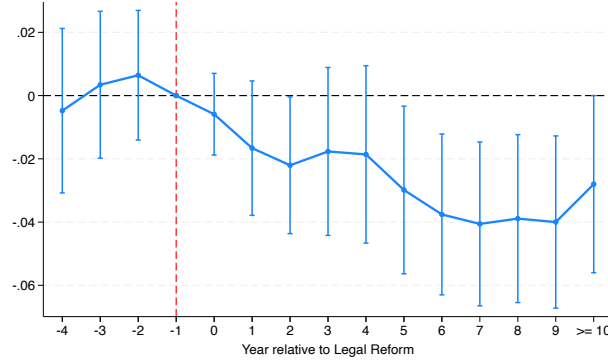


Figure 1: **Likelihood of continuing relationships after E&S incidents for different investor types:** This figure plots the coefficients of the estimation in Table 5. Panel (a) plots the coefficient estimates from column (1) in Table 5, where 'Europe' refers to LPs headquartered in Europe, 'US' refers to those headquartered in the United States, and 'Others' refers to those headquartered in all other regions. Panel (b) plots the coefficient estimates from column (2) in Table 5, where 'Democratic' denotes LPs headquartered in states that voted Democrat in the 2016 presidential election, and 'Republican' denotes those headquartered in states that voted Republican. Panel (c) plots the coefficient estimates from column (3) in Table 5, where 'Private' denotes non-listed LPs, and 'Public' denotes publicly listed LPs. The bars indicate the 95% confidence interval.



(b) Relationship PE firms with low ex-ante share of ESG LP



(c) Relationship PE firms with high ex-ante share of ESG LP

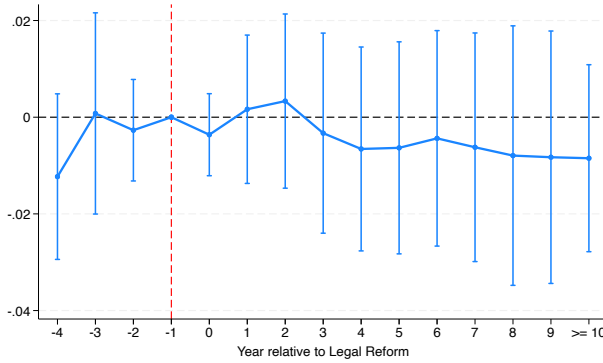


Figure 2: Change in portfolio allocation to dirty industries following New York public pension reform: This figure plots the dynamic coefficients from the difference-in-differences estimation of the impact of the basket-clause reform on PE firms' portfolio allocation to dirty sectors. Specifically, subfigure (a) plots the point estimates as well as 95% confidence intervals of β_s from the regression

$$FracDirty_{i,t} = \alpha + \sum_k \beta_k \mathbb{1}\{year\ k\ relative\ to\ legal\ reform\} \times \mathbb{1}\{Relationship\ with\ NY\ Public\ Pension\} + \gamma_i + \theta_{strat} \times t + \eta_{cty/state} \times t + \delta_{NY\ LP} \times t + \tau_{PubPen\ LP} \times t + \zeta_{ESG\ LP} \times t + \epsilon_{i,t}$$

Subfigure (b) and (c) plot the point estimates as well as 95% confidence intervals of β^L s and β^H s respectively from following regression

$$FracDirty_{i,t} = \alpha + \sum_k \beta_k^L \mathbb{1}\{year\ k\ rela.\ to\ reform\} \times \mathbb{1}\{Relationship\ with\ NY\ Public\ Pension\ \&\ share\ ESG\ LP\ below\ median\} + \sum_k \beta_k^H \mathbb{1}\{year\ k\ rela.\ to\ reform\} \times \mathbb{1}\{Relationship\ with\ NY\ Public\ Pension\ \&\ share\ ESG\ LP\ above\ median\} + \gamma_i + \theta_{strat} \times t + \eta_{cty/state} \times t + \delta_{NY\ LP} \times t + \tau_{PubPen\ LP} \times t + \zeta_{ESG\ LP} \times t + \epsilon_{i,t}$$

The dependent variable is the share of portfolio holdings in dirty industries, defined as mining, oil&gas, transportation, power&utilities, and defence. Year 0 refers to 2005 when New York public pension has the basket-clause reform. $\mathbb{1}\{Relationship\ with\ NY\ Public\ Pension\}$ is a dummy indicating the PE firm i had relationship with (received capital commitment from) New York public pensions up to 2004. $share\ ESG\ LP\ above\ (below)\ median$ indicates whether the share of ESG-concerned relationship LPs are above (below) median in 2004. All regressions include PE-firm FE, year $\times$ PE strategy FE, year $\times$ PE country/state FE, Year $\times$ quartile-share NY LP FE, Year $\times$ quartile-share public pension FE, and year $\times$ quartile-share ESG-LP FE. Confidence intervals based on standard errors clustered at the PE-firm level.

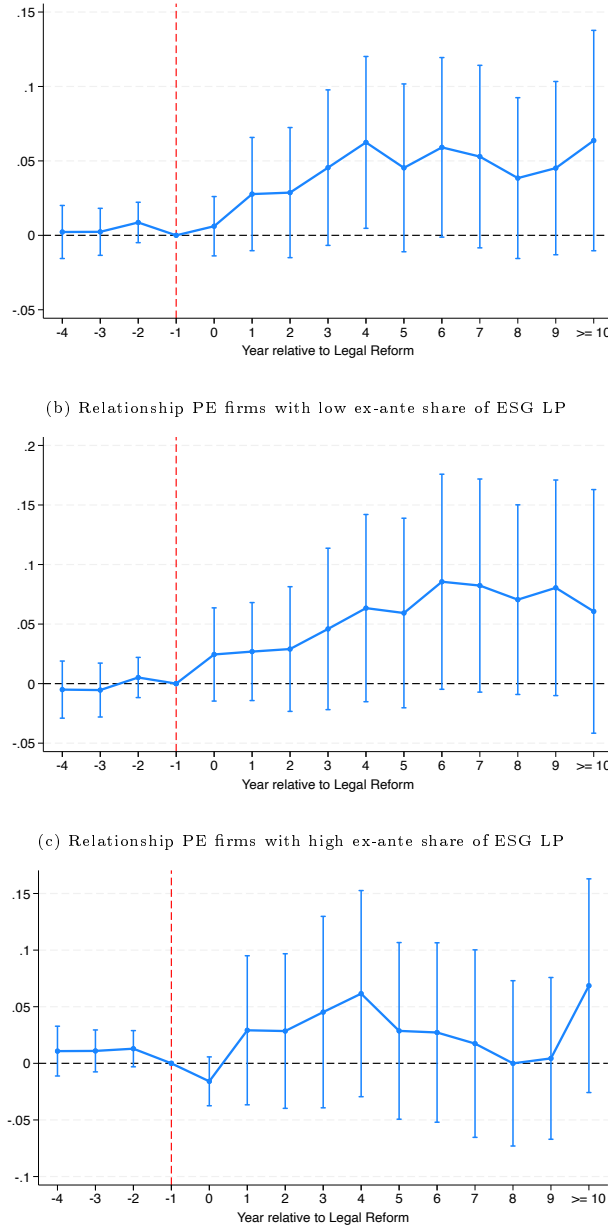


Figure 3: **Likelihood of hiring an ESG employee following New York public pension reform:** This figure plots the coefficients from the difference-in-differences estimation of the impact of the basket-clause reform on PE firms' likelihood of hiring an ESG employee. Specifically, subfigure (a) plots the point estimates as well as 95% confidence intervals of β_s from the regression $D(ESG\ Employee)_{i,t} = \alpha + \sum_k \beta_k \mathbf{1}\{year\ k\ relative\ to\ legal\ reform\} \times \mathbf{1}\{Relationship\ with\ NY\ Public\ Pension\} + \gamma_i + \theta_{strat \times t} + \eta_{cty/state \times t} + \delta_{NY\ LP \times t} + \tau_{PubPen\ LP \times t} + \zeta_{ESG\ LP \times t} + \epsilon_{i,t}$

Subfigure (b) and (c) plot the point estimates as well as 95% confidence intervals of β^L s and β^H s respectively from following regression

$$D(ESG\ Employee)_{i,t} = \alpha + \sum_k \beta_k^L \mathbf{1}\{year\ k\ rela.\ to\ reform\} \times \mathbf{1}\{Relationship\ with\ NY\ Public\ Pension\ \&\ share\ ESG\ LP\ below\ median\} + \sum_k \beta_k^H \mathbf{1}\{year\ k\ rela.\ to\ reform\} \times \mathbf{1}\{Relationship\ with\ NY\ Public\ Pension\ \&\ share\ ESG\ LP\ above\ median\} + \gamma_i + \theta_{strat \times t} + \eta_{cty/state \times t} + \delta_{NY\ LP \times t} + \tau_{PubPen\ LP \times t} + \zeta_{ESG\ LP \times t} + \epsilon_{i,t}$$

The dependent variable is an dummy indicating PE firm i has at least one ESG-related employee in year t . Year 0 refers to 2005 when New York public pension has the basket-clause reform. $\mathbf{1}\{Relationship\ with\ NY\ Public\ Pension\}$ is a dummy indicating the PE firm i had relationship with (received capital commitment from) New York public pensions up to 2004. $share\ ESG\ LP\ above\ (below)\ median$ indicates whether the share of ESG-concerned relationship LPs are above (below) median in 2004. All regressions include PE-firm FE, year $\times$ PE strategy FE, year $\times$ PE country/state FE, Year $\times$ quartile-share NY LP FE, Year $\times$ quartile-share public pension FE, and year $\times$ quartile-share ESG-LP FE. Confidence intervals based on standard errors clustered at the PE-firm level.

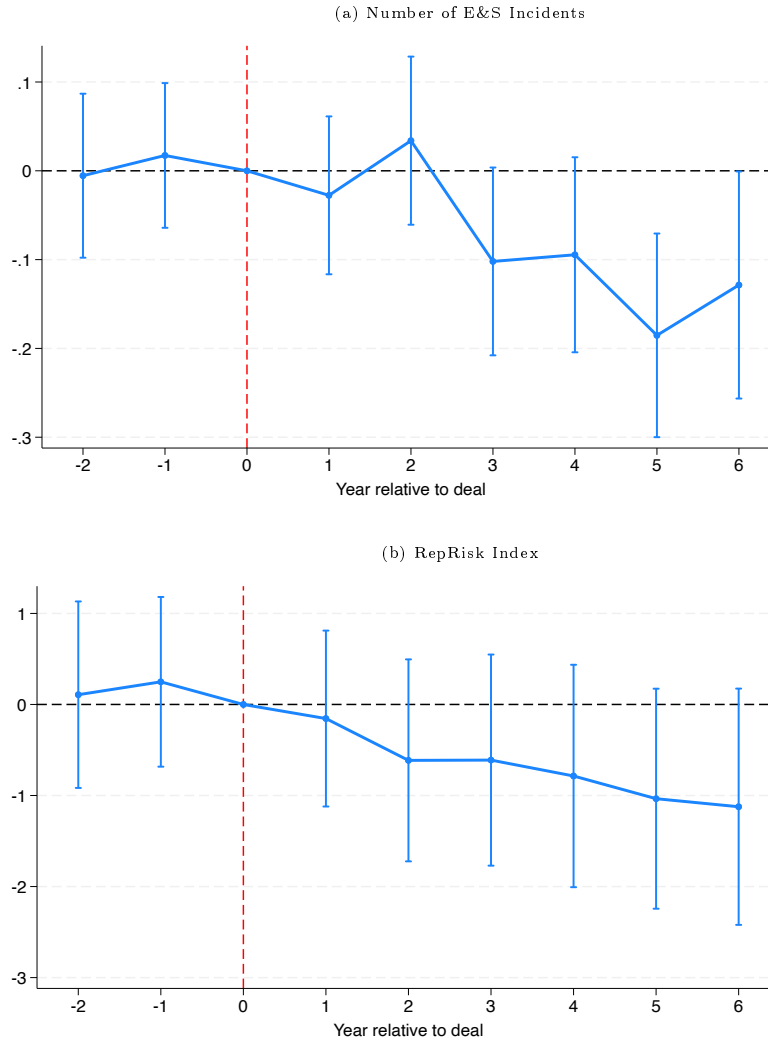


Figure 4: **Dynamic Plot of E&S Risk of Portfolio Companies after PE investments:** The figure depicts E&S outcomes at portfolio companies of PE firms with a high proportion of E&S-concerned LPs compared to those of PE firms with a low proportion of E&S-concerned LPs post-investment. Specifically, it plots the point estimates as well as 95% confidence intervals of β s of the following regression:

$$Y_{i,t} = \alpha + \sum_{k=-2}^6 \beta_k \mathbb{1}\{\text{year } k \text{ relative to PE investment}\} \times \text{High prop. of E\&S-concerned LPs}_i + \theta_{\text{deal year} \times t} + \mu_{\text{Industry} \times t} + \eta_{\text{Country/State} \times t} + \gamma_i + \epsilon_{i,t}$$

High prop. of E&S-concerned LPs is a dummy variable indicating that portfolio company i receives investment by a PE firm whose relationship LPs have above median proportion of LPs based in Europe, LPs in democratic-leaning states of the US or publicly listed LPs. Event time for a portfolio company is defined relative to the year it receives investment from the PE firm. In Panel (a), the dependent variable is num. E&S incidents. In Panel (b), the dependent variable is the RepRisk index. Confidence intervals are based on standard errors clustered by portfolio companies.

Tables

Panel A: Fund N+1 - Fund N data structure								
	Obs	Mean	Sd	5%	25%	50%	75%	95%
Num. of RepRisk firms	505	2.64	2.56	1.00	1.00	2.00	3.00	8.00
Avg. num. ESG incidents	505	0.48	3.10	0.00	0.00	0.00	0.49	1.25
Avg. num. E&S incidents	505	0.29	2.14	0.00	0.00	0.00	0.17	1.00
Avg. num. G incidents	505	0.20	1.38	0.00	0.00	0.00	0.00	0.61
Fund N multiple	505	1.86	0.61	1.08	1.45	1.74	2.11	3.04
Fund N fund series number	505	4.25	2.49	1.00	2.00	4.00	6.00	9.00
Fund N size (billion USD)	505	2.93	4.10	0.19	0.50	1.20	3.50	11.94
Fund N+1 size (billion USD)	505	3.69	4.86	0.24	0.72	1.75	4.66	14.50
Fund N+1 size / Fund N size	505	1.42	0.67	0.62	1.10	1.35	1.67	2.24
Years btw. fund N. and N+1	505	4.43	1.54	2.00	3.00	4.00	5.00	7.00
Num. LPs fund N	505	29.06	27.60	3.00	10.00	19.00	37.00	88.00
Num. LPs fund N+1	505	22.69	23.23	1.00	7.00	15.00	31.00	72.00

Panel B: Fund N+1 - Fund N - LP data structure								
	Obs	Mean	Sd	5%	25%	50%	75%	95%
D(LP invest in Fund N)	1051915	0.02	0.13	0.00	0.00	0.00	0.00	0.00
D(LP invest in Fund N+1)	1051915	0.01	0.12	0.00	0.00	0.00	0.00	0.00
Num. of previous funds an LP has invested	1051915	0.04	0.36	0.00	0.00	0.00	0.00	0.00
D(an LP has invested in previous funds)	1051915	0.02	0.14	0.00	0.00	0.00	0.00	0.00
Num. of E&S incidents	1051915	0.29	2.14	0.00	0.00	0.00	0.17	1.00
Fund N size (billion USD)	1051915	2.93	4.10	0.19	0.50	1.20	3.50	11.94
Fund N multiple	1051915	1.86	0.61	1.08	1.45	1.74	2.11	3.04
Fund N fund series number	1051915	4.25	2.48	1.00	2.00	4.00	6.00	9.00
Avg. num. of fund N an LP invests	1051915	9.16	23.57	0.00	1.00	3.00	7.00	37.00
Avg. num. of fund N+1 an LP invests	1051915	7.34	21.05	0.00	1.00	2.00	5.00	33.00

Panel C: PE firm - Year panel								
	Obs	Mean	Sd	5%	25%	50%	75%	95%
FracDirty	12,695	0.03	0.07	0.00	0.00	0.00	0.02	0.17
D(ESG Employee)	12,695	0.06	0.25	0.00	0.00	0.00	0.00	1.00
Num. ESG Employee	12,695	0.13	0.59	0.00	0.00	0.00	0.00	1.00
D(rela. NY Public Pension)	12,695	0.16	0.37	0.00	0.00	0.00	0.00	1.00

Table 1: **Summary statistics:** The table reports the summary statistics of the main variables used in the analysis. Panel A reports the summary statistics for variables based on the fund N+1 - fund N data structure, where each observation corresponds to a fund N+1 - fund N pair. *Num. of RepRisk firms* is the number of firms covered by RepRisk among fund N's portfolio companies. *Avg. num. ESG (E&S, G) incidents* is the average number of ESG (E&S, G) incidents two years before fund N+1 is raised. *Years btw. fund N and N + 1* measures the difference in vintage years between fund N and fund N+1. *Number LPs* is the average number of LPs that have committed to a fund. Panel B reports the summary statistics for a fund N - fund N+1 - LP data structure. *D(LP invest in fund N)* is a dummy variable equal to one if the LP invests in fund N. *Num. of previous funds an LP has invested* denotes the number of funds in which an LP has invested in the same PE firm before fund N+1 is raised. *D(an LP has invested in previous funds)* is a dummy variable indicating *Num. of previous funds an LP has invested* > 0. *Avg. num. of fund N an LP invests* denotes the average number of funds in which an LP invests in the sample. Panel C reports the summary statistics for the PE firm - Year panel data structure. *FracDirty* is the fraction of portfolio holdings in oil and gas, mining, transportation, power and utilities, and defence. *D(ESG employee)* is an indicator equal to one if the PE firm has at least one ESG employee on staff in a given year. *Num. ESG employee* is the number of ESG employee on staff in a given year at the PE firm. *D(rela. NY Public Pension)* is an indicator equal to one for a pre-reform relationship with a New York public pension fund, defined as having received commitments before 2005 (i.e., up to and including 2004).

	Fund N+1 Size/Fund N Size					
	(1)	(2)	(3)	(4)	(5)	(6)
$\log(1 + \text{num. E\&S incidents})$	-0.142** (0.062)	-0.158** (0.062)	-0.174*** (0.065)			
Low number of E&S incidents				0.009 (0.048)	-0.007 (0.049)	-0.022 (0.054)
High number of E&S incidents				-0.113** (0.048)	-0.133*** (0.048)	-0.156*** (0.046)
$\log(\text{fund N size})$	-0.086*** (0.019)	-0.082*** (0.020)	-0.067*** (0.021)	-0.089*** (0.022)	-0.083*** (0.022)	-0.065*** (0.024)
$\log(\text{fund N multiple})$	0.255*** (0.071)	0.249*** (0.070)	0.220*** (0.074)	0.245*** (0.072)	0.241*** (0.072)	0.213*** (0.075)
$\log(\text{fund N series number})$	-0.129*** (0.046)	-0.147*** (0.046)	-0.169*** (0.046)	-0.129*** (0.047)	-0.147*** (0.046)	-0.170*** (0.046)
Fund N Vintage Year $\times$ Fund N+1 Vintage Year FE	✓			✓		
PE Region FE	✓			✓		
Fund N Vintage Year $\times$ Fund N+1 Vintage Year $\times$ PE Region FE		✓	✓		✓	✓
Industry Controls			✓			✓
Observations	505	505	505	505	505	505
R ²	0.42	0.48	0.50	0.42	0.48	0.50

Table 2: **Effect of E&S incidents on relative size of follow-up funds:** This table reports the results of a regression of fund size growth on previous fund's E&S incidents. The dependent variable in columns (1)-(6) is the fund size growth defined by $\frac{Size_{N+1}}{Size_N}$, which is committed capital to fund $N+1$ divided by committed capital to fund N . In columns (1)-(3), $\log(1 + \text{num. E\&S incidents})$ refers to the logarithm of one plus the average number of E&S incidents of the previous fund (fund N) in the two years prior to raising a follow-up fund. In column (4)-(6), *Low E&S incidents* (*High E&S incidents*) are dummy variables indicating fund N has had an below (above) median average number of incidents (conditional on having incidents) two years prior to raising a follow-up fund. The omitted category consists of funds with no incidents two years prior to raising a follow-up fund. $\log(\text{fund N size})$ is the natural logarithm of AUM of fund N . $\log(\text{fund N multiple})$ is the natural logarithm of net multiple of fund N . $\log(\text{fund N series})$ is natural logarithm of the sequence number of fund N of a given series. Columns (1) and (4) include Fund $N \times$ Fund $N+1$ vintage year fixed effects and PE Region FE. Columns (2), (3), (5) and (6) include Fund $N \times$ Fund $N+1$ vintage year $\times$ PE Region FE fixed effects. In Columns (3) and (6), Industry Controls includes separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N+1$. Standard errors, reported in parentheses, are clustered by PE firms and by fund vintage year pairs. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Fund N+1 Size/Fund N Size							
	(1) Young	(2) Old	(3) Small	(4) Large	(5) Low-perf	(6) High-perf	(7) Low-reputation	(8) High-reputation
Low number of E&S incidents	-0.073 (0.064)	0.062 (0.064)	0.043 (0.067)	-0.064 (0.075)	-0.118* (0.066)	0.019 (0.056)	-0.024 (0.087)	-0.018 (0.058)
High number of E&S incidents	-0.193*** (0.063)	-0.068 (0.070)	-0.206*** (0.060)	-0.078 (0.057)	-0.193*** (0.065)	-0.134** (0.059)	-0.214*** (0.060)	-0.123** (0.058)
log(fund N size)	-0.069*** (0.024)		-0.068** (0.026)		-0.067*** (0.024)		-0.068*** (0.024)	
log(fund N multiple)	0.226*** (0.075)		0.204*** (0.074)		0.212*** (0.076)		0.212*** (0.075)	
log(fund N series number)	-0.175*** (0.046)		-0.166*** (0.046)		-0.173*** (0.046)		-0.170*** (0.047)	
Fund N Vintage Year × Fund N+1 Vintage Year × PE Region FE	✓		✓		✓		✓	
Industry Controls	✓		✓		✓		✓	
Observations	505		505		505		505	
R ²	0.51		0.51		0.51		0.51	

Table 3: **Effect of E&S incidents for low and high-reputation PE firms:** The table reports the results of a regression of fund size growth on previous fund's E&S incidents splitting the coefficient by different measures of PE firm reputation. The dependent variable in columns (1)-(8) is the fund size growth defined by $\frac{Size_{N+1}}{Size_N}$, which is committed capital to fund $N + 1$ over committed capital to fund N . The independent variables *Low E&S incidents* (*High E&S incidents*) are dummy variables indicating fund N had below (above) median average number of incidents (conditional on having incidents) two years prior to raising a follow-up fund. The independent variables are *Low cum E&S incidents* (*High cum E&S incidents*) are dummy variables indicating below (above) below median cumulative average number of incidents from fund N inception till year $t - 1$, conditional on any incidents occurring in this period. In column (1) Young is a dummy variable equal to 1 if the PE firm is in the bottom three quartiles in terms of the number of funds raise. In column (3) Small is a dummy variable equal to 1 if the PE firm is in the bottom three quartiles in terms of total AUM raise. In column (5) Low-perf is a dummy variable equal to 1 if the PE firm has no top quartile performing funds older than 5 years one year prior to new fund's fundraising. In column (7) Low-reputation is a dummy variable taking on value 1 if the PE firm is Young, Small and Low-perf. Columns (2), (4), (6) and (8) are defined as complements to column (1), (3), (5) and (7) respectively. Industry Controls include separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N + 1$. Standard errors, reported in parentheses, in Panel A are clustered by PE firms and by fund vintage year pairs. Standard errors, reported in parentheses, in Panel B are clustered by PE firms. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Dummy(Invest in Fund N+1)				
	(1)	(2)	(3)	(4)	(5)
Relationship LP	0.311*** (0.032)	0.314*** (0.031)	0.311*** (0.032)	0.331*** (0.036)	0.335*** (0.035)
$\log(1 + \text{num. E\&S incidents})$			-0.000 (0.002)	0.002* (0.001)	
Relationship LP $\times$ $\log(1 + \text{num. E\&S incidents})$				-0.116** (0.055)	-0.120** (0.054)
$\log(\text{fund N series number})$	-0.000 (0.001)		-0.000 (0.001)	0.000 (0.001)	
$\log(\text{fund N size})$	0.004*** (0.001)		0.004*** (0.001)	0.004*** (0.001)	
$\log(\text{Fund N Multiple})$	0.005*** (0.001)		0.005*** (0.001)	0.005*** (0.001)	
Fund N+1 Vintage Year $\times$ PE Region $\times$ LP FE	✓	✓	✓	✓	✓
Fund N+1 FE		✓			✓
Industry Controls	✓	✓	✓	✓	✓
Observations	1051915	1051915	1051915	1051915	1051915
R^2	0.31	0.31	0.31	0.31	0.31

Table 4: **LP-GP relationship and E&S incidents.** This table reports the results of a regression of the propensity of an LP to finance fund $N + 1$ and how this propensity changes with the number of E&S incidents. This analysis is conducted using an LP-fund N data structure. The dependent variable is a dummy variable equal to 1 if a given LP invests in fund $N + 1$, and 0 otherwise. *Relationship LP* is a dummy variable indicating that an LP has invested in other funds of a given PE firm before fund $N + 1$ is raised. $\log(1 + \text{num. E\&S incidents})$ refers to the logarithm of one plus the average number of E&S incidents of the current fund (fund N) in the two years prior to raising a follow-up fund. $\log(\text{fund } N \text{ size})$ is the natural logarithm of AUM of fund N . $\log(\text{fund } N \text{ multiple})$ is the natural logarithm of net multiple of fund N . $\log(\text{fund } N \text{ series})$ is the natural logarithm of the sequence number of fund N of a given series. In columns (1), (3) and (4), we include Fund $N + 1$ vintage year $\times$ PE Region $\times$ LP fixed effects. In columns (2) and (5), we include Fund $N + 1$ vintage year $\times$ PE Region $\times$ LP fixed effects and Fund $N + 1$ fixed effects. Industry Controls include separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N + 1$. Standard errors, reported in parentheses, are clustered by PE firms and by fund vintage year pairs. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Dummy(Invest in Fund N+1)		
	(1)	(2)	(3)
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Europe}$	-0.331*** (0.064)		
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, US}$	-0.068 (0.058)		
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Others}$	-0.084 (0.068)		
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Democratic}$		-0.141** (0.061)	
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Republican}$		-0.055 (0.057)	
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Private LP}$			-0.102* (0.056)
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Public LP}$			-0.290*** (0.059)
Relationship LP	0.332*** (0.036)	0.361*** (0.036)	0.332*** (0.036)
$\log(1 + \text{num. E\&S incidents})$	0.002* (0.001)	0.003* (0.001)	0.002* (0.001)
$\log(\text{fund N series number})$	-0.000 (0.001)	0.001 (0.001)	0.000 (0.001)
$\log(\text{fund N size})$	0.004*** (0.001)	0.004*** (0.001)	0.004*** (0.001)
$\log(\text{Fund N Multiple})$	0.005*** (0.001)	0.006*** (0.002)	0.005*** (0.001)
Fund N+1 Vintage Year $\times$ PE Region $\times$ LP FE	✓	✓	✓
Industry Controls	✓	✓	✓
Observations	1051915	636,805	1051915
R^2	0.31	0.33	0.31

Table 5: **Heterogeneity in LP reaction and E&S incidents.** This table reports the results of a regression of the propensity of an LP to finance fund $N+1$ and how this propensity changes with the number of E&S incidents. This analysis is conducted using an LP-fund N data structure. The dependent variable is a dummy variable equal to 1 if a given LP invests in fund $N+1$ and 0 otherwise. *Relationship LP* is a dummy variable indicating that an LP has invested in other funds of a given PE firm before fund $N+1$ is raised. $\log(1 + \text{num. E\&S incidents})$ refers to the logarithm of one plus the average number of E&S incidents at the current fund (fund N) in the two years prior to raising a follow-up fund. $\log(\text{fund } N \text{ size})$ is the natural logarithm of AUM of fund N . $\log(\text{fund } N \text{ multiple})$ is the natural logarithm of net multiple of fund N . $\log(\text{fund } N \text{ series})$ is natural logarithm of the sequence number of fund N of a given series. *Relationship LP, Europe*, *Relationship LP, US*, *Relationship LP, Others* are indicators taking a value of 1, if the LP is a relationship LP and is headquartered in the Europe, the United States, or in other regions respectively. *Relationship LP, Democratic* and *Relationship LP, Republican* are indicators equal to 1 if the LP is a relationship LP and is headquartered in a Democratic-leaning or Republican-leaning state respectively. *Relationship LP, Public*, *Relationship LP, Private* are indicators equal to 1 if the LP is a relationship LP and is Public or Private, respectively. In all specifications we include Fund $N+1 \times$ Vintage Year $\times$ PE Region $\times$ LP fixed effects. Industry Controls include separate controls for the fraction of investments in each industry sector by fund N one year prior to the follow-up fund being raised. Standard errors, reported in parentheses, are clustered by PE firms and by fund vintage year pairs. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Low Reputation	High Reputation	Low Reputation	High Reputation	Low Reputation	High Reputation
	(1)	(2)	(3)	(4)	(5)	(6)
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Europe}$	-0.270* (0.161)	-0.312*** (0.071)				
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, US}$	-0.271*** (0.100)	-0.017 (0.057)				
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Others}$	-0.288** (0.142)	-0.034 (0.064)				
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Democratic}$			-0.256** (0.097)	-0.108* (0.064)		
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Republican}$			-0.358*** (0.112)	-0.005 (0.054)		
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Private LP}$					-0.252** (0.098)	-0.054 (0.055)
$\log(1 + \text{num. E\&S incidents}) \times \text{Relationship LP, Public LP}$					-0.562*** (0.131)	-0.219*** (0.058)
Relationship LP	0.387*** (0.066)	0.304*** (0.037)	0.391*** (0.067)	0.343*** (0.037)	0.387*** (0.065)	0.303*** (0.037)
$\log(1 + \text{num. E\&S incidents})$	0.001 (0.001)	0.004* (0.002)	0.001 (0.002)	0.005* (0.003)	0.001 (0.001)	0.004* (0.002)
$\log(\text{fund N series number})$	-0.001 (0.001)	0.003 (0.002)	-0.000 (0.002)	0.004* (0.002)	-0.001 (0.001)	0.003* (0.002)
$\log(\text{fund N size})$	0.003*** (0.001)	0.004*** (0.001)	0.003*** (0.001)	0.004*** (0.001)	0.003*** (0.001)	0.004*** (0.001)
$\log(\text{Fund N Multiple})$	0.001 (0.001)	0.010*** (0.003)	0.002 (0.002)	0.013*** (0.003)	0.001 (0.001)	0.010*** (0.003)
Fund N+1 Vintage Year $\times$ PE Region $\times$ LP FE	✓	✓	✓	✓	✓	✓
Industry Controls	✓	✓	✓	✓	✓	✓
Observations	447,845	597,821	271,115	361,907	447,845	597,821
R ²	0.36	0.35	0.36	0.36	0.36	0.35

Table 6: **Heterogeneity in LP reaction and E&S incidents for Low and high-reputation PE firms.** This table reports the results of a regression of the propensity of an LP to finance fund $N + 1$ and how this propensity changes with the number of E&S incidents for different LP types and for Low and high-reputation PE firms. This analysis is conducted using an LP-fund N data structure. The dependent variable is a dummy variable taking a value 1 if a given LP invests in fund $N + 1$ and 0 otherwise. *Relationship LP* is a dummy variable indicating that an LP has invested in other funds of a given PE firm before fund $N + 1$ is raised. $\log(1 + \text{num. E\&S incidents})$ refers to the logarithm of one plus the average number of E&S incidents of the current fund (fund N) in the two years prior to raising a follow-up fund. $\log(\text{fund } N \text{ size})$ is the natural logarithm of AUM of fund N . $\log(\text{fund } N \text{ multiple})$ is the natural logarithm of net multiple of fund N . $\log(\text{fund } N \text{ series})$ is natural logarithm of the sequence number of fund N of a given series. *Relationship LP, Europe*, *Relationship LP, US*, *Relationship LP, Other* are indicators equal to 1, if the LP is a relationship LP and is headquartered in Europe, the US or in other regions, respectively. *Relationship LP, Democratic* and *Relationship LP, Republican* are indicators equal to 1 if the LP is a relationship LP and is headquartered in a Democratic-leaning or Republican-leaning state, respectively. *Relationship LP, Public*, *Relationship LP, Private* are indicators equal to 1 if the LP is a relationship LP and is Public or Private, respectively. In columns (1), (3) and (5), we estimate the regression for low-reputation PE firms. Low-reputation PE firms are PE firms that are in the bottom three quartiles in terms of number of funds raised, bottom three quartiles in terms of AUM raised and without a top quartile performing fund. In columns (2), (4) and (6), we estimate the regression for high-reputation PE firms. High-reputation PE firms are PE firms that are not low-reputation PE firms. In all specifications we include Fund $N + 1 \times$ Vintage Year $\times$ PE Region $\times$ LP fixed effects. Industry Controls are separate controls for the fraction of investments in each industry sector by fund N one year prior to the follow-up fund being raised. Standard errors, reported in parentheses, are clustered by PE firms and by fund vintage year pairs. * $p < .10$; ** $p < .05$; *** $p < .01$.

	FracDirty									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Post × D(Rela. NY Public Pension)	-0.014*** (0.003)	-0.014* (0.007)	-0.017** (0.008)	-0.017* (0.009)	-0.017* (0.009)					
Post × D(Rela. NY Public Pension), Low ex-ante ESG rela. LP						-0.027*** (0.004)	-0.029** (0.012)	-0.032*** (0.012)	-0.031** (0.013)	-0.029** (0.014)
Post × D(Rela. NY Public Pension), High ex-ante ESG rela. LP						0.001 (0.004)	0.003 (0.007)	0.001 (0.008)	-0.000 (0.009)	-0.003 (0.009)
PE Firm FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Strategy FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Country/State FE		✓	✓	✓	✓		✓	✓	✓	✓
Year × Quartile Share NY LP FE			✓	✓	✓			✓	✓	✓
Year × Quartile Share Pub Pension FE				✓	✓				✓	✓
Year × Quartile Share ESG LP FE					✓					✓
Observations	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274
R ²	0.61	0.63	0.63	0.64	0.64	0.61	0.63	0.64	0.64	0.64

Table 7: **Impact of Basket-Clause Reform on portfolio allocation to dirty industries:** The table reports difference-in-differences estimates of the impact of the basket-clause reform on PE firms' industry composition of holdings. The dependent variable is the share of portfolio holdings in "dirty" industries measured as the fraction of portfolio holdings in oil and gas, mining, transportation, power and utilities, and defence. *Post* is an indicator equal to one for years on or after 2005, following the basket-clause reform. *D(Rela. NY Public Pension)* is an indicator equal to one for PE firms that had established relationships with (received capital commitments from) New York public pensions prior to the reform, i.e., on or before 2004. Treatment is the interaction of these two indicators. Columns (1) to (5) report the baseline results and columns (6) to (10) present treatment results split by PE firms with low vs high ex-ante ESG LPs. All regressions include PE-firm fixed effects and year-by-PE strategy. Successive columns add Year × PE country/state, Year × quartile-share NY LP, Year × quartile-share public pension, and Year × quartile-share ESG-LP fixed effects. Standard errors, reported in parentheses, are clustered at the PE firm level. * p<.10; ** p<.05; *** p<.01.

	D(ESG employee)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Post × D(Rela. NY Public Pension)	0.040*** (0.011)	0.048** (0.023)	0.045* (0.024)	0.048* (0.025)	0.048* (0.025)					
Post × D(Rela. NY Public Pension), Low ex-ante ESG rela. LP						0.048*** (0.015)	0.061* (0.033)	0.057* (0.034)	0.059* (0.034)	0.059* (0.035)
Post × D(Rela. NY Public Pension), High ex-ante ESG rela. LP						0.030* (0.016)	0.033 (0.030)	0.032 (0.032)	0.034 (0.036)	0.034 (0.035)
PE Firm FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Strategy FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Country/State FE		✓	✓	✓	✓		✓	✓	✓	✓
Year × Quartile Share NY LP FE			✓	✓	✓			✓	✓	✓
Year × Quartile Share Pub Pension FE				✓	✓				✓	✓
Year × Quartile Share ESG LP FE					✓					✓
Observations	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274
R ²	0.57	0.62	0.62	0.63	0.63	0.57	0.62	0.62	0.63	0.63

Table 8: **Impact of Basket-Clause Reform on the Likelihood of Having an ESG Employee:** The table reports difference-in-differences estimates of the impact of the basket-clause reform on PE firms' likelihood of having ESG employees. The dependent variable is a binary indicator equal to one if the PE firm has at least one ESG professional on staff in that year. *Post* is an indicator equal to one for years on or after 2005, following the basket-clause reform. *D(Rela. NY Public Pension)* is an indicator equal to one for PE firms that had established relationships with (received capital commitments from) New York public pensions prior to the reform, i.e., on or before 2004. Treatment is the interaction of these two indicators. Columns (1) to (5) report the baseline results and columns (6) to (10) present treatment results split by PE firms with low vs high ex-ante ESG LPs. All regressions include PE-firm fixed effects and year-by-PE strategy fixed effects. Successive columns add Year × PE country/state, Year × quartile-share NY LP, Year × quartile-share public pension, and Year × quartile-share ESG-LP fixed effects. Standard errors, reported in parentheses, are clustered at the PE firm level. * p<.10; ** p<.05; *** p<.01.

	Number of E&S Incidents			RepRisk Index		
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Investment $\times$ High prop. ESG-concerned Rela. LPs	-0.065** (0.030)	-0.064** (0.031)	-0.071* (0.036)	-0.765** (0.301)	-0.795*** (0.304)	-0.737** (0.339)
Firm FE	✓	✓	✓	✓	✓	✓
Year $\times$ Deal-Year FE	✓	✓	✓	✓	✓	✓
Industry $\times$ Year FE		✓	✓		✓	✓
Country/State $\times$ Year FE			✓			✓
Observations	13,693	13,693	13,693	13,693	13,693	13,693
R^2	0.64	0.65	0.69	0.42	0.43	0.49

Table 9: **E&S Risk of Portfolio Companies after PE investments:** The table reports E&S outcomes at portfolio companies of PE firms with a high proportion of E&S-concerned LPs compared to those of PE firms with a low proportion of E&S-concerned LPs post-investment. The data are structured at a portfolio company-year level. Post-investment for a portfolio company equals 1 if year t is after it receives PE investment, and 0 otherwise. High proportion of ESG-concerned rela. LPs is defined as above median proportion of LPs based in Europe, LPs in democratic-leaning states of the US or publicly listed LPs. The dependent variable in columns (1)-(3) is the number of E&S incidents and the dependent variable in columns (4)-(6) is RepRisk index. In columns (1) and (4), we include Firm FE and Year $\times$ Deal year FE. We add a stricter set of fixed effects in subsequent columns. Columns (2) and (5) include Industry $\times$ Year FE in addition to Firm FE and Year $\times$ Deal year FE. Columns (3) and (6) include Country/State $\times$ Year FE in addition to the previous set of fixed effects. Standard errors, reported in parentheses, are clustered at the portfolio company level. * $p < .10$; ** $p < .05$; *** $p < .01$.

Internet Appendix

ESG Incidents and Fundraising in Private Equity

(not intended for publication)

Internet Appendix A: Appendix Figures and Tables



Figure A1: **E/S/G issues in RepRisk:** This figure exhibits the types of E/S/G incident issues from RepRisk.

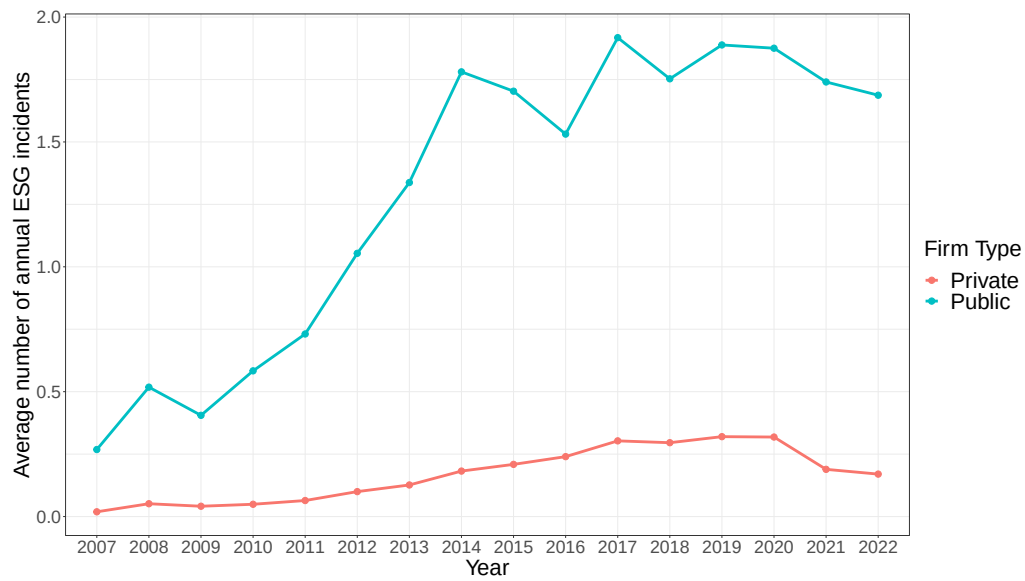


Figure A2: **Average number of RepRisk ESG incidents over time:** This figure plots the average number of incidents per year for public and private firms in RepRisk and includes all firms covered by RepRisk. The blue line represents public firms and red line represents private firms.

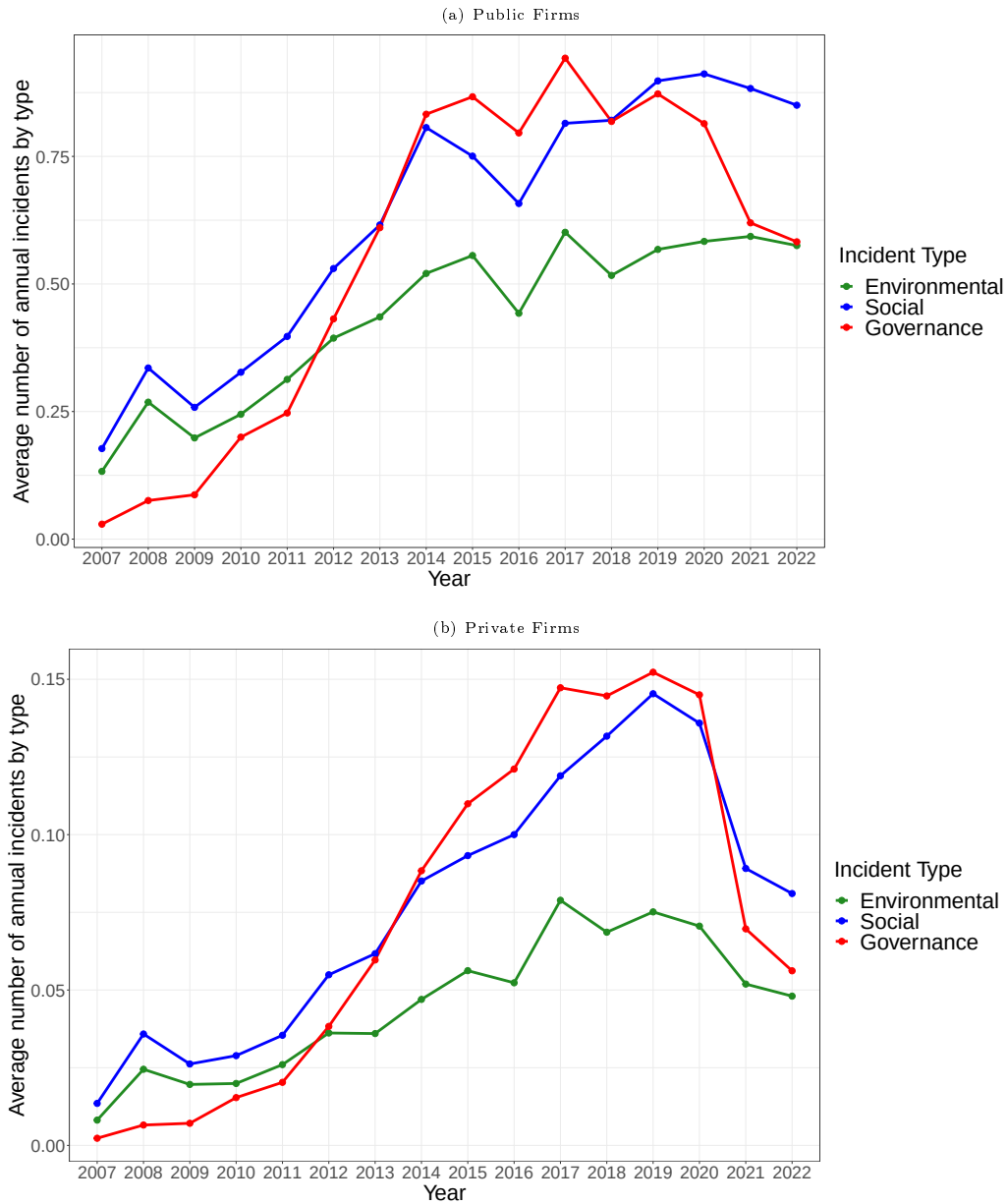


Figure A3: **Average number of incidents by incident type:** This figure plots the number of annual incidents by E/S/G types per year. It includes all firms covered by RepRisk. Green, blue and red lines correspond to environmental, social and governance incidents, respectively. Subfigure (a) plots the trend for public firms and subfigure (b) plots the trend for private firms.

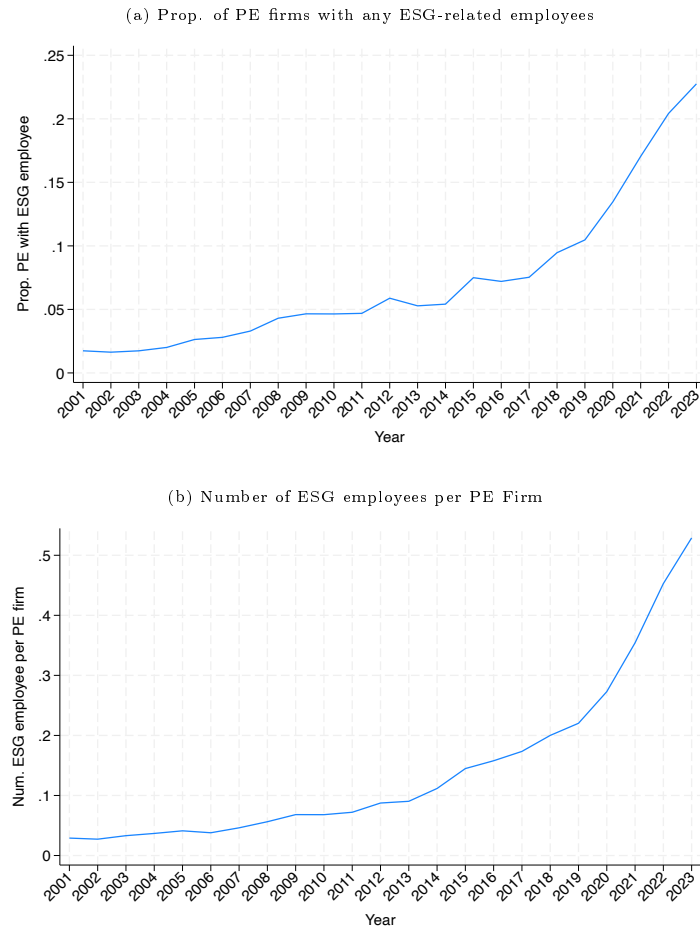


Figure A4: **Trends in ESG employees at PE Firms:** This figure shows the evolution of ESG-related employment in private equity (PE) firms over time in our sample. The sample period is 2001-2023. Panel (a) plots the proportion of PE firms that have at least one ESG-related employee in each year. Panel (b) plots the average number of ESG employees per PE firm by year.

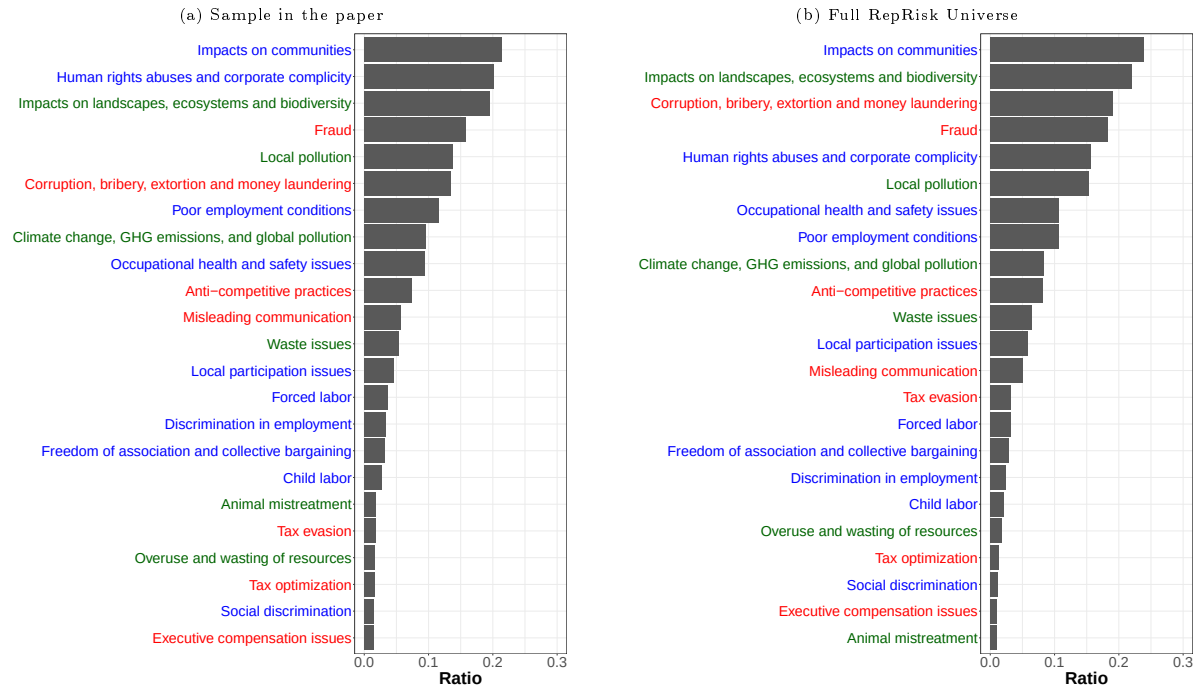


Figure A5: **Distribution of ESG issues:** This figure plots the distribution of ESG issues for firms in our sample and the full RepRisk database. Note that one incident can be associated with multiple issues so the distribution does not sum to 1. The y-axis represents the issue names, while the x-axis shows the ratio of incidents related to a particular issue out of the total incidents. Green, blue and red issues indicate issues related to environmental, social and governance incidents, respectively. Subfigure (a) plots the distribution for firms in our sample, and subfigure (b) plots the distribution for the full RepRisk database.

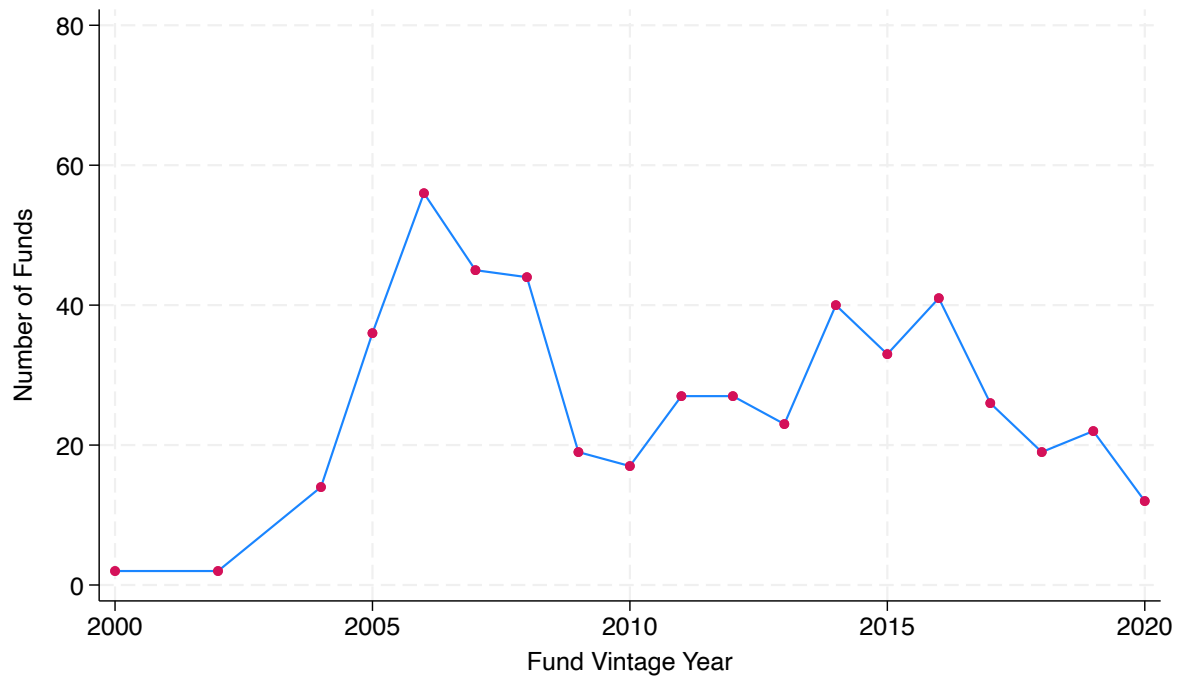


Figure A6: **Number of funds by vintage year:** This figure plots the number of funds per vintage year in the sample, which includes funds with at least one firm covered by RepRisk.

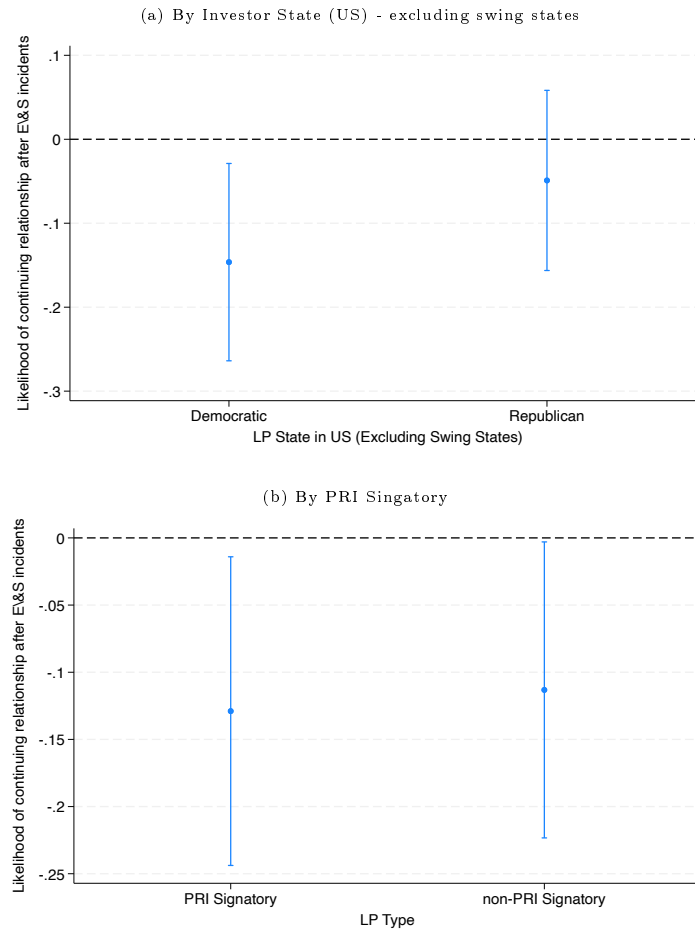


Figure A7: Likelihood of continuing relationships after ESG incidents for different investor types - robustness to excluding swing states and split by PRI Signatory: This figure plots the coefficients of estimations similar to Table 5 but using different classifications for LPs. Panel (a) plots the coefficient estimates where Democratic indicates an LP headquartered in a state that voted Democrat in all presidential elections in the period 2008-2022, Republican indicates an LP headquartered in a state that voted Republican in all presidential elections in the period 2008-2022. LPs in swing states which change voting patterns during 2008-2022 are dropped. Panel (b) plots the coefficient estimates splitting LPs based on whether the LP is a PRI Signatory, where PRI Signatory indicates an LP that has ever signed the PRI, non-PRI Signatory indicates an LP that has not yet signed the PRI. The bars indicate 95% confidence interval.

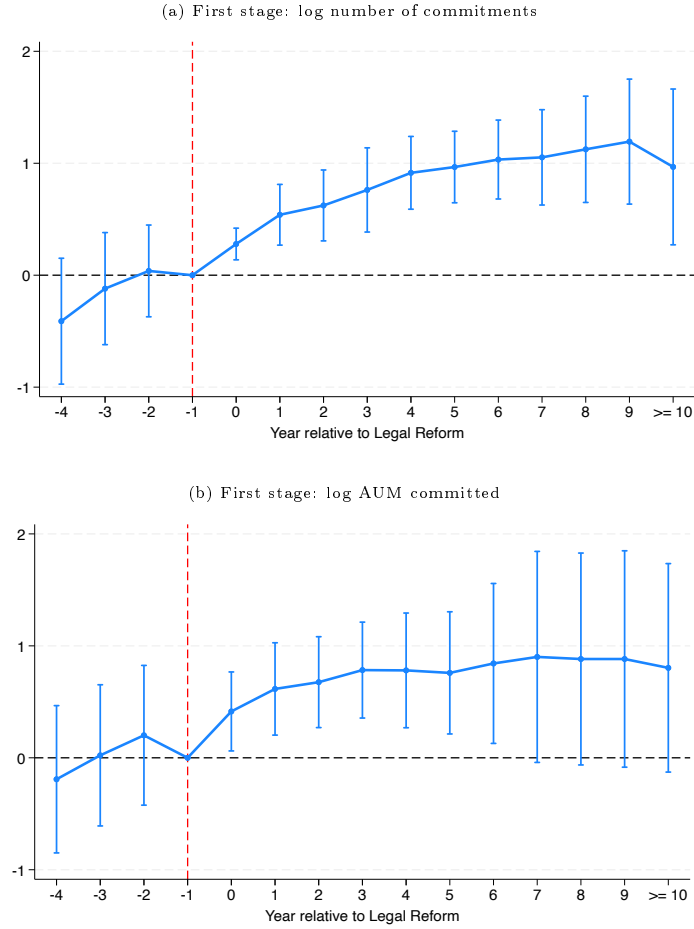
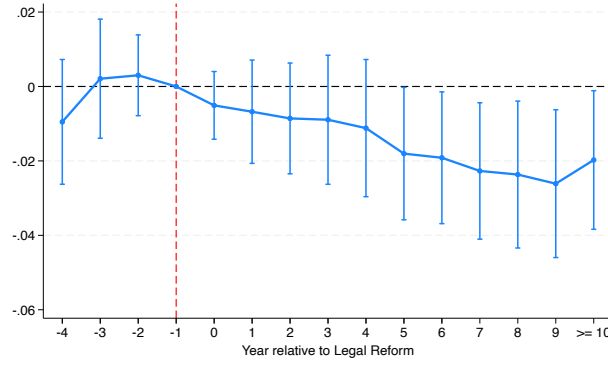


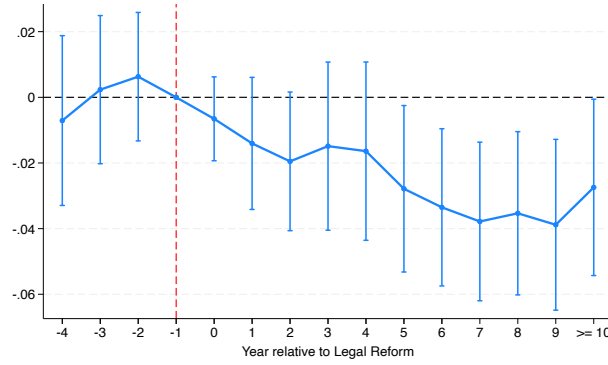
Figure A8: First-Stage Estimates—Effect of the Basket-Clause Reform on LP Commitments: This figure plots coefficients from the first-stage difference-in-differences estimations using LP-year panel data of all US public pension funds. Specifically, it plots the point estimates and 95% confidence interval of β_s from the following regression:

$$Y_{lt} = \sum_k \beta_k \mathbb{1}\{\text{year } k \text{ relative to legal reform}\} \times \mathbb{1}\{l \text{ is in NY}\} + \gamma_l + \theta_{pol \times t} + \varepsilon_{lt},$$

where the dependent variables are the logarithm of number of total commitments made by LP l in year t for subfigure (a), and the logarithm of total capital commitments (AUM) made by LP l in year t for subfigure (b). Year 0 refers to 2005 when New York public pension has the basket-clause reform. $\mathbb{1}\{l \text{ is in NY}\}$ is a dummy variable indicating LP l is from New York state. γ_l indicates LP fixed effects. $\theta_{pol \times t}$ indicates political leaning $\times$ year fixed effects. Standard errors are clustered at the LP level.



(b) Relationship PE firms with low ex-ante share of ESG LP



(c) Relationship PE firms with high ex-ante share of ESG LP

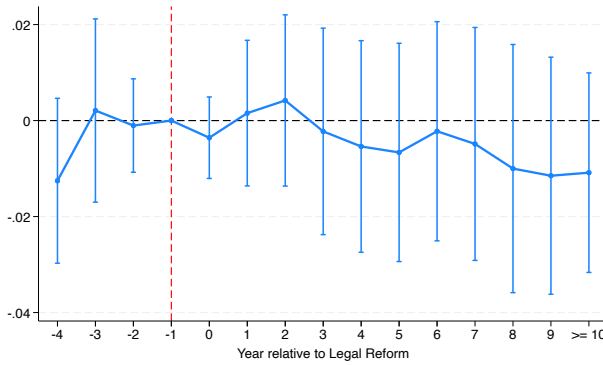


Figure A9: **Robustness excluding Defence - Change in Portfolio allocation to dirty industries following basket clause reform:** This figure plots the dynamic coefficients from the difference-in-differences estimation of the impact of the basket-clause reform on PE firms' portfolio allocation to dirty sectors. Specifically, subfigure (a) plots the point estimates as well as 95% confidence intervals of β_s from the regression

$$FracDirty_{i,t} = \alpha + \sum_k \beta_k \mathbb{1}\{year\ k\ relative\ to\ legal\ reform\} \times \mathbb{1}\{Relationship\ with\ NY\ Public\ Pension\} + \gamma_i + \theta_{strat} \times t + \eta_{cty/state} \times t + \delta_{NY\ LP} \times t + \tau_{PubPen\ LP} \times t + \zeta_{ESG\ LP} \times t + \epsilon_{i,t}$$

Subfigure (b) and (c) plot the point estimates as well as 95% confidence intervals of β^L s and β^H s respectively from following regression

$$FracDirty_{i,t} = \alpha + \sum_k \beta_k^L \mathbb{1}\{year\ k\ rela.\ to\ reform\} \times \mathbb{1}\{Relationship\ with\ NY\ Public\ Pension\ \&\ share\ ESG\ LP\ below\ median\} + \sum_k \beta_k^H \mathbb{1}\{year\ k\ rela.\ to\ reform\} \times \mathbb{1}\{Relationship\ with\ NY\ Public\ Pension\ \&\ share\ ESG\ LP\ above\ median\} + \gamma_i + \theta_{strat} \times t + \eta_{cty/state} \times t + \delta_{NY\ LP} \times t + \tau_{PubPen\ LP} \times t + \zeta_{ESG\ LP} \times t + \epsilon_{i,t}$$

The dependent variable is the share of portfolio holdings in dirty industries, defined as mining, oil&gas, transportation, and power and utilities. Year 0 refers to 2005 when New York public pension has the basket-clause reform. $\mathbb{1}\{Relationship\ with\ NY\ Public\ Pension\}$ is a dummy indicating the PE firm i had relationship with (received capital commitment from) New York public pensions up to 2004. $share\ ESG\ LP\ above\ (below)\ median$ indicates whether the share of ESG-concerned relationship LPs are above (below) median in 2004. All regressions include PE-firm FE, year $\times$ PE strategy FE, year $\times$ PE country/state FE, Year $\times$ quartile-share NY LP FE, Year $\times$ quartile-share public pension FE, and year $\times$ quartile-share ESG-LP FE. Confidence intervals based on standard errors clustered at the PE-firm level.

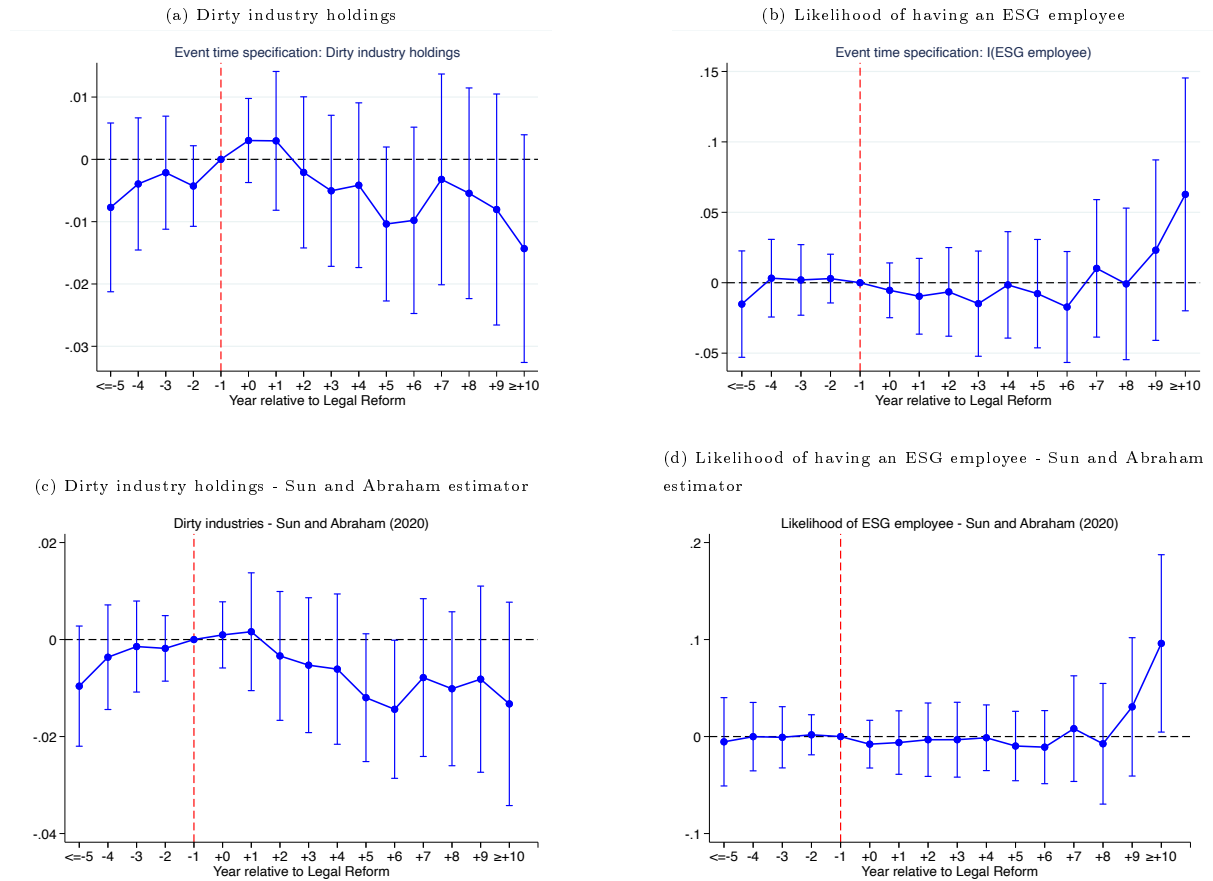


Figure A10: Placebo test for impact of Basket clause reform: This figure plots the coefficients of dynamic difference-in-differences estimates of the impact of the basket-clause reform on industry composition of portfolio holdings of PE firms and their likelihood of having ESG employees for Republican-leaning states. Year 0 refers to the year when the Republican-leaning states have basket-clause legal reforms. The dependent variable in Panel (a) and Panel (c) is the share of portfolio holdings in “dirty” industries measured as the fraction of portfolio holdings in oil and gas, mining, transportation, power and utilities, and defence. The dependent variable in Panel (b) and Panel (d) is a binary indicator equal to one if the PE firm has at least one ESG professional on staff in that year. Panel (a) and Panel (b) present estimates from a staggered difference-in-differences specification and Panel (c) and Panel (d) presents results employing the Sun and Abraham (2021) estimator. All regressions include PE-firm FE, year $\times$ PE strategy FE, year $\times$ PE country/state FE, Year $\times$ quartile-share NY LP FE, Year $\times$ quartile-share public pension FE, and year $\times$ quartile-share ESG-LP FE. Confidence intervals based on standard errors clustered at the PE-firm level. The bars indicate 95% confidence interval.

Firm	Date	Summary	Types	Related Issues
Vantage Specialty Chemicals	29-Aug-2019	Vantage Speciality Chemicals is facing a lawsuit for endangering peoples lives by releasing too much of the cancer-causing chemical ethylene oxide into the air.	E, S	Impact on communities, Local Pollution, Airborne Pollutants, Health Impacts
Miller Homes Limited	24-Nov-2021	Miller Homes Ltd facing a fine for polluting a Huddersfield watercourse for more than 1km, after an investigation by the EPA.	E	Impact on Landscapes, Local Pollution, Violation of National Legislation, Waste Issues, Impact on Land Ecosystems
Rio Trinto Group	05-Apr-2022	Rio Trinto facign scrutiny due to undergoing pollution of a formarly active mine in Bougainville, Papua New Guinea. Pollution from the mine is claimed to continue to poison the rivers and cause environmental destruction.	E	Climate Green-House-Gas Pollution, Greenhouse Gas Emission
Caelus Energy LLC	10-Aug-2017	Caelus Energy LLC caused an environmental damage due to over 7,000 gallons of oil leaked from a North Slope well owned by the same company.	E	Impact on Landscapes, Local Pollution
Hearthside Food Solutions	26-Apr-2022	Federal workplace safety investigators (US Department of Labor) have cited HearthSide Food Solutions for exposing workers to amputation and other serious hazards.	S	Occupational Health, Violation of National Legislation
Quala Wash Holdings	28-Dec-2019	Occupational hazard incident that killed two workers at a Pasadena Chemical Plant owned by Quala Wash Holdings.	S	Occupational Health, Violation of National Legislation
Badger Sportsware Inc	10-Jan-2019	Badger Sportsware under scrutiy since their supplier a clothing company in China (Heitan Taida) has been using forced labor in camps in Northwestern China.	S	Human rights abuses, Supply chain issues, Violation of National Legislation
Signet Jewelers Ltd	26-Mar-2020	Signet Jewelers reaches a settlment on a sexual harrasment case against senior executives	S,G	Discrimination in Employment, Fraud, Human Right Abuses, Poor Employment Conditions, Violation of National Legislation
Tech Data Corporation	17-Mar-2020	Tech Data Corporation fined by Autorité de la concurrence for anti competitive practices.	G	Anti-competitive Practices, Violation of National Legislation
Bubmble Trading LLC	06-Apr-2020	Tinder accuses Bubmble of exploiting Covid 19 to delay a IP protection court case	G	Anti-competitive Practices
Rabobank N.A.	07-Dec-2022	Rabobank under investigation by public prosecutors in the Netherlands for suspected violations of national money laundering laws.	G	Money Laundering, Violation of National legislation
Cetera Financial Group LLC	26-Mar-2020	SSC charges Cetera with defrauding their advisory clients by failing to disclose several sources of compensation.	G	Fraud, Violation of National Legislation

 Table A1: **Examples:** This table lists examples of incidents from RepRisk in our sample.

Core ESG Terms	Environmental / Climate	ESG Risk & Compliance	Social Aspect
ESG	Climate Finance	ESG Risk	Ethical Sourcing
Environmental Social Governance	Climate Strategy	Sustainability Risk	Ethical Investment
Sustainability	Climate Policy	Climate Risk	Ethics & Compliance
Sustainable	Climate Officer	ESG Governance	Ethical Business
Responsible Investment	Carbon Accounting	ESG Compliance	Social Impact
Responsible Investing	Carbon Neutral	Sustainability Compliance	Social Responsibility
Responsible Sourcing	Carbon Strategy	Climate Compliance	Community Engagement
Responsible Business	Decarbonization	ESG Regulation	Community Relations
SRI	Net Zero	Sustainability Regulation	Community Investment
Impact Investing	Energy Transition	Climate Regulation	Community Development
Impact Investment	Clean Energy	ESG Policy	Stakeholder Engagement
Social Impact	Clean Tech	Sustainability Policy	Stewardship
Impact Finance	Clean Technology	Environmental Policy	Active Ownership
Impact & ESG	Green Finance	Corporate Governance	Diversity & Inclusion
CSR	Green Investment	Policy	
Corporate Social Responsibility	Green Investments	Governance Policy	DEI
		ESG Audit	D&I
Corporate Responsibility	Green Technology	ESG Auditor	Human Rights
Corporate Governance	Greenhouse Gas	Sustainability Auditor	Labor Relations
	GHG	ESG Due Diligence	Labor Standards
	Environmental Strategy	Sustainability Due Diligence	Labour Compliance
	Environmental Policy	Environmental Risk	People & Culture
	Environmental Management	Environmental Compliance	People & Culture Manager
	Environmental Governance	Environmental Regulation	People Culture Lead
	Environmental	Environmental Due	Health & Safety
	Sustainability	Diligence	
	Environmental Stewardship	Environmental Audit	Health Safety
	Environmental Footprint	Environmental Auditor	Health n Safety
	Environmental Performance	Environmental Assessment	Health and Safety
	Environmental Officer	Environmental Impact	HSE
		Assessment	
	Environmental Manager	Environmental Reporting	EHS
	Environmental Director	Environmental Disclosure	QHSE
	Environmental Coordinator	Environmental Metrics	QHSSE
	Environmental Specialist	Environmental Monitoring	QHSSES
	Environmental Analyst	Environmental Data	Well-being
	Environmental Consultant		Workplace Wellness
	Environmental Advisor		Employee Well-being
	Environmental Engineer		Social Accountability
	Environmental Scientist		SA8000
	Environmental Technician		Social Equity
	Environmental Affairs		Employee Relations
	Environmental Protection		Employee Engagement
	Environmental Remediation		
	Environmental		
	Conservation		
	Environmental Restoration		
	Environmental Impact		

Table A2: **ESG-related Keywords:** This table provides the list of keywords we use to identify ESG-related employees.

Panel A: Distribution of E/S/G incidents			
Environmental	Social	Governance	Proportion
1	0	0	0.10
0	1	0	0.34
0	0	1	0.32
1	1	0	0.14
1	0	1	0.02
0	1	1	0.05
1	1	1	0.04

Panel B: Distribution of severity, novelty and reach

	Novelty	Severity	Reach
1	0.45	0.68	0.40
2	0.55	0.29	0.45
3	0.00	0.02	0.15

Table A3: **Descriptives of incidents:** This table provides statistics of incidents in the matched sample. **Panel A** shows the types of E/S/G incidents, where one incident can be related to multiple E/S/G labels. **Panel B** shows the distribution of severity, novelty and reach. The levels of severity, novelty and reach are provided by RepRisk.

No.	Primary Industry	No.	Primary Industry
1	Agribusiness	27	Information Services
2	Aerospace	28	Insurance
3	Automobiles, Other Vehicles & Parts	29	Internet
4	Biopolymers	30	IT Infrastructure
5	Biotechnology	31	IT Security/Cybersecurity
6	Bottling	32	Logistics & Distribution
7	Business Support Services	33	Marketing/Advertising
8	Chemicals	34	Materials
9	Commercial Property	35	Media
10	Construction	36	Medical Devices & Equipment
11	Consumer Products	37	Mining
12	Consumer Services	38	Oil & Gas
13	Defence	39	Outsourcing
14	Education/Training	40	Packaging
15	Electronics	41	Pharmaceuticals
16	Energy Storage & Batteries	42	Power & Utilities
17	Environmental Services	43	Rail Transport
18	Financial Services	44	Real Estate Development & Operating Companies
19	Food	45	Renewable Energy
20	Forestry & Timber	46	Retail
21	Hardware	47	Semiconductors
22	Healthcare	48	Ship Building & Repair
23	Healthcare IT	49	Software
24	Healthcare Specialists	50	Telecoms
25	Heating, Cooling & Ventilation Equipment and Services	51	Transportation Services
26	Industrial Machinery	52	Travel & Leisure

Table A4: **Industry classifications in Preqin:** The table reports the industry classifications defined in Preqin. The bolded industries are the “dirty” sectors defined in the main analysis of the paper.

	Cluster by PE		Cluster by Vintages	
	(1)	(2)	(3)	(4)
$\log(1 + \text{num. E\&S incidents})$	-0.174** (0.083)		-0.174** (0.066)	
Low number of E&S incidents		-0.022 (0.058)		-0.022 (0.052)
High number of E&S incidents		-0.156*** (0.056)		-0.156*** (0.049)
$\log(\text{fund N size})$	-0.067*** (0.023)	-0.065** (0.025)	-0.067*** (0.022)	-0.065*** (0.024)
$\log(\text{fund N multiple})$	0.220*** (0.078)	0.213*** (0.079)	0.220*** (0.073)	0.213*** (0.075)
$\log(\text{fund N series number})$	-0.169*** (0.048)	-0.170*** (0.049)	-0.169*** (0.045)	-0.170*** (0.046)
Fund N Vintage Year $\times$ Fund N+1 Vintage Year $\times$ PE Region FE	✓	✓	✓	✓
Industry Controls	✓	✓	✓	✓
Observations	505	505	505	505
R^2	0.50	0.50	0.50	0.50

Table A5: **Effect of E&S incidents on relative size of follow-up funds, alternative standard error clustering:**

This table reports the results of a regression of fund size growth on previous fund's E&S incidents. The dependent variable in columns (1)-(4) is fund size growth defined as $\frac{Size_{N+1}}{Size_N}$, which is the ratio of the committed capital to fund $N + 1$ over the committed capital to fund N . In columns (1) and (3), $\log(1 + \text{num. E\&S incidents})$ refers to the logarithm of one plus the average number of E&S incidents of the previous fund (fund N) in the two years prior to raising a follow-up fund. In column (2) -(4), *Low E&S incidents* (*High E&S incidents*) are dummy variables indicating fund N had below (above) median average number of incidents (conditional on having incidents) two years prior to raising a follow-up fund. The omitted category is funds with no incidents two years prior to raising a follow-up fund. $\log(\text{fund N size})$ is the natural logarithm of AUM of fund N . $\log(\text{fund N multiple})$ is the natural logarithm of net multiple of fund N . $\log(\text{fund N series})$ is the natural logarithm of the sequence number of fund N of a given series. All regressions include Fund $N \times$ Fund $N + 1$ vintage year $\times$ PE Region FE fixed effects. Industry Controls include separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N + 1$. In columns (1)-(2), standard errors, reported in parentheses, are clustered by PE firms. In columns (3)-(4), standard errors, reported in parentheses, are clustered by fund vintage year pairs. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Dummy(Invest in Fund N+1)				
	(1)	(2)	(3)	(4)	(5)
Relationship LP	0.378*** (0.030)	0.383*** (0.028)	0.378*** (0.030)	0.397*** (0.034)	0.403*** (0.032)
$\log(1 + \text{num. E\&S incidents})$			-0.001 (0.005)	0.005 (0.004)	
Relationship LP $\times$ $\log(1 + \text{num. E\&S incidents})$				-0.114* (0.059)	-0.120** (0.056)
$\log(\text{fund N series number})$	0.001 (0.003)		0.001 (0.003)	0.001 (0.003)	
$\log(\text{fund N size})$	0.012*** (0.002)		0.012*** (0.002)	0.012*** (0.002)	
$\log(\text{Fund N Multiple})$	0.018*** (0.004)		0.018*** (0.004)	0.018*** (0.004)	
Fund N+1 Vintage Year $\times$ PE Region $\times$ LP FE	✓	✓	✓	✓	✓
Fund N+1 FE		✓			✓
Observations	352,983	352,983	352,983	352,983	352,983
R^2	0.32	0.33	0.32	0.32	0.33

Table A6: **LP-GP relationship and E&S incidents, robustness to active LP sample:**. This table reports the results of a regression of the propensity of LPs to finance fund $N + 1$ and how this propensity changes with the number of E&S incidents. This analysis is conducted using an LP-fund N data structure. This sample consists of LP who invest in at least one fund in a given year. The dependent variable is a dummy variable equal to 1 if a given LP invests in fund $N + 1$, and 0 otherwise. *Relationship LP* is a dummy variable indicating that an LP has invested in other funds of a given PE firm before fund $N + 1$ is raised. $\log(1 + \text{num. E\&S incidents})$ refers to the logarithm of one plus the average number of E&S incidents of the current fund (fund N) in the two years prior to raising a follow-up fund. $\log(\text{fund N size})$ is the natural logarithm of AUM of fund N. $\log(\text{fund N multiple})$ is the natural logarithm of net multiple of fund N. $\log(\text{fund N series})$ is the natural logarithm of the sequence number of fund N of a given series. In columns (1), (3) and (4), we include Fund $N + 1$ vintage year $\times$ PE Region $\times$ LP fixed effects. In columns (2) and (5), we include Fund $N + 1$ vintage year $\times$ PE Region $\times$ LP fixed effects as well as Fund $N + 1$ fixed effects. Standard errors, reported in parentheses, are clustered by PE firms. * $p < .10$; ** $p < .05$; *** $p < .01$.

	USD (Mill.) committed to a fund			log(USD committed to a fund)		
	(1)	(2)	(3)	(4)	(5)	(6)
Relationship LP	36.512*** (3.596)	27.613*** (2.703)	14.834*** (1.731)	0.583*** (0.040)	0.350*** (0.025)	0.166*** (0.017)
Vintage Year $\times$ PE Region FE	✓			✓		
Vintage Year $\times$ PE Region $\times$ LP FE		✓	✓		✓	✓
Fund FE			✓			✓
Observations	16,139	13,195	12,230	16,139	13,195	12,230
R^2	0.11	0.66	0.79	0.17	0.80	0.90

Table A7: **Association of LP relationships and size of Capital Commitment:** This table reports the results of a regression of LPs' capital commitments to a fund on whether the LP is a Relationship LP. The dependent variable is the amount of capital (in USD millions) committed by a given LP to a given fund. *Relationship LP* is a dummy variable indicating whether an LP has invested in other funds of a given PE firm before fund $N + 1$ is raised. In columns (1) and (4), we include Vintage Year $\times$ PE Region FE. In columns (2) and (5), we include Vintage Year $\times$ PE Region FE $\times$ LP fixed effects. In columns (3) and (6), we include Vintage Year $\times$ PE Region FE $\times$ LP fixed effects as well as Fund fixed effect. Standard errors are clustered by PE firms. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Fund N+1 Size/Fund N Size							
	(1) Severe	(2) non-Severe	(3) Novel	(4) non-Novel	(5) high-Reach	(6) low-Reach	(7) Serious	(8) non-Serious
log(1 + num. E&S incidents)	-0.206** (0.093)	-0.190** (0.088)	-0.219*** (0.077)	-0.141 (0.118)	-0.274** (0.107)	-0.098 (0.116)	-0.196*** (0.070)	0.131 (0.161)
log(fund N size)	-0.070*** (0.021)	-0.070*** (0.021)	-0.068*** (0.021)	-0.072*** (0.021)	-0.064*** (0.022)	-0.073*** (0.020)	-0.067*** (0.021)	-0.075*** (0.020)
log(fund N multiple)	0.214*** (0.074)	0.224*** (0.073)	0.220*** (0.073)	0.218*** (0.074)	0.223*** (0.074)	0.218*** (0.074)	0.219*** (0.073)	0.219*** (0.074)
log(fund N series number)	-0.169*** (0.045)	-0.167*** (0.046)	-0.168*** (0.046)	-0.168*** (0.045)	-0.175*** (0.046)	-0.164*** (0.046)	-0.170*** (0.046)	-0.166*** (0.046)
Fund N Vintage Year × Fund N+1 Vintage Year × PE Region FE	✓	✓	✓	✓	✓	✓	✓	✓
Industry Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	505	505	505	505	505	505	505	505
R ²	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50

Table A8: Effect of E&S incidents on relative size of follow-up funds: heterogeneity by severity, novelty and reach of incidents: This table presents the results of a regression analysis examining the effect of E&S incidents of varying severity, novelty, and reach on fund size growth. The dependent variable in columns (1)-(6) is fund size growth, defined as $\frac{Size_{N+1}}{Size_N}$, which represents the ratio of committed capital to fund $N + 1$ over committed capital to fund N . The term $\log(1 + \text{num. E\&S incidents})$ refers to the logarithm of one plus the average number of E&S incidents associated with the previous fund (fund N) in the two years prior to raising a follow-up fund. In columns (1), (3) and (5), this measure considers only incidents with values of severity, novelty, or reach greater than or equal to 2, respectively. In columns (2), (4) and (6), the measure considers only incidents with a severity, novelty, or reach value of 1, respectively. In column (7), the measure accounts for incidents with a value of at least 2 in severity, novelty, or reach. In column (8), the measure includes only incidents with a value of 1 across severity, novelty, and reach. $\log(\text{fund } N \text{ size})$ represents the natural logarithm of the assets under management (AUM) of fund N . $\log(\text{fund } N \text{ multiple})$ is the natural logarithm of the net multiple of fund N . $\log(\text{fund } N \text{ series})$ represents the natural logarithm of the sequence number of fund N within a given series. Columns (1) and (4) include Fund $N \times$ Fund $N + 1$ vintage year fixed effects and private equity (PE) region fixed effects. Columns (2) and (5) include Fund $N \times$ Fund $N + 1$ vintage year $\times$ PE region fixed effects. In columns (3) and (6), Industry Controls include separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N + 1$. Standard errors, reported in parentheses, are clustered by PE firms and by fund vintage year pairs. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Fund N+1 Size/Fund N Size					
	(1)	(2)	(3)	(4)	(5)	(6)
$\log(1 + \text{num. E\&S incidents}), [t-1, t-1]$	-0.157** (0.064)					
$\log(1 + \text{num. E\&S incidents}), [t-2, t-1]$		-0.174*** (0.065)				
$\log(1 + \text{num. E\&S incidents}), [t-3, t-1]$			-0.167** (0.070)			
$\log(1 + \text{num. E\&S incidents}), [t-4, t-1]$				-0.163** (0.070)		
$\log(1 + \text{num. E\&S incidents}), [t-5, t-1]$					-0.157** (0.071)	
$\log(1 + \text{num. E\&S incidents}), [t-6, t-1]$						-0.157** (0.071)
$\log(\text{fund N size})$	-0.066*** (0.021)	-0.067*** (0.021)	-0.068*** (0.021)	-0.068*** (0.021)	-0.069*** (0.021)	-0.069*** (0.021)
$\log(\text{fund N multiple})$	0.221*** (0.073)	0.220*** (0.074)	0.218*** (0.074)	0.217*** (0.074)	0.216*** (0.074)	0.217*** (0.074)
$\log(\text{fund N series number})$	-0.170*** (0.046)	-0.169*** (0.046)	-0.169*** (0.046)	-0.169*** (0.046)	-0.169*** (0.046)	-0.169*** (0.046)
Fund N Vintage Year $\times$ Fund N+1 Vintage Year $\times$ PE Region FE	✓	✓	✓	✓	✓	✓
Industry Controls	✓	✓	✓	✓	✓	✓
Observations	501	505	505	505	505	505
R^2	0.49	0.50	0.50	0.50	0.50	0.50

Table A9: Effect of E&S incidents on relative size of follow-up funds, with different horizons to accumulate incidents: This table reports the results of a regression of fund size growth on previous fund's E&S incidents, using different time windows to accumulate incidents. The dependent variable in columns (1)-(6) is fund size growth defined by $\frac{Size_{N+1}}{Size_N}$, which represents the ratio of committed capital to fund $N+1$ over the committed capital to fund N . $\log(1 + \text{num. E\&S incidents}), [t-s, t-1]$ represents the logarithm of one plus the average number of E&S incidents of the previous fund (fund N) during the s years prior to raising a follow-up fund. $\log(\text{fund N size})$ is the natural logarithm of size of fund N . $\log(\text{fund N multiple})$ is the natural logarithm of net multiple of fund N . $\log(\text{fund N series})$ is the natural logarithm of the sequence number of fund N of a given series. All columns include the interaction of Fund vintage year $N \times$ Fund $N+1$ vintage year $\times$ PE region fixed effects. Industry Controls include separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N+1$. Standard errors, reported in parentheses, are clustered by PE firms and by fund vintage year pairs. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Fund N+1 Size/Fund N Size					
	(1)	(2)	(3)	(4)	(5)	(6)
$\log(1 + \text{num. G incidents})$	0.035 (0.080)	0.044 (0.079)	0.069 (0.076)			
Low number of G incidents				0.048 (0.045)	0.024 (0.049)	0.031 (0.050)
High number of G incidents				0.013 (0.061)	0.031 (0.061)	0.037 (0.061)
$\log(\text{fund N size})$	-0.092*** (0.018)	-0.089*** (0.019)	-0.077*** (0.019)	-0.096*** (0.019)	-0.091*** (0.019)	-0.079*** (0.021)
$\log(\text{fund N multiple})$	0.257*** (0.070)	0.251*** (0.071)	0.219*** (0.074)	0.255*** (0.070)	0.250*** (0.070)	0.218*** (0.074)
$\log(\text{fund N series number})$	-0.126*** (0.045)	-0.145*** (0.045)	-0.164*** (0.045)	-0.123*** (0.045)	-0.143*** (0.045)	-0.162*** (0.045)
Fund N Vintage Year $\times$ Fund N+1 Vintage Year FE	✓			✓		
PE Region FE	✓			✓		
Fund N Vintage Year $\times$ Fund N+1 Vintage Year $\times$ PE Region FE		✓	✓		✓	✓
Industry Controls			✓			✓
Observations	505	505	505	505	505	505
R^2	0.42	0.47	0.50	0.42	0.47	0.50

Table A10: **Effect of G incidents on relative size of follow-up funds:** This table reports the results of a regression of fund size growth on previous fund's G incidents. The dependent variable in columns (1)-(6) is fund size growth defined as $\frac{Size_{N+1}}{Size_N}$, which is the ratio of the committed capital to fund $N + 1$ over the committed capital to fund N . In columns (1)-(3), $\log(1 + \text{num. G incidents})$ refers to the logarithm of one plus the average number of E&S incidents of the previous fund (fund N) in the two years prior to raising a follow-up fund. In column (4) -(6), *Low G incidents* (*High G incidents*) are dummy variables indicating fund N had below (above) median average number of incidents (conditional on having incidents) two years prior to raising a follow-up fund. The omitted category is funds with no incidents two years prior to raising a follow-up fund. $\log(\text{fund N size})$ is the natural logarithm of size of fund N . $\log(\text{fund N multiple})$ is the natural logarithm of net multiple of fund N . $\log(\text{fund N series})$ is the natural logarithm of the sequence number of fund N of a given series. Columns (1) and (4) include Fund $N \times$ Fund $N + 1$ vintage year fixed effects and PE Region FE. Columns (2) and (5) includes Fund $N \times$ Fund $N + 1$ vintage year $\times$ PE Region FE fixed effects. In columns (3) and (6), Industry Controls include separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N + 1$. Standard errors, reported in parentheses, are clustered by PE firms and by fund vintage year pairs.

* $p < .10$; ** $p < .05$; *** $p < .01$.

	Fund N+1 Size/Fund N Size							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
log(1 + num. E&S incidents)	-0.176*** (0.066)		-0.164** (0.070)		-0.172** (0.066)		-0.169** (0.068)	
Low number of E&S incidents		-0.020 (0.054)		-0.015 (0.056)		-0.022 (0.054)		-0.018 (0.056)
High number of E&S incidents		-0.158*** (0.047)		-0.149*** (0.048)		-0.155*** (0.047)		-0.154*** (0.047)
log(fund N size)	-0.067*** (0.021)	-0.066*** (0.024)	-0.071*** (0.020)	-0.069*** (0.024)	-0.068*** (0.021)	-0.066*** (0.024)	-0.069*** (0.021)	-0.067*** (0.024)
log(fund N series number)	-0.165*** (0.046)	-0.167*** (0.046)	-0.164*** (0.046)	-0.166*** (0.046)	-0.172*** (0.047)	-0.174*** (0.047)	-0.166*** (0.045)	-0.167*** (0.045)
fund N multiple	0.094*** (0.032)	0.091*** (0.032)						
Quartile of fund N multiple=2			0.086 (0.071)	0.081 (0.070)				
Quartile of fund N multiple=3			0.148** (0.070)	0.143** (0.070)				
Quartile of fund N multiple=4			0.175*** (0.060)	0.169*** (0.059)				
log(fund N multiple)					0.376** (0.171)	0.369** (0.172)		
Squared log(fund N multiple)					-0.132 (0.109)	-0.132 (0.109)		
Percentile Rank of fund N multiple							0.214*** (0.080)	0.207** (0.081)
Fund N Vintage Year × Fund N+1 Vintage Year × PE Region FE	✓	✓	✓	✓	✓	✓	✓	✓
Industry Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	505	505	505	505	505	505	505	505
R ²	0.50	0.50	0.50	0.51	0.50	0.51	0.50	0.50

Table A11: **Effect of E&S incidents on relative size of follow-up funds: robustness to non-linear effect of fund multiple:** This table reports the results of a regression of fund size growth on previous fund's E&S incidents, controlling for different forms of fund multiple of fund N. The dependent variable in columns (1)-(6) is fund size growth defined by $\frac{Size_{N+1}}{Size_N}$, which is the ratio of the committed capital to fund $N + 1$ over the committed capital to fund N . In columns (1), (3) and (5), $\log(1 + num. E\&S incidents)$ refers to the logarithm of one plus the average number of E&S incidents of the previous fund (fund N) in the two years prior to raising a follow-up fund. In columns (2), (4) and (6), *Low E&S incidents* (*High E&S incidents*) are dummy variables indicating fund N had below (above) median average number of incidents (conditional on having incidents) two years prior to raising a follow-up fund. The omitted category is funds with no incidents two years prior to raising a follow-up fund. $\log(fund N size)$ is the natural logarithm of size of fund N. $\log(fund N series)$ is the natural logarithm of the sequence number of fund N of a given series. *fund N multiple* is the net multiple of fund N. *Quartile of fund N multiple* represent dummy variables indicating quartiles of fund N multiple. $\log(fund N multiple)$ is the natural logarithm of net multiple of fund N. *Squared log(fund N multiple)* is the square of the natural logarithm of net multiple of fund N. All the regressions include Fund $N \times$ Fund $N + 1$ vintage year $\times$ PE Region fixed effects. All the regressions also include separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N + 1$. Standard errors, reported in parentheses, are clustered by PE firms and by fund vintage year pairs. * $p < .10$; ** $p < .05$; *** $p < .01$ * $p < .10$; ** $p < .05$; *** $p < .01$.

	Fund N+1 Size/Fund N Size					
	(1)	(2)	(3)	(4)	(5)	(6)
$\log(1 + \text{num. E\&S incidents})$	-0.185** (0.070)		-0.139* (0.077)		-0.123 (0.079)	
Low number of E&S incidents		-0.051 (0.060)		-0.003 (0.067)		0.006 (0.068)
High number of E&S incidents		-0.143*** (0.045)		-0.118*** (0.043)		-0.111** (0.045)
$\log(\text{fund N size})$	-0.069*** (0.023)	-0.065** (0.026)	-0.086*** (0.024)	-0.087*** (0.027)	-0.084*** (0.024)	-0.087*** (0.028)
$\log(\text{fund N series number})$	-0.145*** (0.053)	-0.146*** (0.054)	-0.150** (0.058)	-0.147** (0.059)	-0.155** (0.059)	-0.151** (0.060)
fund N IRR	0.004* (0.002)	0.004* (0.002)				
$\log(\text{Observed fund N PME, before fund N+1 is raised})$			0.292*** (0.084)	0.285*** (0.082)		
$\log(\text{Observed fund N multiple, before fund N+1 is raised})$					0.264*** (0.079)	0.258*** (0.078)
Fund N Vintage Year $\times$ Fund N+1 Vintage Year $\times$ PE Region FE	✓	✓	✓	✓	✓	✓
Industry Controls	✓	✓	✓	✓	✓	✓
Observations	465	465	367	367	367	367
R^2	0.50	0.50	0.54	0.54	0.54	0.54

Table A12: Effect of E&S incidents on relative size of follow-up funds: robustness to alternative performance measures: This table reports the results of a regression of fund size growth on previous fund's E& S incidents, controlling for alternative measures of fund performance. The dependent variable in columns (1)-(6) is fund size growth defined as $\frac{Size_{N+1}}{Size_N}$, which is the ratio of the committed capital to fund $N+1$ over the committed capital to fund N . In columns (1), (3) and (5), $\log(1 + \text{num. E\&S incidents})$ refers to the logarithm of one plus the average number of E&S incidents of the previous fund (fund N) in the two years prior to raising a follow-up fund. In columns (2), (4) and (6), *Low E&S incidents* (*High E&S incidents*) are dummy variables indicating fund N had below (above) median average number of incidents (conditional on having incidents) two years prior to raising a follow-up fund. The omitted category is funds with no incidents two years prior to raising a follow-up fund. $\log(\text{fund N size})$ is the natural logarithm of size of fund N . $\log(\text{fund N series})$ is the natural logarithm of the sequence number of fund N of a given series. $\log(\text{fund N IRR})$ is the natural logarithm of IRR of fund N . $\log(\text{Observed fund N PME, before fund N+1 is raised})$ is the natural logarithm of the public market equivalent of fund N 's performance one year before fund $N+1$ is raised. $\log(\text{Observed fund N multiple, before fund N+1 is raised})$ is the interim fund multiple one year before fund $N+1$ is raised. All the regressions include Fund $N \times$ Fund $N+1$ vintage year $\times$ PE Region fixed effects. All the regressions also include separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N+1$. Standard errors, reported in parentheses, are clustered by PE firms and by fund vintage year pairs. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Fund N Multiple				Fund N IRR			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\log(1 + \text{num. E\&S incidents})$	-0.006 (0.094)	0.055 (0.096)			0.154 (2.192)	1.334 (2.009)		
Low number of E&S incidents			0.075 (0.072)	0.164** (0.077)			1.834 (1.653)	4.012*** (1.513)
High number of E&S incidents			-0.084 (0.063)	-0.031 (0.065)			-1.203 (1.529)	-0.196 (1.407)
$\log(\text{fund N size})$		-0.070** (0.028)		-0.085*** (0.031)		-1.306** (0.574)		-1.662*** (0.610)
$\log(\text{fund N series number})$		0.011 (0.056)		0.009 (0.056)		-1.169 (1.796)		-1.303 (1.788)
Fund N Vintage Year $\times$ PE Region FE	✓	✓	✓	✓	✓	✓	✓	✓
Industry Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	505	505	505	505	464	464	464	464
R^2	0.18	0.19	0.19	0.20	0.20	0.22	0.21	0.23

Table A13: **Association of fund performance with E&S incidents:** This table reports the results of a regression of fund performance on E&S incidents. The dependent variable in columns (1)-(4) is the fund performance measured by net multiple of funds. The dependent variable in columns (5)-(8) is the fund performance measured by the internal rate of return (IRR) of funds. In column (1), (2), (5) and (6), $\log(1 + \text{num. E\&S incidents})$ refers to the logarithm of one plus the average number of E&S incidents of the previous fund (fund N) in the two years prior to raising a follow-up fund. In column (3), (4), (7) and (8), *Low E&S incidents* (*High E&S incidents*) are dummy variables indicating whether fund N had a below- (above-) median average number of incidents (conditional on having incidents) two years prior to raising a follow-up fund. The omitted category consists of funds with no incidents two years prior to raising a follow-up fund. $\log(\text{fund N size})$ is the natural logarithm of AUM of fund N. $\log(\text{fund N series})$ is natural logarithm of the sequence number of fund N of a given series. In all columns we include fund N vintage year $\times$ PE Region fixed effects. Industry Controls include separate controls for the fraction of investments made by the fund in each industry sector. Standard errors, reported in parentheses, are clustered by PE firms. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Fund N Multiple				Fund N IRR			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\log(1 + \text{num. E\&S incidents}), \text{Low Reputation}$	-0.087 (0.140)	-0.103 (0.127)			0.800 (2.914)	-0.540 (3.482)		
$\log(1 + \text{num. E\&S incidents}), \text{High Reputation}$	0.050 (0.124)	0.174 (0.142)			-0.263 (2.536)	2.635 (2.677)		
Low number of E&S incidents, Low Reputation			-0.069 (0.108)	-0.012 (0.105)			1.558 (3.661)	2.122 (3.661)
High number of E&S incidents, Low Reputation			-0.064 (0.110)	-0.077 (0.099)			0.037 (2.484)	-1.238 (2.787)
Low number of E&S incidents, High Reputation			0.101 (0.082)	0.203** (0.091)			1.845 (1.654)	4.435*** (1.686)
High number of E&S incidents, High Reputation			-0.094 (0.073)	-0.002 (0.087)			-1.778 (1.588)	0.349 (1.681)
$\log(\text{fund N size})$		-0.075** (0.029)		-0.087*** (0.032)		-1.363** (0.608)		-1.709*** (0.655)
$\log(\text{fund N series number})$		0.005 (0.058)		-0.001 (0.058)		-1.259 (1.889)		-1.424 (1.920)
Fund N Vintage Year $\times$ PE Region FE	✓	✓	✓	✓	✓	✓	✓	✓
Industry Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	505	505	505	505	464	464	464	464
R^2	0.18	0.20	0.19	0.21	0.20	0.22	0.21	0.23

Table A14: Association of fund performance with E&S incidents for low- and high-reputation PE firms This table reports the results of a regression of fund performance on E&S incidents, by low and high-reputation PE firms. The dependent variable in columns (1)-(4) is fund N Multiple. The dependent variable in columns (5)-(8) is fund N IRR. In columns (1) and (2), (5) and (6), $\log(1 + \text{num. E\&S incidents}, \text{LowReputation}(\text{highreputation}))$ refers to the logarithm of one plus the average number of E&S incidents of the previous fund (fund N) in the two years prior to raising a follow-up fund for the low-reputation (high-reputation) PE firms. In column (3), (4), (7) and (8), $\text{LowNumberof E\&S incidents}, \text{LowReputation}(\text{HighReputation})$ ($\text{HighNumberof E\&S incidents}, \text{LowReputation}(\text{HighReputation})$) are dummy variables indicating fund N has a below (above) median average number of incidents (conditional on having incidents) two years prior to raising a follow-up fund for low-reputation (high-reputation) PE firms. The omitted category consists of funds with no incidents two years prior to raising. Low-Reputation PE firms are PE firms that are in the bottom three quartiles in terms of number of funds raised, bottom three quartiles in terms of AUM raised and without a top quartile performing fund. High-reputation PE firms are PE firms that are not low-reputation. $\log(\text{fund N size})$ is the natural logarithm of AUM of fund N. $\log(\text{fund N series})$ is the natural logarithm of the sequence number of fund N of a given series. In all columns we include fund N vintage year $\times$ PE Region fixed effect. Industry Controls include separate controls for the fraction of investments made by the fund in each industry sector. Standard errors, reported in parentheses, are clustered by PE firms. * $p < .10$; ** $p < .05$; *** $p < .01$.

State	Basket clause in 2000	Post-2000 changes
Alabama	No	
Alaska	No	
Arizona	No	
Arkansas	No	
California	No	
Colorado	No	
Connecticut	No	
Delaware	No	
District of Columbia	No	
Florida	Yes	2008: 5% → 15%.
Georgia	Yes	2012: 0% → 5%.
Hawaii	No	
Idaho	No	
Illinois	Yes	No change in basket clause of 10%
Indiana	No	
Iowa	No	
Kansas	Yes	2012: total cap 5% → 15%; new-commit cap 1% → 5%.
Kentucky	No	
Louisiana	No	
Maine	No	
Maryland	No	
Massachusetts	Yes	No change in basket clause of 5%. PRIM excluded
Michigan	Yes	2013: caps +10 ppts across tiers (< \$250m: 5%→15%; \$250m-< \$1b: 10%→20%; ≥ \$1b: 15%→25%; State Treasurer: 20%→30%).
Minnesota	No	
Mississippi	Yes	2005: 0% → 10%; 2022: 10% → 20%.
Missouri	No	
Montana	No	
Nebraska	No	
Nevada	No	
New Hampshire	No	
New Jersey	No	
New Mexico	No	
New York	Yes	2006: 15% → 25%; 2022: 25% → 35%.
North Carolina	Yes	2000: 0% → 5%; 2011: 5% → 7.5%; 2013: 7.5% → 8.75%.
North Dakota	No	
Ohio	No	
Oklahoma	No	
Oregon	No	
Pennsylvania	No	
Rhode Island	No	
South Carolina	Yes	2005: overall equity cap 40% → 70% (covers public & private equity).
South Dakota	No	
Tennessee	Yes	2006: 0% → 40%.
Texas	No	
Utah	No	
Vermont	No	
Virginia	No	
Washington	No	
West Virginia	No	
Wisconsin	No	
Wyoming	Yes	2016: 0% → 10%; 2018: 10% → 20%.

Table A15: **Basket clauses across states:** The table reports the basket clause (alternative asset cap) status in 2000 and post-2000 changes, for all states in the U.S. No indicates no statutory basket clause in 2000; many such states operate under prudent-investor standards. Post-2000 changes indicate the changes in the basket clause status for each state allowing public pension funds to commit a larger percentage of assets to non-traditional asset classes such as private equity, venture capital and hedge funds.

	Num Funds		log(Num Funds)		AUM Committed (Mill USD)		log(AUM Committed)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × NY Public Pension	62.084*** (9.475)	64.094*** (9.540)	0.888*** (0.200)	1.014*** (0.204)	3207.933** (1332.255)	3101.376** (1343.334)	0.668** (0.283)	0.769*** (0.287)
LP FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓		✓		✓		✓	
Year × Political Leaning FE		✓		✓		✓		✓
Observations	6,570	6,570	6,100	6,100	6,570	6,570	4,863	4,863
R ²	0.87	0.87	0.86	0.87	0.87	0.87	0.92	0.92

Table A16: **First-Stage Estimates—Effect of the Basket-Clause Reform on LP Commitments:** This table presents first stage difference-in-differences estimates using LP-year panel data of US public pension funds. The dependent variable in columns (1)-(2) is the number of funds an LP commits capital to; columns (3)-(4) are the log number of funds; columns (5)-(6) are total AUM committed; and columns (7)-(8) are the log of total commitments. *Post* is a dummy indicating the year is on or after 2005, when NY public pension has the basket clause legal reform. *NY Public Pension* is a dummy indicating the public pension is from New York state. All specifications include LP fixed effects; odd-numbered columns include year fixed effects while even-numbered columns include year × political leaning fixed effects. Standard errors, reported in parentheses, are clustered at the LP level. * p<.10; ** p<.05; *** p<.01.

	Num Commitments					Amount Committed (USD Mill)				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Post × D(Rela. NY Public Pension)	0.708** (0.306)	0.719** (0.324)	0.690** (0.331)	0.656** (0.317)	0.631** (0.311)	81.641** (33.162)	79.150** (35.154)	77.821** (35.617)	73.571** (34.216)	71.529** (33.433)
PE Firm FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Strategy FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Country/State FE		✓	✓	✓	✓		✓	✓	✓	✓
Year × Quartile Share NY LP FE			✓	✓	✓			✓	✓	✓
Year × Quartile Share Pub Pension FE				✓	✓				✓	✓
Year × Quartile Share ESG LP FE					✓					✓
Observations	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274
R ²	0.66	0.68	0.69	0.69	0.69	0.74	0.75	0.75	0.75	0.75

Table A17: **Validation of First stage - commitments to relationship PE firms:** This table reports difference-in-differences estimates validating the first-stage results at the PE firm (GP) level. The regression is run at a PE firm-year panel. The dependent variable in columns (1)-(5) is the number of commitments received from New York public pensions, while in columns (6)-(10) it is the total amount of capital commitments received (in USD million). *Post* is an indicator equal to one for years on after 2005, when the New York basket-clause reform. *D(Rela. NY Public Pension)* is an indicator equal to one for PE firms that had relationships with (received capital commitments from) New York public pensions prior to the reform (up to 2004). The treatment variable is the interaction of these two indicators, capturing post-reform outcomes for firms with pre-existing New York pension relationships. All regressions include PE-firm fixed effects and year-by-PE strategy fixed effects. Successive columns add Year × PE country/state, Year × quartile-share NY LP, Year × quartile-share public pension, and Year × quartile-share ESG-LP fixed effects. Standard errors, reported in parentheses, are clustered at the PE-firm level. * p<.10; ** p<.05; *** p<.01.

	FracDirty, excl. defence									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Post × D(Rela. NY Public Pension)	-0.013*** (0.003)	-0.011 (0.007)	-0.014* (0.008)	-0.017* (0.009)	-0.016* (0.009)					
Post × D(Rela. NY Public Pension), Low ex-ante ESG rela. LP						-0.023*** (0.004)	-0.024** (0.011)	-0.027** (0.012)	-0.028** (0.012)	-0.026** (0.013)
Post × D(Rela. NY Public Pension), High ex-ante ESG rela. LP						0.000 (0.004)	0.003 (0.008)	0.001 (0.009)	-0.003 (0.009)	-0.004 (0.009)
PE Firm FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Strategy FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Country/State FE		✓	✓	✓	✓		✓	✓	✓	✓
Year × Quartile Share NY LP FE			✓	✓	✓			✓	✓	✓
Year × Quartile Share Pub Pension FE				✓	✓				✓	✓
Year × Quartile Share ESG LP FE					✓					✓
Observations	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274
R ²	0.61	0.63	0.64	0.64	0.64	0.61	0.63	0.64	0.64	0.64

Table A18: **Robustness excluding defence - Impact of Basket-Clause Reform on portfolio allocation to dirty industries:** The table reports difference-in-differences estimates of the impact of the basket-clause reform on PE firms' industry composition of holdings. The dependent variable is the share of portfolio holdings in "dirty" industries measured as the fraction of portfolio holdings in oil and gas, mining, transportation, power and utilities. *Post* is an indicator equal to one for years on or after 2005, following the basket-clause reform. *D(Rela. NY Public Pension)* is an indicator equal to one for PE firms that had established relationships with (received capital commitments from) New York public pensions prior to the reform, i.e., on or before 2004. Treatment is the interaction of these two indicators. Columns (1) to (5) report the baseline results and columns (6) to (10) present treatment results split by PE firms with low vs high ex-ante ESG LPs. All regressions include PE-firm fixed effects and year-by-PE strategy. Successive columns add Year × PE country/state, Year × quartile-share NY LP, Year × quartile-share public pension, and Year × quartile-share ESG-LP fixed effects. Standard errors, reported in parentheses, are clustered at the PE firm level. * p<.10; ** p<.05; *** p<.01.

	num. ESG employees									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Post × D(Rela. NY Public Pension)	0.104*** (0.026)	0.127** (0.060)	0.116* (0.063)	0.118* (0.060)	0.116* (0.060)					
Post × D(Rela. NY Public Pension), Low ex-ante ESG rela. LP						0.147*** (0.033)	0.188* (0.099)	0.176* (0.104)	0.179* (0.099)	0.180* (0.100)
Post × D(Rela. NY Public Pension), High ex-ante ESG rela. LP						0.051 (0.036)	0.058 (0.058)	0.048 (0.060)	0.043 (0.068)	0.041 (0.067)
PE Firm FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Strategy FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year × PE-Country/State FE		✓	✓	✓	✓		✓	✓	✓	✓
Year × Quartile Share NY LP FE			✓	✓	✓			✓	✓	✓
Year × Quartile Share Pub Pension FE				✓	✓				✓	✓
Year × Quartile Share ESG LP FE					✓					✓
Observations	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274	12,274
R ²	0.63	0.67	0.67	0.68	0.68	0.63	0.67	0.68	0.68	0.68

Table A19: **Robustness - Impact of Basket-Clause Reform on the number of ESG Employee:** The table reports difference-in-differences estimates of the impact of the basket-clause reform on the number of ESG employees at a PE firm. The dependent variable is the number of ESG professionals on staff in that year at a given PE firm. *Post* is an indicator equal to one for years on or after 2005, following the basket-clause reform. *D(Rela. NY Public Pension)* is an indicator equal to one for PE firms that had established relationships with (received capital commitments from) New York public pensions prior to the reform, i.e., on or before 2004. Treatment is the interaction of these two indicators. Columns (1) to (5) report the baseline results and columns (6) to (10) present treatment results split by PE firms with low vs high ex-ante ESG LPs. All regressions include PE-firm fixed effects and year-by-PE strategy fixed effects. Successive columns add Year × PE country/state, Year × quartile-share NY LP, Year × quartile-share public pension, and Year × quartile-share ESG-LP fixed effects. Standard errors, reported in parentheses, are clustered at the PE firm level. * p<.10; ** p<.05; *** p<.01.

	Dirty industry holdings				I(ESG employee)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post ($\geq$ cohort year); 0 for never treated=1	-0.000 (0.006)	-0.000 (0.007)			0.024 (0.019)	0.020 (0.020)		
Post $\times$ Low ESG LPs in 2006=1			-0.004 (0.006)	-0.003 (0.008)			0.028 (0.023)	0.025 (0.025)
Post $\times$ High ESG LPs in 2006=1			0.008 (0.013)	0.004 (0.016)			0.015 (0.033)	0.013 (0.027)
PE Firm FE	✓	✓	✓	✓	✓	✓	✓	✓
Year $\times$ PE-Strategy FE	✓	✓	✓	✓	✓	✓	✓	✓
Year $\times$ PE-Country/State FE		✓		✓		✓		✓
Year $\times$ Quartile ESG LP FE		✓		✓		✓		✓
Year $\times$ Qrtle Share Public Pension LP FE		✓		✓		✓		✓
Year $\times$ Qrtle Share Red trtd LP FE		✓		✓		✓		✓
Observations	15,613	15,394	15,613	15,394	15,613	15,394	15,613	15,394
R^2	0.71	0.74	0.71	0.74	0.57	0.64	0.57	0.64

Table A20: **Placebo test for impact of Basket clause reform:** This table reports difference-in-differences estimates of the impact of the basket-clause reform on industry composition of portfolio holdings of PE firms and their likelihood of having ESG employees for Republican-leaning states. The dependent variable in Columns(1)-(4) is the share of portfolio holdings in “dirty” industries measured as the fraction of portfolio holdings in oil and gas, mining, transportation, power and utilities and defence; and the dependent variable in columns (5)-(8) is a binary indicator equal to one if the PE firm has at least one ESG professional on staff in that year. *Post* is an indicator equal to one for years post reform, following the basket-clause reform. *D(Rela. Public Pension)* is an indicator equal to one for PE firms that had established relationships with (received capital commitments from) treated public pensions prior to the reform, i.e., on or before 2006. Treatment is the interaction of these two indicators. Columns (1)-(2) and (5)-(6) report the baseline results and columns (3)-(4) and (5)-(6) present treatment results split by PE firms with low vs high ex-ante ESG LPs. All regressions include PE-firm fixed effects and year-by-PE strategy. Even numbered columns add Year $\times$ PE country/state FE, Year $\times$ quartile-share public pension, Year $\times$ quartile-share ESG-LP fixed effects, and Year $\times$ quartile-share treated (red) states LP fixed effects. Standard errors are clustered at the PE-firm level. * $p < .10$; ** $p < .05$; *** $p < .01$.

Internet Appendix B: E&S incidents and likelihood of raising a follow-up fund

In this appendix, we provide a detailed description of additional tests conducted to test whether experiencing E&S incidents affect the likelihood of raising a follow-up fund. We organize the data in the form of a fund-year panel. This data structure allows us to investigate the likelihood and timing of raising a follow-up fund. A fund remains in the sample until a follow-up fund is raised, as we use a hazard model to estimate the likelihood and timing of fundraising. If a fund does not raise a follow-up fund, it remains in the sample for up to 10 years from its inception. Following Barber and Yasuda (2017), we restrict our sample to funds raised no later than 2018 to allow enough time to raise a follow-up fund towards the end of our sample period. In the spirit of Barber and Yasuda (2017)'s approach to measure interim fund performance, we construct our measure of E&S incidents by taking the average number of incidents from the fund's inception year to date.

Using this fund-year panel, we first plot a Kaplan-Meier survival graph depicting cumulative survival probabilities—that is, the probability of not yet having raised a follow-up fund. Figure B1 shows the survival probability up to ten years from the inception of the current fund. The number at risk indicates the funds that have not yet raised a follow-up fund. The graph shows that most fundraising events occur between years 3 and 8 after the current fund's inception, which is consistent with the results of Barber and Yasuda (2017). By ten years after fund inception, approximately 75% of funds in our sample have raised a follow-up fund.

We then test the impact of E&S incidents on fundraising at the extensive margin. In other words, we ask: Do E&S incidents affect the likelihood of raising a follow-up fund? Since the probability of raising a follow-up fund varies over the lifespan of a fund—it is initially low, peaks midway, and then declines, we follow Barber and Yasuda (2017) and employ a proportional hazards model to analyze the timing of raising a follow-up fund.

In the hazard model, a “failure” event for a given fund N is defined as raising a follow-up fund. Fund N remains in the sample from inception for up to 10 years or until a follow-up fund is raised. We estimate the hazard rate using a proportional hazards model, which takes the

following form:

$$h(t) = h_0(t)exp(x_t\beta)$$

$$x_t\beta = \alpha + \beta_1\log(1 + E\&S\ incidents_t) + \beta_2\log(multiple) + \beta_3\log(size) + \beta_4\log(series) \quad (5)$$

$$+ \beta_5\log(buyout\ multiple)_t + Industry\ Controls_t,$$

where x_t is a vector of covariates; $h_0(t)$ is the baseline hazard rate equal to pt^{p-1} , where p is the shape parameter. Time t is measured in years since the inception of fund N . $E\&S\ incidents_t$ is the average number of E&S incidents up to year $t-1$.³³ Similar to the intensive margin analysis, we also divide the incidents into *Low E&S Incidents* (*High E&S Incidents*), which indicates below (above) median number of E&S incidents for each vintage year until year $t-1$ in the fund-year panel, conditional on an E&S incident. As a result, the omitted category is funds with no E&S incidents. Similar to Equation 1, we include logarithm of fund size, fund multiple and fund series as control variables. $Industry\ Controls_t$ denotes separate controls for the proportion of investments in each industry sector at time t . In addition, we follow Barber and Yasuda (2017) and control for logarithm of net multiple of all active buyout funds in a given year to control for the hot market effect (likelihood of raising a fund with respect to overall market performance).

Table B1 reports the results. In column (1), the coefficient on $\log(1 + E\&S\ incidents_t)$ is negative and statistically significant, which implies a lower likelihood of raising a follow-up fund after E&S incidents.³⁴ In column (3), we re-estimate the model including *Industry Controls*, and the coefficients remain similar. Intuitively, this controls for the possibility that funds with a given industry composition may be more likely to raise a follow-up fund (for instance, if they happen to specialize in an industry that is doing particularly well during our sample period). The coefficients on the control variables are in line with the prior literature. Funds are more likely to raise a follow-up fund if they perform better, if they have raised larger funds in the past, or if the buyout industry performs better (Barber and Yasuda, 2017).

³³Note that we normalize the number of incidents by the number of years before a follow-up fund is raised as described in Section 3. Therefore, the number of incidents does not increase with the number of years a fund exists in the sample.

³⁴We demean logarithm of average number of incidents by PE region, year and vintage year. This is to remove the trend in number of incidents in order to make it consistent with the categorical variables used in columns 2 and 4. Intuitively, this is also to be consistent with the intensive margin regression with fixed effects in Equation (1).

In Columns (2) and (4), we estimate Equation (5) using a categorical variable for the number of E&S incidents. *Low E&S Incidents* (*High E&S Incidents*) takes a value of 1 for below (above) median number of E&S incidents until year $t - 1$ for each PE region, year and vintage year. The variables take the value of 0 for funds that do not experience any incidents up to year $t - 1$. Funds that experience incidents are less likely to raise a follow-up fund in the next year compared to funds that do not experience incidents. In terms of economic magnitude, the hazard ratio of raising a follow-up fund for below median number of incidents is 0.773 ($\exp(-0.258)$). This implies that funds that experience below median number of incidents have a 22.7% ($1 - 0.773$) lower hazard rate of raising a follow-up fund in the next year compared to funds that do not experience any incidents. Similarly, funds that experience above median number of incidents have a 30.79% lower hazard rate of raising a follow up fund in the next year compared to funds that do not experience any incidents. This effect is also economically large, as it is equivalent to the hazard rate impact of increasing fund performance by a factor of 1.5 (calculated as $1 + 0.368/0.694$).

We also conduct this analysis by PE firms' reputation. E&S incidents have negatively affect likelihood of fundraising particularly for small, young and lower-performing PE firms (Appendix Table B2). We replicate the same regressions for G incidents and do not find any impact of G incidents on the likelihood of fundraising (Appendix Table B3). These results are highly consistent with the intensive margin results in the main analysis of the paper.

To visualize the effect and to understand the economic magnitude more intuitively, we plot the post-estimation fitted failure function, which corresponds to the probability of raising a follow-up fund, in Figure B2. The function is evaluated at the mean values of the covariates for each duration (measured as the number of years since the fund's inception). The figure shows that the probability of raising a follow-up fund ("failure") for funds that do not experience an incident is higher than the probability of raising a follow-up fund for funds that experience below or above median number of incidents. Estimates imply that 5 years after inception, funds that do not experience incidents have a probability of raising a follow-up fund of 35.50%, whereas funds that experience above median number of incidents have a lower probability of 26.17% of raising a follow-up fund.

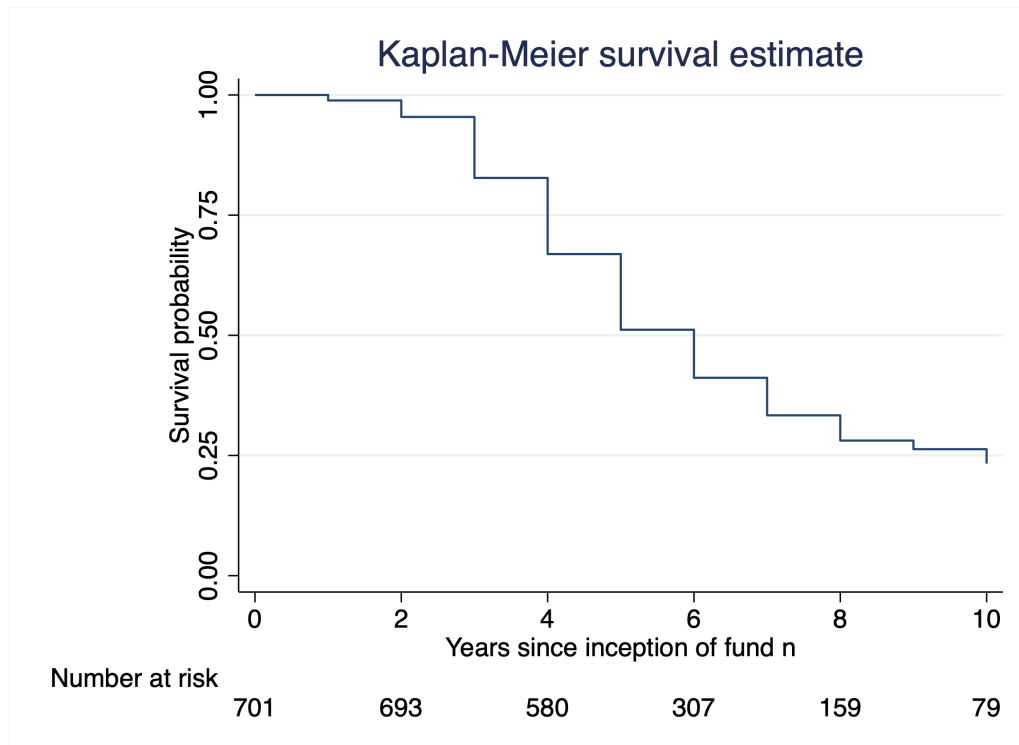


Figure B1: **Kaplan-Meier survival probability:** The figure depicts the survival probability—the probability that a follow-up fund has not been raised—on the Y-axis and years since fund N is raised on the X-axis. Number at risk represents the number of funds at risk, i.e., the number of funds that have not yet raised a follow-up fund and have not been censored.

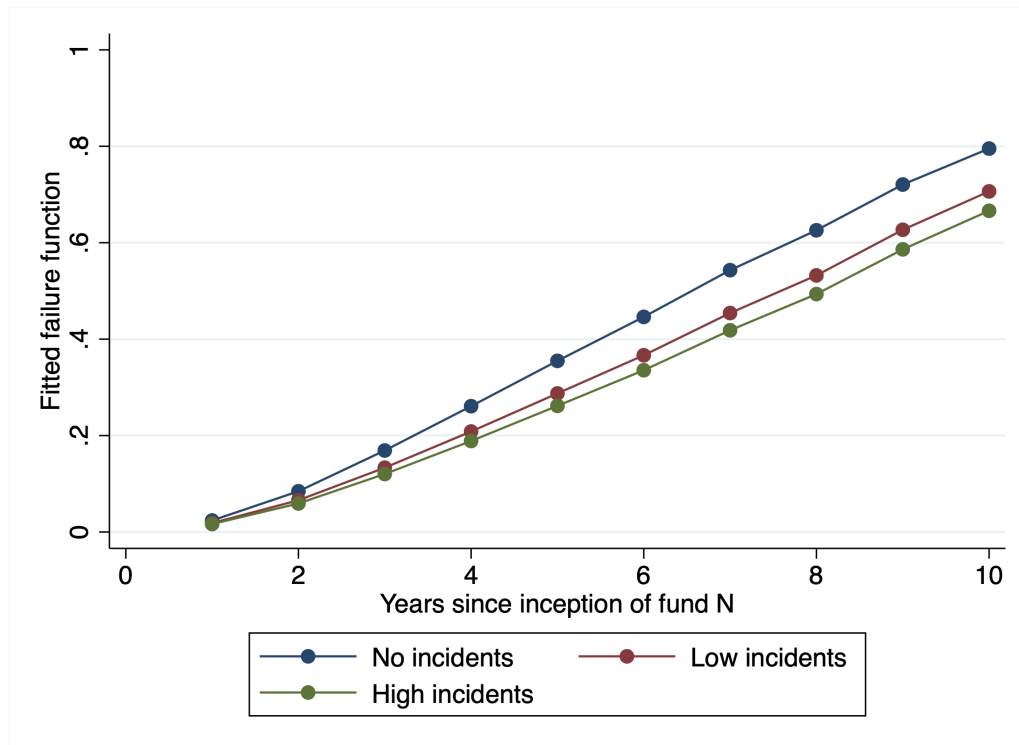


Figure B2: **Fitted Failure Function:** The figure depicts the fitted failure function i.e., probability of raising a follow-up fund for funds that experience above median (high), below median (low) and no E&S incidents. Failure corresponds to raising a follow-up fund and a higher value of the fitted failure function implies a higher probability of raising a follow-up fund. The function is evaluated at specified values of the selected covariate and overall means of other covariates at each duration (number of years since inception of the fund).

	Hazard model for fundraising			
	(1)	(2)	(3)	(4)
$\log(1 + \text{cum num. E\&S incidents})$	-0.520** (0.262)		-0.472* (0.255)	
Low cum num. E&S incidents		-0.274** (0.118)		-0.258** (0.120)
High cum num. E&S incidents		-0.380*** (0.144)		-0.368** (0.143)
$\log(\text{fund multiple})$	0.670*** (0.133)	0.682*** (0.133)	0.684*** (0.135)	0.694*** (0.135)
$\log(\text{fund size})$	0.283*** (0.046)	0.312*** (0.048)	0.259*** (0.048)	0.290*** (0.050)
$\log(\text{buyout multiple})$	5.884*** (1.641)	6.515*** (1.692)	5.514*** (1.648)	6.076*** (1.706)
$\log(\text{fund series})$	-0.042 (0.101)	-0.028 (0.100)	-0.042 (0.103)	-0.029 (0.102)
Observations	3114	3114	3114	3114
Industry controls	No	No	Yes	Yes

Table B1: **Effect of E&S incidents on the probability of raising a follow-up fund:** The table reports results from a hazard model using years since fund inception and presents the effect of E&S incidents on the likelihood of raising a follow-up fund. The analysis is conducted in a fund-year panel, in which each fund remains in the sample until it raises a follow-up fund or until the end of the sample period. In columns (1) and (3), $\log(1 + \text{cum num. E\&S incidents})$ is demeaned log cumulative average number of incidents from fund N inception till year $t - 1$. The variable is demeaned by each vintage year of fund, year and PE firm region. In columns (2) and (4), *Low cum E&S incidents* (*High cum E&S incidents*) are dummy variables indicating below (above) median cumulative average number of incidents from fund N inception till year $t - 1$, conditional on any incidents occurring in this period. The omitted category is funds with no incidents from fund N inception till year $t - 1$. $\log(\text{fund size})$ is the natural logarithm of AUM of fund N . $\log(\text{fund multiple})$ is the natural logarithm of net multiple of fund N . $\log(\text{fund series})$ is natural logarithm of the sequence number of fund N of a given series. $\log(\text{buyout multiple})$ is the natural logarithm of overall performance of buyout funds for each year. In columns (3) and (4), we include separate industry controls for the fraction of investments made by fund N at $t - 1$ in each industry sector. Standard errors, reported in parentheses, are clustered by PE firms. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Hazard model for fundraising							
	(1) Young	(2) Old	(3) Small	(4) Large	(5) Low-perf	(6) High-perf	(7) Low-reputation	(8) High-reputation
Low cum. number of E&S incidents	-0.445*** (0.153)	0.022 (0.172)	-0.435*** (0.131)	-0.036 (0.174)	-0.484*** (0.159)	0.008 (0.160)	-0.536*** (0.184)	-0.076 (0.150)
High cum. number of E&S incidents	-0.425*** (0.163)	-0.183 (0.230)	-0.452** (0.194)	-0.192 (0.192)	-0.745*** (0.226)	0.008 (0.167)	-0.640** (0.260)	-0.171 (0.167)
log(fund multiple)	0.681*** (0.134)		0.671*** (0.135)		0.671*** (0.135)		0.680*** (0.135)	
log(fund size)	0.269*** (0.051)		0.271*** (0.052)		0.254*** (0.056)		0.261*** (0.053)	
log(buyout multiple)	6.321*** (1.692)		6.183*** (1.698)		6.316*** (1.698)		6.256*** (1.703)	
log(fund series)	-0.069 (0.104)		-0.065 (0.105)		-0.045 (0.101)		-0.067 (0.103)	
Observations	3114		3114		3114		3114	
Industry Controls	✓		✓		✓		✓	

Table B2: **Extensive margin effects of E&S incidents for low and high-reputation PE firms:** The table reports results from a hazard model using years since fund inception and presents the effect of E&S incidents on the likelihood of raising a follow-up fund. The independent variables are *Low cum E&S incidents* (*High cum E&S incidents*) are dummy variables indicating below (above) below median cumulative average number of incidents from fund N inception till year $t - 1$, conditional on any incidents occurring in this period. In column (1) Young is a dummy variable equal to 1 if the PE firm is in the bottom three quartiles in terms of the number of funds raise. In column (3) Small is a dummy variable equal to 1 if the PE firm is in the bottom three quartiles in terms of total AUM raise. In column (5) Low-perf is a dummy variable equal to 1 if the PE firm has no top quartile performing funds older than 5 years one year prior to new fund's fundraising. In column (7) Low-reputation is a dummy variable taking on value 1 if the PE firm is Young, Small and Low-perf. Columns (2), (4), (6) and (8) are defined as complements to column (1), (3), (5) and (7) respectively. Industry Controls include separate controls for the fraction of investments made by fund N in each industry sector one year prior to raising fund $N + 1$. Standard errors, reported in parentheses, are clustered by PE firms. * $p < .10$; ** $p < .05$; *** $p < .01$.

	Hazard model for fundraising			
	(1)	(2)	(3)	(4)
$\log(1 + \text{cum num. G incidents})$	-0.024 (0.260)		-0.101 (0.270)	
Low cum num. G incidents		-0.047 (0.130)		-0.050 (0.131)
High cum num. G incidents		-0.047 (0.144)		-0.079 (0.148)
$\log(\text{fund multiple})$	0.668*** (0.133)	0.669*** (0.133)	0.682*** (0.135)	0.683*** (0.135)
$\log(\text{fund size})$	0.268*** (0.045)	0.274*** (0.048)	0.246*** (0.047)	0.253*** (0.050)
$\log(\text{buyout multiple})$	5.973*** (1.630)	6.080*** (1.647)	5.565*** (1.643)	5.698*** (1.661)
$\log(\text{fund series})$	-0.043 (0.102)	-0.043 (0.102)	-0.044 (0.104)	-0.045 (0.103)
Observations	3114	3114	3114	3114
Industry controls	No	No	Yes	Yes

Table B3: **Effect of G incidents on the probability of raising a follow-up fund:** The table reports results from a hazard model using years since fund inception and presents the effect of G incidents on the likelihood of raising a follow-up fund. The analysis employs a fund-year panel, in which each fund remains in the sample until raising a follow-up fund or until the end of the sample period. In columns (1) and (3), $\log(1 + \text{cum num. G incidents})$ refers to the demeaned logarithm of cumulative average number of incidents from fund N inception till year $t - 1$. The variable is demeaned by each vintage year of fund, year and PE firm region. In columns (2) and (4), *Low cum G incidents* (*High cum G incidents*) are dummy variables indicating below (above) median cumulative average number of incidents from fund N inception till year $t - 1$, conditional on incidents occurring in this period. The omitted category is funds with no incidents from fund N inception till year $t - 1$. $\log(\text{fund size})$ is the natural logarithm of AUM of fund N . $\log(\text{fund multiple})$ is the natural logarithm of net multiple of fund N . $\log(\text{fund series})$ is the natural logarithm of the sequence number of fund N of a given series. $\log(\text{buyout multiple})$ is the natural logarithm of overall performance of buyout funds for each year. In columns (3) and (4), we include separate industry controls for the fraction of investments by fund N at $t - 1$ in each industry sector. Standard errors, reported in parentheses, are clustered by PE firm. * $p < .10$; ** $p < .05$; *** $p < .01$.