Institutional Pressures and Net-Zero Alliance Exits in the Financial Sector: A Determinants Analysis

Abstract

Whether climate-related considerations are compatible with fiduciary duties is a salient question in non-traditional accounting and finance research. Adopting an institutional theory perspective, we study institutional investors' exits from global net-zero alliances and subsequent capital market reactions between 2022 and 2025. First, we find that pressures from regulatory threats and news controversies are positively associated with investors' exit decisions, while shareholding diversity and profitability are negatively associated. Second, the likelihood of exit is higher for controversies in areas of business ethics, legal disputes and fraudulent practices. Third, we find significant stock price reactions after first major departures from net-zero alliances for banks (NZBA) and asset management corporations (NZAM). Our results suggest that institutional investors adapt their climate-related engagement activities under institutional pressures. The findings suggest that consistency of the institutional environment is essential to support steadiness in investor's long-term non-financial agenda.

Keywords: net-zero, institutional pressures, financial alliance, institutional investors, esg, pushback, backlash, blackrock

JEL classifications:

1. Introduction

In only two weeks, five of the world's biggest asset managers withdrew from the largest net-zero investor initiative worldwide. Between 15 February and 1 March 2024, the combined assets under management by members of Climate Action 100+ (CA100+) shrank by 25% (Jessop and Kerber 2024). The departures came after U.S. attorneys general and members of the House Committee on the Judiciary raised allegations about investors' involvement in global net-zero investor alliances, negligence of fiduciary duties and violation of antitrust principles (Committee on the Judiciary 2024). The pushback against ESG activities and the exits by major institutions, such as JP Morgan Asset Management, PIMCO, Citigroup, Allianz or Munich Re, marked an international precedent, showing the fragility of net-zero investor commitments and sparking a debate over the question whether climate-related matters are compatible with investors' fiduciary mandates (Baker 2024; IEA 2024).

Whether institutional investors should consider climate- and sustainability-related matters has emerged as a critical question in current accounting and finance research (Stroebel and Wurgler 2021). On the one hand, fiduciary duties following the principles of obedience, loyalty, prudence or impartiality protect clients' financial interests from possible conflicts of interests. If non-financial considerations are driven by management's private interests rather than clients' financial interests, fiduciary duties may be violated (Hart 1993). Non-financial considerations could be a sign that investors accept the risk of financial underperformance for individual benefits at the expense of clients (Giglio et al. 2025). On the other, scholars argue that fiduciary duties oblige investors to consider non-financial matters because of their growing value-relevance (Gary 2019; Dyck et al. 2019). As banks, insurers and asset managers are increasingly concerned about the financially adverse effects of global warming (Starks et al. 2017)(Ilhan et al., 2023), non-financial considerations may be essential to seize all relevant information to manage material risks responsibly in the course of climate change (Kolasa and Sautner 2024).

In this study, we examine this issue empirically by analysing institutional investors' decisions to exit international net-zero alliances and capital market responses. The sample spans 345 net-zero alliance members examined at the quarter-level between 2022 and 2025 (2,355 observations). We focus on recognized global net-zero investor alliances, including CA100+ and four constituent organisations of the Glasgow Financial Alliance for Net-Zero (GFANZ). The dataset combines hand-collected information on exit decisions and regulatory pressures, financial data from LSEG Datastream, and news data from Ravenpack.

Using the institutional theory framework by DiMaggio and Powell (1983), we investigate the role of internal and external institutional pressures for investor's exit decisions. First, we consider external coercive pressures as mainly affecting net-zero membership decisions. This involves company-specific shocks and litigation risk emanating from the politization of environmental, social and governance (ESG) topics (Bourveau, 2017). It also includes public scrutiny and reputation risk from adverse news coverage of company-specific ESG-related issues (Aouadi, 2018). In addition, we investigate mimetic factors as the main internal pressure sources. This includes risk avoidance behaviour and conflicting investment strategies by shareholders as a result of the diversity in equity holding and the influence of strategic long-term investors (Dasgupta, 2021). It also includes financial performance results affecting management's decisions with respect to non-financial actions (Brooks, 2018).

Beyond analysing determinants on an aggregate level, we study the role of company-specific news controversies in more detail. We focus on company-specific issues in areas of ethics, legal, fraud, sanctions and social issues. Saliently, we also find that each of the five alliances has witnessed a collective wave of exits over a short period of time. We explore this issue further focussing on the market perception of exit dynamics. Specifically, we examine whether a first-mover-effect exists by examining short-term stock price reactions following the first departure of one major alliance members.

We find that regulatory shocks and ESG controversies are positively associated with investors' likelihood of exit, while shareholder diversity and financial performance are negatively associated. First, members which face regulatory shocks, for example, through investigations or lawsuits, in the same or previous quarter are more than twice as likely to exit an alliance, while the number of total shocks further raises this likelihood. Second, investors with a more diverse ownership structure exhibit a higher likelihood of exit relative to investors with high concentration of strategic owners. Third, ESG-related controversies are positively associated with alliance exits. Fourth, investors with lower profit results show a higher likelihood of exits relative to other investors. We corroborate these results using linear regression and penalized maximum likelihood methods. From the granular analysis of news controversies, we find that controversy scores in the areas of business ethics, legal disputes and fraudulent practices are significant and positively associated with exit decisions, while sanctions and social issues are insignificant. The analysis of market reactions shows robust and significant negative stock price reactions after the departure of Goldman Sachs from the Net-Zero Banking Alliance (NZBA) in December 2024 and significant positive reactions after the exit of Black Rock from the Net-Zero Asset Manager Alliance (NZAM) in January 2025.

The study contributes in two main ways. First, our focus on the determinants of investor alliance exit decisions complements existing literature on voluntary sustainability activities by financial institutions. Existing literature has studied the role of institutional pressures in driving voluntary accessions to non-financial alliances and partnerships by investors (Reid and Toffel 2009; Schiemann and Sakhel 2019; Lee and Raschke 2023). Yet, there is a lack of understanding on the determinants of stepping back from non-financial alliance commitments. We fill this void and identify determinants for the reversal of non-financial alliance commitments, namely regulatory shocks, ESG controversies, ownership diversity and reduced profitability. These findings contrast the idea that potential exit barriers, such as reputational damage, might prevent investors from withdrawing their alliance pledges. The findings also demonstrate that institutional investors are not immune to changes in coercive and mimetic pressures and adapt their strategic non-financial decisions to conform to medium-term changes in their environment.

Second, we contribute to the emerging literature on the growing pushback and politization of ESG activities by financial institutions. A nascent stream of empirical research in economics and finance explores the drivers and consequences of anti-ESG regulation. especially in the United States. to oppose non-financial activities by financial institutions (De Mariz, 2025; Rajgopal, 2025; Tang et al., 2024). While current studies focus on formal anti-ESG regulations, we find that informal pressures play an important role in affecting investor's commitments to non-financial alliances. We identify regulatory shocks, news controversies, ownership concentration and profitability factor in affecting exit decisions. While informal institutional pressures are positively associated with the likelihood of exit decisions, the study suggests that a stable institutional environment can strengthen the consistency of institutional investors' non-financial agenda.

2. Background

At the 2021 United Nations Climate Change Conference, a coalition of banks, asset managers and insurance companies agreed to create a global alliance of institutional investors to multiply their efforts and action for the green transition and to achieve the objectives of the Paris Agreement (UNFCCC, 2021). The founding members of the Glasgow Financial Alliance for Net-Zero (GFANZ) viewed climate action not as an act of benevolence, but as part of their fiduciary mandate (GFANZ, 2021). In the following years, the number of signatories of the GFANZ grew from 450 in 2021 to 675 members in 2023. According to a growing number of corporate leaders from financial institutions, the consideration of climate aspects served investors' best interests by opening new long-term strategic opportunities while also strengthening risk management in the context of climate change (Fink 2016)(GFANZ 2023). Accordingly, institutional investors would fulfil their fiduciary mandate best by integrating financial and sustainability considerations thereby acting as "*conscious capitalists*" (Mackey and Sisodia 2014; Freeman et al. 2007). The movement joined earlier efforts by the CA100+ initiative, which coordinated investors' net-zero efforts since 2017 and gathered institutional investors to support climate progress in the real economy through collaborative engagement (CA100, 2017)[1].

However, greenwashing and financial concerns led to cracks in the sustainable investing movement. Revelations about systematic overstatements of climate action by several financial institutions raised the public scrutiny and led to controversies about the credibility of voluntary non-financial pledges and activities pursued by financial institutions (Reuters, 2022). In addition, a growing number of shareholders raised their concerns that investors shift towards the consideration of non-financial factors happened at the expense of financial performance thereby violating fiduciary duties. In March 2023, Republican attorneys general wrote to 53 U.S. fund firms that investor climate-related activities were "*inconsistent with [your] clients' financial interests*" (Granicus 2023). In December 2024, the House Judiciary Committee Chairman Jordan announced an investigation into collusive activities of BlackRock and State Street related to ESG goals.

The support for the ESG pushback from federal- and state-level officials in the US was grounded in two main arguments: First, the view that consideration of ESG matters represents a breach of fiduciary duties. In a letter to 53 asset managers in 2023, attorney general Austin Knudsen, contended that CA100+ members force "*portfolio companies to "align […] political lobbying with the Paris Agreement," without allowance for whether such an alignment would be in the financial best interests of the company*", and that clients "*looking for low cost, passive indexing investments may be unwittingly funding your ESG activism*" (Montana Department of Justice, 2023). Second, critics pointed out that action by net-zero alliance members breaches antitrust principles. In an interim report, the Republican Committee Judiciary pointed out that groups such as CA100+ pursued the objective "*to harness the collective influence of" its investor members*" and seek to ensure that "*companies […] have committed to net-zero or gone out of business as investors are no longer providing them with capital*" (Committee of the Judiciary, 2014).

As companies reacted to the dilemma between the support for ESG considerations and the growing anti-ESG headwinds individually by quitting or maintaining net-zero memberships, the industry-wide polarization on this issue shows that the question whether net-zero activities are compatible with fiduciary duties remains unresolved.

[1] The CA100+ required members to implement a strong governance framework, which clearly articulates the board's accountability and oversight of climate change risk, to provide enhanced corporate disclosure and implement transition plans to deliver on robust targets, and to take action to reduce greenhouse gas emissions across their value chain, including engagement with stakeholders such as policymakers and other actors to address the sectoral barriers to transition (CA100+, 2017).

3. Hypothesis development

According to institutional theory, companies adapt their behaviour to adapt to institutional pressures in their environment (DiMaggio, 1982; Oliver, 1991). Symbolic behaviour can support companies to defend their actions and gain legitimacy when changing institutional norms cast doubt on the legitimacy of companies' economic activities. From this perspective, investors' decisions to join or quit voluntary net-zero alliances may be viewed as symbolic responses to acquiesce to new institutional norms and changing societal expectations, such as a growing public opposition against corporate climate activities or unmet expectations about the compatibility between climate goals and financial interests (Berger-Schmitz et al. 2023).

Companies may experience institutional pressures in relation to their climate agenda from the inside and outside. From the inside, pressures result from the question whether alliance objectives are aligned with corporate strategic goals. Fiduciary duties oblige investors to meet the strategic goals and expectations from a diverse group of stakeholders with different investment objectives and horizons. Non-compliance with their fiduciary duties and perceived neglect of clients' financial interests may increase pressures on management to focus on their core fiduciary mandate. Subdued financial performance and dissatisfaction by stakeholders can turn harness institutional pressures and strengthen the urge for management action. From a different standpoint, the discussion on whether or not shareholders consent to investors' climate agenda also relates to the question of the allocation of property rights (Jensen, 1976). The stance of corporate owners matters for the strategic direction taken by the management on ESG-related goals and ambitions. The consequences of climate change appear as particularly important for long-term oriented investors. However, the relative concentration of equity ownership in the hands of strategic investors may determine whether strategic shareholders can enforce their climate agenda and influence management's strategic long-term decisions.

From the outside, institutional pressures may arise from changing political or societal expectations about companies' activities. Reputational concerns may push companies to undertake warranted non-financial actions voluntarily in accordance with societal expectations. At the same time, criticism of corporate non-financial actions may lead companies to reassess and abandon non-financial commitments. Companies' reputation may further be damaged if companies are involved in ESG-related controversies, further reducing trust among stakeholders and leading companies to revaluate their non-financial actions. Beyond reputational concerns, legal threats and public investigations may exert coercive pressures on companies to comply with non-financial goals. Fear of regulatory sanctions may arise if companies do not live up to their sustainability pledges, thus risking accusations of misleading customers and conducting corporate greenwashing. Coercive pressures may also arise when shareholders file complaints about fiduciary misconduct because of prioritisation of non-financial actions.

While investors reassess their climate commitments continuously in a dynamically evolving institutional environments, there may be a barrier to stepping back from net-zero pledges. In contrast to joining an alliance, quitting memberships and reversing earlier decisions may create uncertainty and ambiguous signals to corporate stakeholders. Based on the above, we formulate the following hypothesis:

H1: Regulatory threats, ESG controversies, ownership concentration and profitability concerns matter for investors' decisions to exit net-zero investor alliances.

4. Data and methodology

4.1 Data

I use three sources of data. First, we hand-collect information on net-zero alliance members and regulatory pressures from news sources and official alliance websites. Regulatory pressures include direct forms of pressure exercised by state institutions and public administration members targeting individual alliance members and thereby exposing their activities negatively to the public. These include open letters confronting individual financial institutions, investigations by governmental committees, boycotts of individual companies, as well as lawsuits filed by public officials. These forms of direct pressure are detected primarily for the United States. We do not consider general negative news or revelations which do not target institutions individually. An overview of exit events and regulatory pressure events are included in the Appendix.

Second, we use news controversy information from RavenPack. RavenPack offers structured analytics services by compiling, preparing and publishing online content from over 40,000 sources, including from websites and social media. We rely on the news controversies dataset which includes company-specific news controversy metrics for a range of ESG-related topics. We use aggregate ESG controversy scores and relevant topic-specific scores in relationship to corporate business ethics, anti-competitive practices, governance or sanctions (RavenPack 2025). Third, we use financial data from LSEG Datastream. The advantage of using LSEG Datastream is the global coverage and timeliness of the data.

To construct the sample, we identify current and former members of international net-zero investor alliances. We consider major global alliances which are actively working towards implementing the United Nation's climate objectives under the Paris Agreement. These include the CA100+ initiative and members of the Glasgow Financial Alliance for Net-Zero (GFANZ), including the NZAOA, NZIA, NZBA, NZAM. The analysis covers the time period of the global emergence and crisis of international financial net-zero alliances, from the inception of the Glasgow Financial Alliance for Net-zero (GFANZ) in November 2021 to the collapse of the NZBA in August 2025.

Our initial sample considers 27,900 company-quarter observations. First, we consider only companies with listed equity shares on public stock exchanges. Second, we identify shares through available ISIN codes and do not consider any non-equity securities, such as depositary receipts. For group entities, we identify the highest publicly listed parent company and remove any duplicate company identifiers. Finally, we restrict the sample to firms with available financial data for all variables required under the baseline model equation (1). This results in 2,313 firm-quarter observations.

4.2 Methodology

I investigate the determinants of net-zero alliance exits using logistic regression methods (Fisher-Vanden and Thorburn 2011; Schiemann and Sakhel 2019; Reid and Toffel 2009), we specify the following model[2]:

$$\Pr(Exit_{it} = 1) = \alpha_0 + \beta_1 RegulatoryShock_{it} + \beta_2 ESGControversy_{it} + \beta_3 FreeFloatShare_{it} + \beta_4 ProfitMargin_{i,t} + \beta_5 TotAssets_{i,t} + \beta_6 DebtRatio_{i,t} + \beta_7 PtB_{i,t} + QuarterFE_t + RegionFE + IndustryFE + e_{i,t} \quad [1]$$

[2] The logistic regression model estimates the conditional probability of the outcome by maximum likelihood and by considering potential determinants ($p_i = \Pr[y_i = 1|x] = F(x_i'\beta)$)Cameron and Trivedi 2005. In comparison to the Probit model, the logistic regression assumes a logistic cumulative distribution function for the link function, i.e., $F(x\beta) = \exp(x\beta)\,/(1 + \exp(x\beta))$.

In equation (1), $Exit_{it}$ is a binary variable taking the value of 0 for company-quarters before an alliance exit, 1 for company-quarters coinciding with an alliance exit, and missing for quarters following an alliance exit. we consider four variables of interest to measure institutional pressures: $RegulatoryShock_{it}$ is a binary variable equal to 1 if the company experienced at least one adverse shock related to its net-zero memberships in the current or previous quarter (0 otherwise). Prior research finds that regulatory changes in supervision and scrutiny affect companies' equity performance (Loipersberger 2018). $Controversy_{it}$ is a calculated score, measuring the average magnitude of ESG controversies which a firm is involved in and related to adverse ESG matters, along with the relevance of such news in the media. $FreeFloatShare$ is the percentage of shares in issue available to ordinary investors and non-available to institutional investors, including pension funds, employees, government and investment companies. There is mixed evidence regarding the relationship between institutional ownership and ESG performance. Existing studies find negative (Borghesi et al. 2014) and positive associations, for example, through corporate engagement (Barko et al. 2022). $ProfitMargin$ is a measure of financial performance, computed as net profit divided by revenue. Negative financial performance likely increases the pressure on corporate leadership to retract from net-zero commitments in order to focus on financial performance.

For the control variables, we include the following: $TotAssets_{i,t}$ is the natural logarithm of total assets. Financial size may influence exit decisions. Larger firms may act more conservatively with regards to their sustainability disclosure decisions than smaller firms. $DebtRatio_{i,t}$ is the share of total debt to total assets. Research finds that ESG performance can be linked to financial characteristics including financial risk. Credit ratings are positively related to sustainability scores and regulatory risks (Seltzer 2025). Companies' sustainability activities are associated with lower costs of equity financing for firms (El Ehoul, 2011). However, other research finds that ESG performance is negatively linked to growth in return on assets. PtB is the share price divided by the book value per share. $QuarterFE$ are quarterly fixed effects. $RegionFE$ are fixed effects for world regions. Prior research finds that country-specific characteristics explain differences in sustainability performance (Cai et al., 2016; Rennehoog et al., 2017). $IndustryFE$ are industry-fixed-effects. ESG scores vary between industries (Borghesi et al., 2014). we cluster standard errors at company-level following prior research (Petersen, 2009).

4.3 Descriptive statistics

Fig. 1 shows the distribution of net-zero alliance exits and regulatory shocks over time. Regulatory shocks include actions undertaken by state and public administration officials in the US against net-zero alliance activities, including letters sent to institutional investors, lawsuits filed against institutional investors, and investigations into net-zero alliance activities of institutional investors (see Appendix).

The first wave of regulatory shocks occurred from the second half of 2022 through the first half of 2023. Noticeable events include accusations by Texas Comproller Heggar that the growing ESG integration suggests that "*some financial companies no longer make decisions in the best interest of their shareholders or their clients*" (Texas Comptroller of Public Accounts, 2022). Alliance-specific investigations were intensified through an investigation by Republican state AGs into NZBA and climate-related memberships of six US banks (19.10.2022) and open letters by Republican state AGs to NZIA and NZAOA members stating concerns on the legality of their "activist climate agenda" (15.05.2023). A second wave of regulatory shocks was observed from the second half of 2024 to the first quarter of 2025. Around the date of the presidential election, US Republican officials renewed their anti-ESG pushback consistent with the position of the official Republican presidential candidate. The HJC Chairman Jordan probes 60+ companies over ESG ties and NZAM involvement (20.12.2024). 11 state AGs warned major financial institutions that certain DIE and ESG commitments could lead to enforcement actions if they are found to violate state or federal law following a review (23.01.2025).

Concerning the distribution of exit decisions, the first exits were observed in the first two quarters of 2023 in the insurance industry. In the first half of 2023, 13 members withdrew from the NZIA, including major members such Allianz, Axa and Munich Re. Additionally, exits to the CA100+, NZBA, and NZIA were recorded through 2024, including withdrawals by major US banks and asset managers such as JP Morgan, State Street or Wells Fargo. The highest number of exits (20) for a single period was recorded in the first quarter of 2025. These include various exits from the NZBA, such as by the National Bank of Canada, Macquarie Group or Mizuho Group, as well as individual exits from other alliances including NZAM, CA100+ and NZAOA. Overall, the graph shows a pattern of high numbers of exits occurring consistently after relative increases in anti-ESG pushback. The relative time lag suggests that exit decisions may have been taken by investors' management in response to growing institutional pressure from political and regulatory attacks.

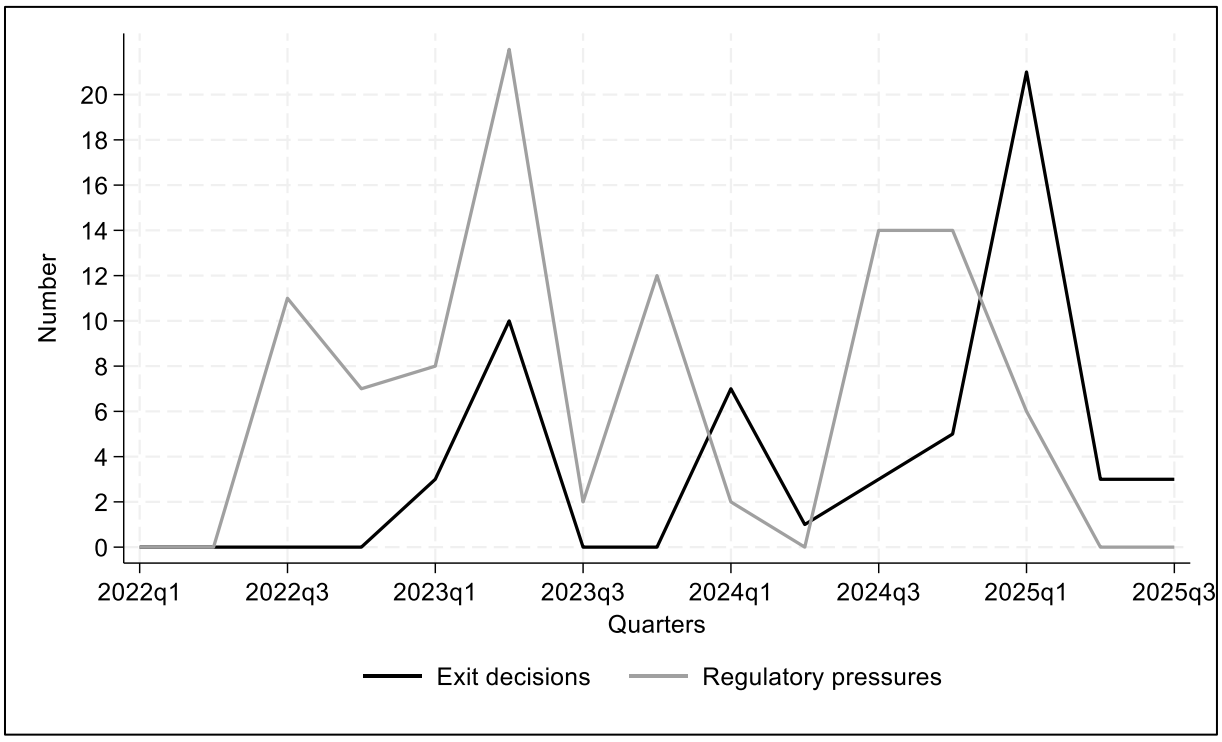


Fig.1 Exit decisions and regulatory pressures
This figure shows the number of net-zero alliance exits and regulatory pressures perceived by net-zero alliance members in the sample between the first quarter of 2022 and the third quarter of 2025.

Table 2 shows subsample differences in mean values for potential exit determinants. In total, 56 company-quarter observations correspond to exit decisions, while 2,301 observations correspond to non-exit decisions. Exiting members received on average 2.4 shocks in the same or previous quarter while non-exiting members received on average only 0.9 shocks. In addition, exit decisions occurred when there was a high controversy around company activities in relation to ESG matters, as indicated by a mean ESG controversy score of 2.5 relative to 1.1 for non-exit members. Also, the free-float share of exiting members is higher than for non-exiting members. This corresponds to our hypothesis of a relatively weaker long-term strategic orientation supported by institutional investor ownership. The visible differences in descriptive statistics provide a justifiable basis for investigating systematic differences empirically. Summary statistics for all sample variables are provided in the Appendix.

5. Results

5.1 Main results

Table 3 shows the main results. Columns 1 to 6 show the estimated regression coefficients for internal and external pressures based on equation (1), including regulatory pressures, ownership

concentration, ESG controversies and financial performance. Column 7 shows the full model results. All specifications include total assets, debt ratio, profit margin and price-to-book value and quarter-, industry- and region- fixed effects as control variables. Estimated coefficients are translated into odds ratios[3].

The results in column 1 and 2 show that regulatory shocks are positively associated with the likelihood of exit. Companies which have faced a regulatory shock in the previous or current quarter are two times more likely to withdraw their net-zero membership relative to other members which have not been targeted. At the same time, companies which have received multiple regulatory shocks over time are more likely to withdraw from an alliance. The results in column 3 and 4 show that the likelihood of exit is positively associated with the free float share of equity owned by ordinary shareholders. Conversely, companies with high equity shares owned by strategic institutional owners, such as by banks, pension funds, government, were less likely to withdraw from a net-zero alliance. The results in columns 5 and 6 show a significant and positive association between news-related ESG controversies and the likelihood of alliance exits. The link between ESG controversies and the likelihood of exit is especially pronounced for ESG controversies related to companies' business ethics. The results in column 7 show that the significance of estimated determinants is unaffected when controlling for all variables in the combined model specification. Additionally, all model specifications highlight the relevance of financial characteristics for net-zero alliance exits. Company size measured by total assets is positively associated with the likelihood of exit, yet the size and significance of the relationship is weakened after controlling for ESG controversies. Conversely, the results show a negative association between profit-margin and the likelihood of exit.

To assess the performance of our regressions, we examine the goodness of fit using McFadden's pseudo-R-squared, which determines the improvement of the full model in explaining the conditional probability over a model with only the intercept (Pseudo R2= 1− (L1 /L0). In addition, acknowledging that a trade-off exists between model fit and overparametrisation, we invoke Akaike's information criterion (AIC), which weights the maximized log-likelihood value of the model against the number of parameters (AIC = −2 × ln(likelihood) + 2 × k), thereby assigning a penalty for model complexity and the number of parameters. Based on the goodness of fit measures, we find that the explanatory power of our estimates is reasonably high. Pseudo-R-squared values of 63% and 70% indicate and that the variation which is not explained by the models is small relative to the total sum of squared (Cameron and Trivedi, 2011). We notice that the goodness of fit is highest after incorporating data on strategic equity ownership, ethics controversies and in the full model, although this is at the expense of sample size. While the relationship between ESG controversies and the likelihood of exit is significant and strong, we also find that the full model, although more complex, is not better at predicting the outcome variable (Cameron and Trivedi, 2011).

5.2 Robustness tests

Prior research shows that the maximum likelihood estimator in logistic regression models may be biased in small samples, especially when the number of prediction events is small. In fact, poor approximation of the tails of the distribution may lead conventional logistic regression to grossly underestimates the occurrence of rare events (Cameron and Trivedi 2005; King and Zeng 2001)[4].

We address methodological concerns related to small sample size and rareness of events in two ways. First, we correct the bias in the maximum likelihood estimator in line with methods employed by

[3] The odds ratio p/(1-p) measures the probability that a company exits versus a company that does not exit)(Cameron and Trivedi, 2005).

[4] Poor approximation arises because in empirical settings the propensity of an event can only be derived from actual occurrences and because the relative contribution of observed occurrences to the variance of the estimation is small (King and Zeng, 2001).

previous empirical research (Kryzanowski and Mohebshahedin 2020; Haß et al. 2015). Specifically, we apply a form of penalized maximum likelihood introduced by Firth (1993) and correct the first order derivative of the likelihood function (score function)(Firth 1993). Under Firth's method, the score function is updated through a correction term shifting the score function downwards proportionally, thereby removing the emergence of the first order bias (Stolte et al. 2024). Second, we also estimate the model using ordinary least squares estimation, considering that high sampling sensitivity and type 1 error rates may lead to biased coefficient estimates (Stone and Rasp 1991).

The results are shown in Table 4. The overall predictions remain unchanged when applying penalized maximum likelihood. Significant associations between net-zero alliances and determinant proxies are also detected for regulatory pressures, ESG controversy and profit margin in the case of ordinary least squares, however not for the free float share in companies' equity.

6. Additional analysis

6.1 News controversies

Whether investors' management factors in controversial information for their decisions to stay in or to quit net-zero alliances may depend on the specific messages and accusations transported to the management, public and covered by the media. To investigate the relevance of topic-specific media coverage, we use granular news controversy information from Ravenpack to examine public controversies on three levels, including governance, legal and social aspects.

On the one hand, investors' membership in net-zero alliances may be discussed in the public as an issue of corporate governance, related to anti-competitive practice, business ethics, corruption, behaviour of management, and board and shareholder rights. On the other, the pursuit of non-financial objectives may be considered as equivalent to fraud and illegal behaviour. Reporting about legal disputes, possible sanctions and allegations of companies to have covered up alliance-related activities may factor into management's decision to remain member of a net-zero alliance. Further, media coverage on socially controversial issues might influence investors' net-zero alliance exit decisions. While investors' net-zero alliance activities may barely be related to aspects such as human rights, labour conditions and layoffs directly, other social charges related to lobbying and reputation may rise to the attention of management and determine exit decisions. We consider relevant news controversy scores which are reasonable wide available for our sample.

Table 5 shows the results. Estimated coefficients for the relevance of specific news controversies for investors' net-zero alliance exits are shown in columns 2 to 6. The results show a positive association between selected governance and legal news controversies and net-zero alliance exits. The association is strong and significant at the 5% level. Companies with higher scores on controversies around business ethics, legal issues and reporting on fraud are more likely to quit their net-zero alliance membership relative to their peers. News controversies on company sanctions or social aspects are not associated with net-zero alliance exits.

6.2 Market perceptions

We employ methods from the event study literature to assess if financial markets viewed net-zero exits as positive or negative signals for the future existence of net-zero investor alliances (MacKinlay 1997; Corrado 2011; Bassen et al. 2021; Krüger 2015)

One condition for the event study methodology is that the events of interest are associated with the release of unanticipated information to the market, which are financially relevant and immediately integrated by market participants. Accordingly, we examine stock price reactions of net-zero alliance members around the first departure by a member within each alliance over the time period. Thus, we

can rule out the possibility that anticipation about consequential exit decisions by other net-zero members confound our results. The additional data for this analysis include adjusted daily stock returns from LSEG Datastream and global market factors from the Fama-French data library (Fama and Kenneth 2025).

This analysis involves three steps: First, we calculate daily abnormal stock returns for net-zero alliance members by regressing companies' ordinary returns on market portfolio returns using an estimation period of 230 days in order to separate idiosyncratic and systematic stock price reaction components. Second, we compute 1-, 3- and 5-day cumulative abnormal returns (CARs) to account for market inefficiencies in information transmission and lagged price responses. Third, we test whether CARs differ statistically from 0 to assess if an event had a significant effect on stock valuations[5].

Table 6 shows the results. Panel A to E show the mean CARs, p-values and significance levels for three testing procedures. First, we use a t-test to assess differences in means of CARs around the event. Second, we use an event-induced variance test to account for changing variances in the cross section of returns following the event (Boehmer et al. 1991)[6]. Third, we use a generalized non-parametric rank test which does not require assumptions on the distribution of abnormal returns (Kolari and Pynnonen 2011).

First, we find positive stock price reactions of NZIA members after the exit by Munich Re. Significant price responses across the testing procedures confirm that the findings are robust to possible heterogeneities in price reactions and non-normality in excess returns. We consider positive reactions for NZIA members as consistent with possible market expectations about a reduction of scrutiny and pressures from anti-competitive concerns in this early stage of anti-ESG pushbacks in 2022.

Second, we find positive reactions of CA100+ member stock prices after the departure by the U.S. branch of Black Rock over the 3-day window. However, the non-significance of the non-parametric test hints to the relevance of distributional assumptions for the realisation of this finding. We consider that the diversity of member profiles in the CA100+ initiative, including financial institutions from asset management, insurance and banking industries, might explain the absence of a clear directional response.

Third, significant positive stock price responses are observed for the 1-, 3- and 5-day event windows around the exit by Goldman Sachs from the NZBA. Statistically significant findings at the 1%- and 5%-levels show that the findings are robust. The positive price responses of remaining NZBA members in reaction to Goldman Sachs' exit may be viewed in the context of a series of state investigations into the activities and roles of American banks in the NZBA since 2022, and a reform of the NZBA guidance on allowable transactions related to fossil fuel financing in spring 2024. In response to increasing pressures and a tightening of alliance requirements, the exit by Goldman Sachs may be perceived by markets as a relief for net-zero members strengthening homogeneity within of the alliance.

Fourth, a significant negative stock price response is observed for NZAM members following the departure by Black Rock in 2025 over the 1-day event window. Considering Black Rock's status as the largest asset management institution worldwide, the negative price reaction might be explained by

[5] We calculate abnormal return using the formula $AR_{it} = r_{it} - \hat{\alpha}_{it} - \hat{\beta}_{it} \times r_{M,t}$, where r_{it} is the natural logarithm of excess stock returns over the risk-free rate for firm we on day t, $r_{vw,t}$ is the excess market return for day t, $\hat{\alpha}_{it}$ and $\hat{\beta}_{it}$ are estimated from the market model $r_{it} = \alpha_{it} + \beta_{it} r_{M,t} + \varepsilon_{it}$ for the estimation period, AR_{it} is calculated as $AR_{it} = r_{it} - E(r_{it}|r_{M,t})$. The statistical implementation is facilitated through the eventstudy2 command (Kaspereit 2019).

[6] Increasing variance usually arises when stock prices respond differently tot he event. The approach by Boehmer et al. (1991) consists in explicitly estimating the variance of the average CARs. This approach requires cross-sectional independence which is the case in the absence of clustering (MacKinlay, 1997).

the perception that the exit by one it's bellwether members undermines the legitimacy and reduces the relevance of the alliance.

Fifth, we find negative stock price responses for NZAOA members following the exit by Australian QBE Group in 2025 for the 1-day event window. The absence of significant effects under the non-parametric test hints highlights the non-robustness and sensitivity of the findings to distributional assumptions.

7. Conclusion

Institutional investors are influenced in their decisions to pursue non-financial objectives by a range of internal and external factors (Ilhan et al. 2023; Starks et al. 2017). While there has been a growth in anti-ESG opposition in recent years, there is a lack of understanding of the main determinants of investor's decisions to step back from their non-financial activities. In this context, this study sheds light on key determinants of institutional investors' decisions to quit global net-zero investor alliances, including regulatory pressures, exposure to news controversies, strategic ownership concentration, and profitability.

The results show that exiting net-zero alliance members exhibit higher numbers of regulatory shocks, lower equity shares by strategic institutions, higher scores on ESG-related media controversies and lower profit margins than non-exiting members. Granular results show that higher news controversy scores are observed for existing institutions especially in the areas of corporate governance, such as relating to business ethics and anticompetitive practices, and legal issues, including coverage of fraud and legal disputes.

The event study analysis shows lasting and significant stock price effects for net-zero alliance members following the first alliance departures from the NZBA and NZAM. While the robustness of findings is confirmed under different testing procedures, differences are observed in the direction of price effects. Significant price responses for members of NZIA, CA100+, and NZAOA alliances are observed for selected event-windows or under restrictive assumptions.

The results have potentially valuable implications for policy makers. The findings from the determinants' analysis show that institutional investors' climate-related activities are not immune to evolving institutional pressures from short- to medium-term institutional changes in their environment. Despite their long-term investment horizons, financial institutions may withdraw their non-financial commitments and actions if institutional changes in the external environment or internal instabilities warrant them to do so. The determinants' analysis further highlights that regulatory pressures propagate in financial markets on a global level even if shocks and media are locally. As a result, the findings underline the importance of a stable and consistent institutional environment, support through media coverage and regulatory institutions, as well as internal structural stability, through strategic ownership and financial health, to support non-financial institutional investment considerations in the long-term.

The findings of the event study also suggest that context specificity matters for the financial assessment of net-zero alliance institutions after exit decisions by major members. In this regard, we consider that individual circumstances, including the escalation of the anti-ESG pushback through regulatory action and media coverage around the U.S. presidential election in autumn 2024, might have influenced financial market responses. As a result, we consider that the ambiguity in stock price responses across the five observed alliances provides evidence for the absence of a generalisable approach to derive externally valid conclusions about predicted stock market reactions to net-zero alliance departures.

The findings of this study and the current dynamics on this study opens various ways for future research. First, while this study has investigated the drivers of net-zero membership exits, it is uncertain whether exit decisions result in a fundamental change in course for climate action by investors. Using new information on post-exit activities, future research might study whether long-term activities of institutional are affected by alliance exits, for example, through a rebalancing of investment portfolios, a scaling down of internal climate actions, or adjustments to their stewardship with investee companies. Or, whether institutions continue to uphold their climate-related yet without advertising their activities actively to avoid public scrutiny and pressures, i.e., as a form of green-hushing. Second, the perception of negligence of fiduciary duties is commonly cited as a main cause for concern with respect to investor's non-financial activities. Existing literature has shown that non-financial activities may be positively or negatively associated with financial performance. Future research may examine this concern examining the case of institutional investors in more detail- Specifically, using available data, researchers may analyse whether the withdrawal by financial institutions from net-zero alliances I associated with a shift in focus by corporate management and whether this affects post-exit financial performance. Third, the exodus from net-zero alliances also suggests a step-back for global efforts to promote transparency on investor's climate objectives. While helping institutional investors to acquire knowledge and exchange best practices, voluntary alliances can provide a platform for the availability of information and for the convergence of different approaches to attain a common goal within an industry. Future research may therefore assess the net-zero exodus implies a polarization of industry-wide approaches to pursue non-financial objectives.

Tables

Table 1 Sample selection

	# Companies	# Company-quarters
Initial sample of net-zero alliance members	1,395	27,900
Keep only listed companies	504	10,080
Remove duplicate observations	357	6,109
Consider only available financial data	327	4,245
Omit observations for perfect collinearity	321	2,357
Final sample	**321**	**2,357**

This table shows the sample selection process.

Table 2 Exit mode choices

	Subsample averages		**All y**
	y=0 No exit	**y=1 Exit**	
Regulatory shock	0.06	0.36	0.07
Free float share	69.52	87.54	69.95
ESG controversy	1.09	2.30	1.12
Profit margin	6.83	10.02	6.90
ln Total assets	10.34	12.96	10.40
Leverage	0.04	0.05	0.04
Price-to-book	1.65	1.45	1.64
Observations	2,301	56	2,357

The table shows average values of selected independent variables corresponding to net-zero alliance exit observations at the company-quarter-level.

Table 3 Net-zero alliance exits and determinants

	Pr(Exit = 1)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Regulatory shock	1.371***						1.647***
	(0.4438)						(0.4748)
Cumulative shocks		0.421**					
		(0.2050)					
Freefloat share			0.021**				0.027**
			(0.0104)				(0.0136)
Strategic share				-0.024*			
				(0.0135)			
ESG controversy					0.404***		0.358**
					(0.1556)		(0.1512)
Ethics controversy						0.444**	
						(0.1900)	
ln Total assets	0.686***	0.670***	0.639***	0.585***	0.364**	0.354*	0.256*
	(0.1284)	(0.1306)	(0.1173)	(0.1309)	(0.1446)	(0.1942)	(0.1399)

Debt ratio	-0.269	-0.561	-0.587	0.435	-0.830	-0.115	-0.345
	(1.1487)	(1.2262)	(1.1353)	(1.3138)	(1.5866)	(1.8790)	(1.4938)
Profit margin	-0.004***	-0.004***	-0.004***	-0.003**	-0.055***	-0.056***	-0.063***
	(0.0011)	(0.0011)	(0.0011)	(0.0012)	(0.0165)	(0.0216)	(0.0158)
Price-to-book	-0.089	-0.065	-0.093	-0.133	-0.081	-0.008	-0.208*
	(0.1065)	(0.0962)	(0.1062)	(0.1113)	(0.1053)	(0.1120)	(0.1228)
Constant	-13.467***	-13.512***	-14.709***	-12.343***	-8.823***	-8.795***	-9.350***
	(1.8302)	(1.8038)	(1.9566)	(2.0681)	(1.8098)	(2.4362)	(2.1322)
Observations	2,357	2,357	2,357	1,529	1,157	732	1,157
Pseudo R-squared	0.291	0.2796	0.2806	0.2718	0.2339	0.2526	0.275
AIC	411.4306	417.4386	416.936	285.7655	351.6229	270.1866	338.6852
Quarter FE	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES
Region FE	YES	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table shows the estimated coefficients from the logistic regressions of the determinants of net zero alliance exits in the pooled cross-section of observations. The dependent variable is a binary variable equal to 1 for at the company-quarter observations corresponding to exit decisions and 0 otherwise. All specifications include company-level standard errors.

Table 4 Robustness checks

	Pr(Exit = 1)		
	(1)	(2)	(3)
	Logit	Firth	OLS
Regulatory shock	1.647***	1.499***	0.066***
	(0.4748)	(0.4353)	(0.0126)
Freefloat share	0.027**	0.023**	0.000
	(0.0136)	(0.0114)	(0.0002)
ESG controversy	0.358**	0.337**	0.012***
	(0.1512)	(0.1335)	(0.0033)
Profit margin	-0.063***	-0.063***	-0.001*
	(0.0158)	(0.0169)	(0.0003)
Observations	1,157	2,062	2,062
Control variables	YES	YES	YES
Quarter FE	YES	YES	YES
Industry FE	YES	YES	YES
Region FE	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table shows the estimated coefficients for the determinants of net zero alliance exits, estimated by logistic regression, Firth's penalized maximum likelihood and ordinary least squares. The dependent variable is a binary variable equal to 1 for at the company-quarter observations corresponding to exit decisions and 0 otherwise.

Table 5 Net-zero alliance exits and news controversies

	Pr(Exit = 1)					
	(1)	(2)	(3)	(4)	(5)	(6)
ESG controversy	0.404***					
	(0.1556)					
Ethics controversy		0.433**				
		(0.1872)				
Legal controversy			0.401**			
			(0.1864)			
Fraud controversy				0.398**		
				(0.1827)		
Sanctions controversy					0.296	
					(0.1855)	
Social controversy						0.121
						(0.1527)
ln Total assets	0.364**	0.338*	0.420**	0.410*	0.559**	0.526***
	(0.1446)	(0.1976)	(0.1719)	(0.2133)	(0.2317)	(0.1986)
Debt ratio	-0.830	-0.389	-0.565	-0.592	-0.542	-0.237
	(1.5866)	(2.0449)	(1.7353)	(2.2903)	(2.4737)	(1.8809)
	-		-	-		
Profit margin	0.055***	-0.055**	0.057***	0.070***	-0.054*	-0.031
	(0.0165)	(0.0228)	(0.0221)	(0.0255)	(0.0294)	(0.0245)
Price-to-book	-0.081	-0.089	-0.060	-0.117	-0.082	-0.053
	(0.1053)	(0.1295)	(0.1088)	(0.1493)	(0.1479)	(0.1364)
	-	-	-	-	-	-
Constant	8.823***	8.397***	9.305***	8.981***	11.137***	10.466***
	(1.8098)	(2.4671)	(2.2516)	(2.7368)	(3.0510)	(2.7092)
Observations	1,157	699	722	666	641	716
Quarter FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
Region FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table shows the estimated coefficients from the logistic regressions of the determinants of net zero alliance exits in in relationship to specific news controversies in the media. The dependent variable is a binary variable equal to 1 for at the company-quarter observations corresponding to exit decisions and 0 otherwise. All specifications include company-level standard errors.

Table 6 Cumulative abnormal stock returns

Window	1 days	3 days	5 days
Panel A: 31.03.2023	Munich Re exit from NZIA		
Mean CAR	-0.0061	0.0172	0.0110
t-test	0.1310	.0058***	0.1558
Boehmer	0.2837	.0001***	0.1804
Grank	0.7563	.0249**	0.6961

Observations	73	73	73
Panel B: 15.02.2024	Black Rock (U.S.) exit from CA100+		
Mean CAR	0.0018	0.0155	0.0068
t-test	0.5705	.0014***	0.2545
Boehmer	0.5853	.0000***	0.9701
Grank	0.4563	0.1376	0.8406
Observations	74	74	74
Panel C: 06.12.2024	Goldman Sachs exit from NZBA		
Mean CAR	0.0103	0.0152	0.0148
t-test	.0012***	.0016***	.0143**
Boehmer	.0006***	.0000***	.0251**
Grank	.0306**	.0320**	.1648
Observations	102	102	102
Panel D: 09.01.2025	Black Rock exit from NZAM		
Mean CAR	-0.0142	-0.0100	-0.0070
t-test	.0000***	.0488**	.2667
Boehmer	.0000***	.2441	.0060***
Grank	.03942**	.85637	.34908
Observations	89	89	89
Panel E: 21.03.2025	QBE Group exit from NZAOA		
Mean CAR	-0.0111	0.0027	0.0121
t-test	.0433**	.7437	.2473
Boehmer	.0079***	.4292	.1553
Grank	.2761	.6079	.5472
Observations	22	22	22

*** p<0.01, ** p<0.05, * p<0.1

This table shows the event study results for five event dates in panels A to E, including the exit by German Munich Re from NZIA, the exit by Australian QBE Group from NZAOA, the exit by U.S. Black Rock from NZAM, and by U.S. Goldman Sachs from the NZBA. Each panel shows the mean CARs, p-values and significance levels for prediction windows of 1, 3 and 5 days (t -test, Boehmer et al., 1991; Kolari and Pynnonen, 2011).

Appendix

Table 2 Summary statistics

Variable	N	mean	sd	p25	p50	p75
Exit	2,357	0.0238	0.152	0	0	0
Shock	2,357	0.0687	0.253	0	0	0
Cumulative shocks	2,357	0.378	0.573	0	0	1
Free float	2,357	69.95	26.26	49	78	93
Strategic ownership	1,945	36.44	24.58	15	30	58
ESG controversy	1,157	1.145	1.255	0.210	0.682	1.634
Governance controversy	804	1.010	1.087	0.174	0.581	1.508
Profit margin	2,357	6.905	90.99	7.680	12.97	20.27
ln Total assets	2,357	10.40	3.017	8.955	11.04	12.70
Leverage	2,357	0.0427	0.225	-0.0252	0.0388	0.125
Ptb ratio	2,357	1.642	1.941	0.710	1.090	1.650

This table shows the summary statistics for variables in the main dataset.

Table X Regulatory pressures, q1 2022 and q3 2025

Date	Event	Type	Number of companies
04.08.2022	19 state AGs, led by AG Brnovich, send letter to BlackRock accusing them of "unlawful market manipulation" via ESG.	letter	1
22.08.2022	Texas Comptroller Glenn Hegar announces list of financial companies that boycott energy companies.	boycott	10
19.10.2022	19 Republican state AGs launch an investigation into NZBA and climate-related membershipps of six US banks.	investigation	7
30.03.2023	21 Republican state AGs write to 53 asset managers stating concerns over their ESG considerations at corporate annual meetings' votes.	letter	8
15.05.2023	23 Republican state AGs write to NZIA and NZAOA members stating concerns on the legality of their collaboration on an "activist climate agenda".	letter	89
06.07.2023	The HJC writes to BlackRock requesting documents and communications related to how BlackRock advances ESG policies.	letter	2
17.10.2023	AG of Texas Paxton opens review whether net-zero alliance members boycott energy companies.	investigation	9
15.12.2023	HJC Chairman Jordan subpoenaes BlackRock and State Street to support the House's investigation of collusive ESG agreements.	subpoena	2
18.12.2023	Tennessee Attorney General Jonathan Skrmetti sues BlackRock saying its ESG strategy is "misleading."	lawsuit	1
27.02.2024	15 Republican Attorneys General announce an investigation into BlackRock over ESG disclosures.	investigation	2
30.07.2024	The Republican HJC majority writes to more than 130 US companies requesting information about their CA100+ involvement.	letter	14

27.11.2024	11 Republican-led states sue BlackRock, Vanguard and State Street for violation of antitrust law through climate activism.	lawsuit	2
20.12.2024	The HJC Chairman Jordan probes 60+ companies over ESG ties and NZAM involvement.	investigation	12
23.01.2025	11 state AGs warn major financial institutions that ESG commitments could lead to enforcement actions if they are found to violate law.	letter	6

This table shows all studied events of regulatory pressures received by net-zero alliance member companies over the time period.

Table X Exits from net-zero investor alliances, q1 2022 and q3 2025

Quarter	All exits	NZIA exit	NZBA exit	NZAOA exit	NZAM exit	CA100+ exit
q1 2022	0	0	0	0	0	0
q2 2022	0	0	0	0	0	0
q3 2022	0	0	0	0	0	0
q4 2022	0	0	0	0	0	0
q1 2023	3	3	0	0	0	0
q2 2023	10	10	0	0	0	0
q3 2023	0	0	0	0	0	0
q4 2023	0	0	0	0	0	0
q1 2024	7	0	1	0	0	6
q2 2024	1	1	0	0	0	0
q3 2024	3	0	0	0	0	3
q4 2024	5	0	4	0	0	1
q1 2025	21	0	13	1	5	2
q2 2025	3	0	0	1	1	1
q3 2025	3	0	3	0	0	0
q4 2025	0	0	0	0	0	0
Total	56	14	21	2	6	13

This table shows all exit decisions by net-zero alliance member companies over the time period.

Table X Variable descriptions

Variable	Measurement	Source
Exit	Binary variable equal to 1 for net-zero alliance exit (0 otherwise)	Own
Regulatory pressure	Binary variable equal to 1 for regulatory pressure event targetting the company in the same or previous quarter (0 otherwise)	Own

Cumulative pressure	Number of regulatory pressures received since q1 2022	Own
Freefloat share	Percentage of shares available to ordinary investors	LSEG
Strategic share	Sustainability disclosure related job postings	LSEG
ln Total assets	Natural logarithm of total assets	LSEG
Debt ratio	Share of total debt to total assets	LSEG
Profit margin	Net profit divided by revenue	LSEG
Price-to-book	Share price divided by the book value per share	LSEG
ESG controversy	Aggregate ESG-related controversy score for the firm between 1 and 4	Ravenpack
Ethics controversy	Specific controversy score for the firm between 1 and 4, related to ethics-related topics such as anti-competitive practice, business governance, management and board, shareholder rights, corporate behavior	Ravenpack
Legal controversy	Specific controversy score for the firm between 1 and 4, related to legal disputes the company is involved in or accused of being involved in	Ravenpack
Fraud controversy	Specific controversy score for the firm between 1 and 4, related to fraud or sanctions	Ravenpack
Sanctions controversy	Specific controversy score for the firm between 1 and 4, related to fines or penalties	Ravenpack
Social controversy	Specific controversy score for the firm between 1 and 4, related to social issues such as human rights, labor condictions, layoffs, lobbying, corporate reputation	Ravenpack

This table shows the variable definitions and sources in the main dataset.

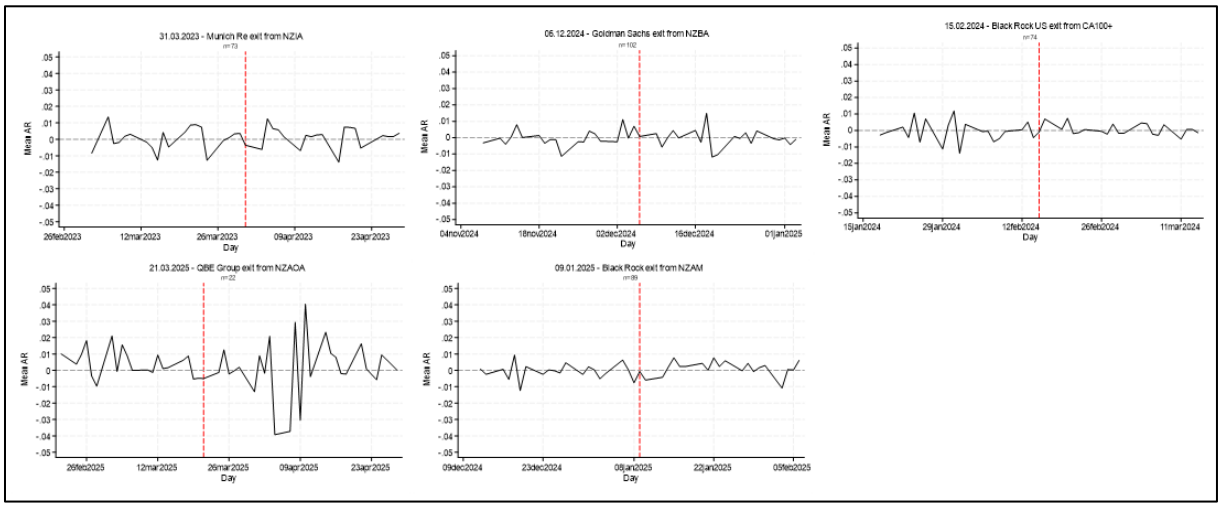


Fig.2 Average abnormal returns of net-zero alliance members around dates of exit announcement
The graph shows the respective average abnormal returns for all members of the NZIA, the NZBA, the CA100+, the NZAOA, and the NZAM for 40 days around the first departure date of a major members from the alliance.

References

Baker, Russel (2024): The problem with ‘universal owner theory’ for climate-conscious funds. Available online at https://www.investmentmagazine.com.au/2024/03/the-problem-with-universal-owner-theory-for-climate-conscious-funds/, checked on 1/13/2025.

Barko, Tamas; Cremers, Martijn; Renneboog, Luc (2022): Shareholder engagement on environmental, social, and governance performance. In *Journal of business ethics* 180 (2), pp. 777–812.

Bassen, Alexander; Kaspereit, Thomas; Buchholz, Daniel (2021): The capital market impact of Blackrock’s thermal coal divestment announcement. In *Finance research letters* 41, p. 101874.

Berger-Schmitz, Zola; George, Douglas; Hindal, Cameron; Perkins, Richard; Travaille, Maria (2023): What explains firms' net zero adoption, strategy and response? In *Business Strategy and the Environment* 32 (8), pp. 5583–5601.

Boehmer, Ekkehart; Masumeci, Jim; Poulsen, Annette B. (1991): Event-study methodology under conditions of event-induced variance. In *Journal of financial economics* 30 (2), pp. 253–272.

Borghesi, Richard; Houston, Joel F.; Naranjo, Andy (2014): Corporate socially responsible investments: CEO altruism, reputation, and shareholder interests. In *Journal of Corporate Finance* 26, pp. 164–181.

Cameron, A. Colin; Trivedi, Pravin K. (2005): Microeconometrics: methods and applications: Cambridge university press.

Committee on the Judiciary (2024): New Report | Sustainability Shakedown: How a Climate Cartel of Money Managers Colluded to Take Over the Board of America's Largest Energy Company. Available online at https://judiciary.house.gov/sites/evo-subsites/republicans-judiciary.house.gov/files/2024-12/2024-12-13-Sustainability-Shakedown-Report.pdf, checked on 4/22/2025.

Corrado, Charles J. (2011): Event studies: A methodology review. In *Accounting & Finance* 51 (1), pp. 207–234.

Dyck, Alexander; Lins, Karl V.; Roth, Lukas; Wagner, Hannes F. (2019): Do institutional investors drive corporate social responsibility? International evidence. In *Journal of financial economics* 131 (3), pp. 693–714.

Fama, Eugene; Kenneth, French (2025): Current Research Returns. Available online at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html, checked on 12/19/2025.

Fink, Larry (2016): Text of Larry Fink’s 2016 Corporate Governance Letter to CEOs. Available online at https://www.reit.com/sites/default/files/meetings/REITWise16/Governance/Full%20Document(s)/Blackrock%20-%20Larry%20Fink%202016%20Corporate%20Governance%20Letter%20to%20CEOs%20(2-1-16).pdf, checked on 5/3/2025.

Firth, David (1993): Bias reduction of maximum likelihood estimates. In *Biometrika* 80 (1), pp. 27–38.

Fisher-Vanden, Karen; Thorburn, Karin S. (2011): Voluntary corporate environmental initiatives and shareholder wealth. In *Journal of Environmental Economics and management* 62 (3), pp. 430–445.

Freeman, R. Edward; Martin, Kirsten; Parmar, Bidhan (2007): Stakeholder capitalism. In *Journal of business ethics* 74, pp. 303–314.

Gary, Susan N. (2019): Best interests in the long term: Fiduciary duties and ESG integration. In *U. Colo. L. Rev.* 90, p. 731.

GFANZ (2023): 2023 Progress Report. Available online at https://assets.bbhub.io/company/sites/63/2023/11/GFANZ-2023-Progress-Report.pdf, checked on 8/14/2025.

Giglio, Stefano; Maggiori, Matteo; Stroebel, Johannes; Tan, Zhenhao; Utkus, Stephen; Xu, Xiao (2025): Four facts about ESG beliefs and investor portfolios. In *Journal of financial economics* 164, p. 103984.

Granicus (2023): Letter to asset managers undersigned Republican attorneys general. Available online at https://content.govdelivery.com/attachments/MTAG/2023/03/30/file_attachments/2453301/2023-03-30%20Asset%20Manager%20letter%20Press%20FINAL.pdf, checked on 4/22/2023.

Hart, Oliver (1993): An Economist's View of Fiduciary Duty. In *The University of Toronto Law Journal* 43 (3), pp. 299–313. DOI: 10.2307/825709.

Haß, Lars Helge; Müller, Maximilian A.; Vergauwe, Skrålan (2015): Tournament incentives and corporate fraud. In *Journal of Corporate Finance* 34, pp. 251–267.

IEA (2024): World Energy Investment 2024. Available online at https://iea.blob.core.windows.net/assets/60fcd1dd-d112-469b-87de-20d39227df3d/WorldEnergyInvestment2024.pdf, checked on 1/13/2025.

Ilhan, Emirhan; Krueger, Philipp; Sautner, Zacharias; Starks, Laura T. (2023): Climate risk disclosure and institutional investors. In *The Review of financial studies* 36 (7), pp. 2617–2650.

Jessop, Simon; Kerber, Ross (2024): JPMorgan, State Street Quit Climate Group, BlackRock Steps Back. Available online at https://www.reuters.com/sustainability/sustainable-finance-reporting/jpmorgan-fund-arm-quits-climate-action-100-investor-group-2024-02-15/, checked on 1/13/2025.

Kaspereit, Thomas (2019): eventstudy2 - A program to perform event studies with complex test statistics in Stata (Version 3.0).

King, Gary; Zeng, Langche (2001): Logistic regression in rare events data. In *Political analysis* 9 (2), pp. 137–163.

Kolari, James W.; Pynnonen, Seppo (2011): Nonparametric rank tests for event studies. In *Journal of empirical finance* 18 (5), pp. 953–971.

Kolasa, Thea; Sautner, Zacharias (2024): Institutional investors and the fight against climate change. In *Corporate Governance. An International Review*, Epub ahead of print.

Krüger, Philipp (2015): Corporate goodness and shareholder wealth. In *Journal of financial economics* 115 (2), pp. 304–329.

Kryzanowski, Lawrence; Mohebshahedin, Mahmood (2020): Transparency and fund governance efficacy: The effect of the SEC'S disclosure rule on advisory contracts. In *Journal of Corporate Finance* 62, p. 101559.

Loipersberger, Florian (2018): The effect of supranational banking supervision on the financial sector: Event study evidence from Europe. In *Journal of Banking & Finance* 91, pp. 34–48.

Mackey, John; Sisodia, Rajendra (2014): Conscious capitalism, with a new preface by the authors: Liberating the heroic spirit of business: Harvard Business Review Press.

MacKinlay, A. Craig (1997): Event Studies in Economics and Finance. In *Journal of Economic Literature* 35 (1), pp. 13–39. Available online at http://www.jstor.org/stable/2729691.

RavenPack (2025): Controversy News. Available online at https://www.ravenpack.com/products/edge/factors/controversy-news, checked on 12/19/2025.

Reid, Erin M.; Toffel, Michael W. (2009): Responding to public and private politics: Corporate disclosure of climate change strategies. In *Strategic management journal* 30 (11), pp. 1157–1178.

Schiemann, Frank; Sakhel, Alice (2019): Carbon disclosure, contextual factors, and information asymmetry: The case of physical risk reporting. In *European Accounting Review* 28 (4), pp. 791–818.

Starks, Laura T.; Venkat, Parth; Zhu, Qifei (2017): Corporate ESG profiles and investor horizons. In *Available at SSRN 3049943*.

Stolte, Marieke; Herbrandt, Swetlana; Ligges, Uwe (2024): A comprehensive review of bias reduction methods for logistic regression. In *Statistic Surveys* 18, pp. 139–162.

Stone, Mary; Rasp, John (1991): Tradeoffs in the choice between logit and OLS for accounting choice studies. In *Accounting review*, pp. 170–187.

Stroebel, Johannes; Wurgler, Jeffrey (2021): What do you think about climate finance? In *Journal of financial economics* 142 (2), pp. 487–498. DOI: 10.1016/j.jfineco.2021.08.004.