The Shared Cost of Pursuing Shareholder Value*

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Abstract

We propose a portable framework to infer shareholders' preferences, their influence on firms' prosocial decisions, and the resulting economic consequences for firms and marginalized shareholders. Using quasi-experimental variations tied to media coverage of firms' annual general meetings, we find that shareholders support costly prosocial actions, such as covid-related donations and private sanctions on Russia, when these generate image gains. In contrast, shareholders that the public associates less to a specific firm, such as financial corporations with large portfolios, oppose such actions. These prosocial expenditures crowd out investments at exposed firms, reducing productivity and profits by 1 to 3%. Pursuing the values of some shareholders thus comes at a cost to others, which shareholders' monitoring motivated by heterogeneous preferences could mitigate. By highlighting the interplay between shareholder influence and firms' objectives, this study contributes to the broader debate on activism, showing how unobservable internal conflicts drive corporate responses to societal pressures.

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"[...] it is the job of the manager of a firm [...] not only to [...] organize production, but also to learn about the *preferences* of the firm's shareholders."
Grossman and Hart (1979)

1 Introduction

Firms contribute to society not only through profit-driven activities like innovation and job creation but also by engaging in "altruistic" efforts to address social objectives such as reducing pollution and improving labor conditions. While economic theory suggests externalities can be corrected through policies like taxes or property rights, real-world obstacles—such as incomplete information, transaction costs, and political frictions—often undermine these solutions. Activism has emerged to fix similar problems, with affected parties negotiating directly with firms by demanding them to internalize their externalities (Baron, 2001, Egorov and Harstad, 2017).

Despite the growing influence of stakeholder activism on corporate strategies, key questions remain about *how* and *why* influential stakeholders shape firms' decisions and their *consequences* for other stakeholders, society, and the environment. Among stakeholders, certain shareholders—such as institutional investors or ex-founders—leverage privileged access and close ties to decision-makers to influence corporate actions. However, researchers often observe only limited facets of these interactions, such as stock trades or shareholder proposals at Annual General Meetings (AGMs). While AGMs are often seen as democratic forums for strategy proposals and votes, this paper shows they are far more: pivotal battlegrounds where influential shareholders steer decisions through opaque and often unseen actions, sidelining less visible shareholders and broader societal interests.

This paper develops a framework to uncover how shareholders shape firms' costly and visible prosocial actions and assesses their impacts on silent or unheard shareholders. The approach leverages two natural experiments: unexpected emergencies that trigger public pressure and heightened media scrutiny during AGMs. We apply this framework to two global crises—COVID-19-related donations and firms' exits from Russia after its invasion of Ukraine—revealing how shareholders' preferences influence corporate responses. Our findings expose a trade-off: shareholders who capture private returns from prosocial actions advocate for these initiatives, often reducing investments and imposing large losses on the broader shareholder base, while others prioritize profitability.

This paper makes three key contributions. First, it reveals that many shareholder conflicts remain hidden when focusing only on proposals and votes. For example, despite the size of COVID-related donations, no AGM vote in 2020 addressed them. Our findings highlight the need for a broader framework rooted in stakeholders' preferences to understand activism, contributing to the discourse on civil society lobbying and activism (Bertrand *et al.*, 2020, 2023). Second, it underscores the underutilized potential of AGM timings to uncover these conflicts, opening new directions for empirical research on shareholder democracy (Cremers and Sepe, 2016, Levit *et al.*, 2024). Third, revisiting Friedman (1970), we extend Hart and Zingales (2017)'s argument that firms should maximize shareholder value, not wealth, when shareholders derive utility from addressing externalities. By uncovering heterogeneity in shareholder preferences, this study invites further exploration into how these differences shape corporate strategies and societal outcomes.

Our approach is motivated by a stylized theoretical model where shareholders with heterogeneous preferences compete to influence a firm's decision over a costly but visible prosocial action. Net of altruistic inclinations, we expect shareholders with significant stakes but no private returns from the prosocial action to oppose it, while those who gain private returns will support it if their gains outweigh their losses. We identify the former in institutional investors—financial intermediaries like mutual funds and banks—who own shares across many firms and are rarely associated with any single one. The latter group includes individual and family shareholders closely tied to a firm, such as prominent stakeholders synonymous with the firm's identity (e.g., Bill Gates and Microsoft). Notably, our results hold even when individual shareholders have special access to managers, such as past or current executives, as shown below.

Our empirical framework leverages a sudden emergency where the public demands costly prosocial actions from firms and exogenous variation in AGM timing across firms, which, as shown in Fioretti *et al.* (2024), increases media coverage and, by extension, the visibility of a firm's most recognizable shareholders. The International Shareholder Services (ISS), a global leader in proxy voting services, recommends a 90-day period between shareholders receiving AGM materials and the AGM itself. Consider the recent pandemic as a similar emergency. The first reported U.S. COVID case occurred on January 15, 2020 (Holshue *et al.*, 2020): because firms with AGMs scheduled within the next 90 days had planned it before the onset of the pandemic and could not legally move their AGM dates (SEA, 1934), the increased media attention tied to the AGM is independent of shareholder and manager preferences regarding donations, the composition of the shareholding body, their access to managers, and the firm's financial and operational status. These features make our approach portable across crises, jurisdictions, and time.

We estimate the impact of shareholder preferences on corporate decisions by comparing donation rates at firms *with* large individual shareholders to those *without*, for both treated firms (AGMs held within 90 days of the crisis onset) and control firms.[1] This comparison isolates the influence of large individual shareholders, driven by AGM-induced visibility gains for corporate prosocial behavior. Since firms donated COVID-relief cash and goods—such as facemasks, sanitizers, ventilators, and software—we focus on explaining why firms donated rather than the value of the donations. At S&P 500 firms, cash donations alone averaged 1% of EBIT, a substantial cost for most shareholders but a publicity windfall for the most visible ones.

By April 15, we find that treated S&P 500 firms with prominent individual shareholders before the pandemic were 46% more likely to donate to covid relief than the average S&P 500 firm. In contrast, treated firms with large institutional shareholders were 26% less likely to donate. Our findings cannot be explained by consumer demand for covid-related donations, managerial will, peer pressure from donating competitors, or financial returns.

We validate the image-gain mechanism by showing an immediate and sustained increase in Google searches for a firm's individual shareholders compared to its institutional shareholders around the donation news date; this gap widens by about 40% over the ten days following a donation. However, institutional shareholders are not uniformly opposed to covid-related donations: several S&P 500 financial firms donated directly, but their donations negatively correlate with those of the S&P 500 firms in their portfolios. This suggests shareholders support donations only when they yield direct private benefits, creating externalities for other shareholders. These private benefits can be micro-founded as warm glow utilities (e.g., Andreoni, 1989), prestige (e.g., Harbaugh, 1998), or reputational gains from virtue signaling (e.g., Bar-Isaac *et al.*, 2008).

We demonstrate the portability of our framework in two ways. First, we examine U.S. multinationals' responses to the 2022 Ukrainian invasion, focusing on their decisions to exit Russian investments or sever ties with Russian suppliers. While we do not argue that exiting Russia was welfare-enhancing, early

[1] Our results are robust to alternative measures of firm-shareholder association, such as pairwise correlation in prior Google searches.

exits often garnered greater media attention and imposed significant costs on shareholders when poorly planned. Our findings show that large institutional shareholders opposed exits, while prominent individual shareholders supported cutting ties. Second, we extend our analysis to firms' ESG news coverage and donations over the past decade. Consistent with our findings, higher individual shareholding is associated with fewer prosocial incidents but increased donations during AGM months. These results underscore how shareholders shape firm decisions beyond voting.

Although firms are better positioned than shareholders to create certain social value—such as supplying sanitizing gels to hospitals or cutting ties with villain states—these actions, while benefiting large individual shareholders, imposed significant costs on firms and other shareholders. Using operating income and market capitalization, we estimate these costs at 1–3 percentage points for treated firms exposed to large individual shareholders before a crisis. These losses stemmed from higher operating costs, as revenues remained unchanged between treated and control groups. For example, investments fell by 6% in 2020–21, reducing productivity and costing shareholders approximately 3% of pre-pandemic earnings per share (EPS). During the Russia-Ukraine crisis, rushed exits led AGM-treated firms with large individual shareholders to cut investments by 20% and incur restructuring costs that eroded 5% of EPS in 2022. Ultimately, prioritizing the values of a few shareholders imposes substantial costs on the broader shareholder base.

This paper's central novelty lies in causally linking unobserved shareholder preferences to the costs they impose on other shareholders. These findings contribute to the rich literature on firms' objectives, which gained prominence in the 1980s through debates on profit maximization (e.g., Grossman and Hart, 1979, Hart, 1995) and has recently been invigorated by discussions on the transition to a sustainable economy and corporate purpose (Rajan *et al.*, 2022, Fioretti, 2022). We demonstrate that horizontal conflicts among shareholders with misaligned preferences influence firms' strategies, such as severing ties with partners in a villain state. While the idea that shareholders (and managers) can extract private rents is well established (Shleifer and Vishny, 1997), standard remedies typically involve either legal protection of minority rights (La Porta *et al.*, 2002) or monitoring by large investors (e.g., Shleifer and Vishny, 1986, Burkart *et al.*, 1997, Edmans, 2009). Our findings refine this view: minority rights are better protected in firms with multiple large shareholders holding diverse preferences than in those with concentrated ownership by shareholders with aligned preferences.

Another key novelty of our approach is that it extends research on shareholder influence over firms' strategies, which has traditionally considered only shareholder proposals and votes at AGMs (e.g., DeMarzo, 1993, Gompers *et al.*, 2003, Bouton *et al.*, 2022, Meirowitz *et al.*, 2024). This paper introduces a significant innovation: a portable empirical framework for inferring shareholder preferences from firms' decisions. Without this framework, one might mistakenly conclude that shareholders were indifferent to COVID-19 interventions, as no 2020 AGM proposals in our sample addressed them. While AGM proposals are a standard dataset for studying shareholder democracy (e.g., Cuñat *et al.*, 2012, Gantchev and Giannetti, 2021), they fail to capture the broader and often unobserved influence shareholders exert outside formal votes—particularly on sustainability issues, where decisions are less regulated compared to areas like mergers and acquisitions, which require board and shareholder approvals.

Consistent with the literature, we find that the "voice" mechanism—where stakeholders express concerns—plays a key role in driving firm strategies, especially when "exit" options, such as stock sales, are costly or impractical (e.g., Broccardo *et al.*, 2022, Oehmke and Opp, 2020, Berk and van Binsbergen, 2021, Green and Roth, 2020, Bartlett and Bubb, 2023, Saint-Jean, 2024). The voice channel we document naturally extends to other stakeholders, including consumers, NGOs, and the civil society more broadly (e.g., Hirschman, 1970, Gans *et al.*, 2021, Bertrand *et al.*, 2021, Meirowitz and Pi, 2022, Fioretti *et al.*, 2024).[2]

Our findings also contribute to two key areas of research on the private provision of social goods. The first examines the drivers of corporate philanthropy and corporate social responsibility (CSR), focusing on consumer and worker responses as well as corporate reputation risks (e.g., Bénabou and Tirole, 2010, List, 2011, Kitzmueller and Shimshack, 2012, Gneezy *et al.*, 2010, Elfenbein *et al.*, 2012, Akey *et al.*, 2021, List and Momeni, 2021, Gosnell *et al.*, 2020, Conway and Boxell, 2024). We extend this literature by highlighting the role of influential shareholders in shaping CSR strategies, beyond managerial influence (Fleurbaey and Ponthière, 2023, Harrison *et al.*, 2019). The second, emerging strand explores the impact of private sanctions, particularly on Russian and Ukrainian firms (Korovkin *et al.*, 2024, Nigmatulina, 2023), and global trade

[2]A growing literature highlights the pivotal role of institutional investors in advancing socially responsible investment (e.g., Dyck *et al.*, 2019, Hartzmark and Sussman, 2019, Chen *et al.*, 2020, Yegen, 2020). Our findings complement this work, as non-image motives may operate in other contexts, driving institutional investors more than other investors to advocate for socially responsible investments.

diversion (Steinbach, 2023). Our analysis offers new insights into the crisis onset, identifying a novel factor driving firm exits and their economic consequences—critical for understanding the broader role of private sanctions in shaping political decisions (Hart *et al.*, 2024).

The remainder of our paper is organized as follows. Sections 2 and 3 introduce the conceptual and empirical frameworks, respectively. Section 4 presents the main results of shareholder influence using the recent pandemic as our main testbed but also discusses its external validity using the Russia-Ukraine war and the reporting of ESG incidents and donations over the last decade. Section 5 illustrates the distributional cost of pursuing shareholder value and discusses our main contributions. Section 6 summarises our findings and concludes.

2 Conceptual Framework

This conceptual framework illustrates the scope of our empirical analysis. A firm considers a *costly* but *visible* prosocial action that reduces profits and dividends by $D > 0$ for its two shareholders. Shareholder A, publicly associated to the firm, gains $v_A > 0$ in image benefits if the action is adopted, while shareholder B, with no public connection, gains nothing ($v_B = 0$). Each shareholder can pressure the manager to pursue their preferred action, creating an *externality* on the other shareholder, with the following probability function:

$$\Pr(\text{prosocial action}) = s(e_A, e_B), \tag{1}$$

which is increasing in the influence effort of shareholder A, e_A, and decreasing in that of shareholder B, e_B. The cost of effort to shareholder i, $c(e_i)$, is convex in i's effort level, with $e_i > 0$. Shareholder i's utility is

$$U_i = (v_i - D) \cdot s(e_A, e_B) - c(e_i).$$

i's optimal effort sets marginal benefit equal to marginal cost, according to:

$$(v_A - D) \cdot \frac{\partial s(e_A, e_B)}{\partial e_A} = c'(e_A), \text{ for type } A, \quad \text{and} \quad -D \cdot \frac{\partial s(e_A, e_B)}{\partial e_B} = c'(e_B), \text{ for type } B.$$

Therefore, A will pressure the firm only in case of a clear association with the firm ($v_A > D$). Importantly, an *exogenous increase* in v_A will raise A's equilibrium effort. In the case of strategic complementarities, shareholder B will adjust their effort to reduce the probability of a donation.[3] Thus, the two agents compete to influence the firm and will set effort levels to offset each other, considering the dividend loss and their private returns and effort costs.

This model easily extends to a setting with N shareholders, where shareholder $k \in 1, \ldots, N$ is of type A or B and owns $x^k \in (0,1]$ shares, with $\sum_{k=1}^{N} x^k = 1$. In this case, the utility of shareholder k of type i is

$$U_i^k = (v_i^k - D \cdot x^k) \cdot s(E_A, E_B) - c(e_i^k),$$

where E_i denotes the total effort of all type-i shareholders. This maximization problem yields similar first-order conditions as the two-shareholder case, providing us with two new *theoretical predictions*, which we will test in the data.

The first prediction is that large-B shareholders (those with higher x^k) will increase their effort more than small-B shareholders as v_A^k rises, since large-B shareholders stand to lose more when A's effort increases. The second prediction concerns A-type shareholders. If the public is less likely to associate minority type-A shareholders with the firm—a hypothesis we confirm empirically in Figures 1 and 3 of the next sections—then the same increase in v_A^k will elicit a stronger response from large-A shareholders compared to small-A shareholders.

In the real world, shareholders have different effort costs for influence and varying dividend expectations. Suppose an exogenous treatment increases v_A at some firms but not others. We expect prosocial actions to be more likely at treated firms with a high proportion of type-A shareholders, particularly blockholders owning large shares. Conversely, prosocial actions should be less likely at treated firms with larger type-B blockholders. The next section explains how we implement this intuition on shareholding data.

3 Exploiting Quasi-Experiments

According to the framework in Section 2, examining shareholder preferences requires measuring shareholder efforts and observing firms' prosocial actions. This presents two challenges: (i) Environmental, Social, and Governance (ESG) indices, commonly used prosociality measures for large corporations, are inadequate because they lack specific, visible actions tied to shareholder advocacy, and (ii) shareholder effort levels—e_A and e_B in (1)—are unobservable.

[3] Strategic complementarities naturally arise in this setting with probability distributions like $s(e_A, e_B) = \frac{e_A}{e_A + e_B}$ (with $e_A + e_B > 0$) or the logistic probability.

Crises and Annual General Meetings (AGMs) offer solutions. Crises create public demand for visible, costly actions—such as pandemic-related donations or private sanctions on Russia—providing data on specific actions (item (i)). To isolate variation across shareholders, we use AGMs during crises as exogenous shocks to media coverage, leveraging differences in shareholder visibility between firms with and without AGMs (item (ii)), as we discuss below.

3.1 AGM Treatment

The AGM date is exogenous to current event and its date is stable across years. An AGM is the annual gathering where managers present the firm's performance and shareholders vote on previously submitted proposals by managers or shareholders. In particular, shareholders meeting specific criteria can submit proposals at least 120 days before the proxy statement's release based on the prior year's AGM (see Rule 14a-8, SEA, 1934). As a result, AGM dates show little variation across years, as shown in Panel (a) of Appendix Figure B1 for S&P 500 firms from 2012 to 2019.

Therefore, we consider firms with AGM periods overlapping the start of a crisis as treated. Following *Institutional Shareholder Service* (ISS) guidelines, the leading firm for proxy voting services to shareholders, firms must notify shareholders of an AGM no more than 90 days before the meeting date. With the first U.S. COVID-19 case reported on January 15, 2020, treated firms held AGMs within 90 days of this date, while controls include the remaining S&P 500 firms (Holshue *et al.*, 2020). Similarly, treated firms held AGMs within 90 days of the Russian invasion of Ukraine on February 24, 2022.

3.2 Shareholder Types

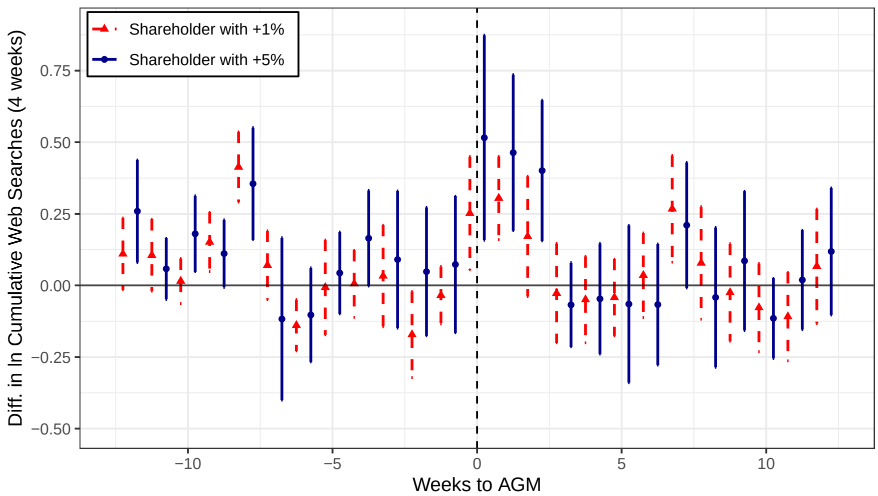
Following our conceptual framework (Section 2), as an AGM substantially increases a firm's media coverage (Fioretti *et al.*, 2024), the AGM treatment also might increase the private returns of shareholders that the public closely associate with the firm (type A)—e.g., Elon Musk and Tesla—by increasing their media coverage (v_A), with no impact for less visible shareholders. We verify this intuition by showing that the pass-through of image gains from heightened media coverage during a firm's AGM is strongest for individual and family shareholders. Specifically, we estimate:

$$y_{ift} = \sum_{w=-12}^{12} \theta_w \, \text{AGM}_{f(i)t+w} + \gamma_w \, \text{AGM}_{f(i)t+w} \times \text{Individual}_i + \alpha_i + \tau_{ft} + \varepsilon_{ift}, \quad (2)$$

where the dependent variable is the logarithm of the cumulative Google Trends score over a twelve-week period starting from week t for shareholder i of firm f. The variables $\{\text{AGM}_{f(i)t+w}\}_{w=-12}^{w=+12}$ are time dummies around the firm's nearest AGM. These are interacted with an indicator for individual investors. We include shareholder, firm, and time-fixed effects. We interpret γ_w as the visibility gap between individual and non-individual investors w weeks from the AGM.[4]

Figure 1 shows the estimated $\hat{\gamma}_w$, with standard errors clustered at the firm-by-shareholder type level.[5] Red triangles (blue dots) represent firms with at least one individual shareholder owning 1% (5%) of shares as of December 2019. Google search differences remain flat until three weeks before an AGM, then rise by about 30% around the AGM. For firms with larger individual shareholders (blue dots), the increase peaks at above 50%.

Figure 1: Visibility of individual and institutional shareholders around AGMs



Note: Estimates of $\hat{\gamma}_w$ measuring the difference in cumulative search rates between individual and institution shareholders in week w according to (2). Red triangles (blut dots) report the $\hat{\gamma}_w$ when using only firms with individual shareholders with +1% (+5%) shares. Vertical bars are 95% CI. SEs are clustered by firm- and shareholder-type.

[4]Google Trends data for each day returns a value between 0 and 100, representing the relative frequency of searches for a keyword. We account for shareholder-fixed effects to compare searches across different shareholders.

[5]Types are "bank", "insurance", "mutual funds", "individual or family", and "hedge fund". Other shareholder types, i.e. "self-ownership", "foundations", and "national governments or agencies" are excluded from this analysis.

Unsurprisingly, individual shareholders receive the most internet searches around an AGM, as this category includes publicly visible figures such as current and past managers, board members, founders, their family members, and other wealthy individuals. Therefore, our main analysis define large individual and family shareholders as type A, while institutional shareholders (e.g., banks, funds, and insurance companies) are classified as type B, as their investments in multiple firms make it difficult for the public to link them to the actions of a specific firm. In Section 4.3.2, we also show consistent results with other measures of shareholder-firm visibility beyond shareholding size.

The next section describes our treatment-effect approach.

3.3 Empirical Approach

We exploit AGM timing and ownership structure as outlined in the previous section by translating the contest game from (1) into:

$$y_f = \beta_1 \text{Ownership}_f + \beta_2 \text{AGM}_f + \beta_{treat} \text{Ownership}_f \times \text{AGM}_f + \varepsilon_f. \quad (3)$$

The dependent variable, y_f, represents the prosocial decision taken by firm f within 90 days of the crisis' onset (e.g., whether it donates during the COVID crisis).[6] On the right-hand side, Ownership_f captures characteristics of the shareholding body before the crisis, and AGM_f is a dummy indicating if the firm had an AGM planned within 90 days of the crisis. For illustration, if Ownership_f equals one for firms with individual shareholders and zero otherwise, β_{treat} captures the difference between (i) the donation rates at AGM-treated firms with and without individual shareholders and (ii) the similar difference at firms with no AGM planned. A positive (negative) coefficient suggests that individual shareholders supported (opposed) donations.

3.3.1 Access to Managers and Other Confounding Factors

By focusing on these differences across AGM-treated and control firms, we eliminate idiosyncratic variations in factors like different influence on managers—e.g., founders may have easier access to managers—and other shareholder preferences such as discount rates and risk inclinations, as long as the crisis and AGM timing are unrelated to firm and shareholder characteristics. This assumption

[6] When examining exit from Russia in the aftermath of the invasion of Ukraine, Section 4.4.1 adopts a shorter horizon to avoid confounding effects due to government sanctions, which imposed firms to limit operations with Russia counterparts.

holds in our setting, as AGM dates were fixed prior to the crisis. That is, our approach cancels out any factor that does not differentially shift v_A (Section 2) at firms with and without an AGM, leaving out private image gains.

The sale and purchase of shares could confound results. To address this, we fix the shareholding network before the crisis, ensuring that AGM transactions do not affect the perceived association between a firm and its shareholders.

3.3.2 Distributional Consequeces

To study the distributional effects of shareholder influence on other shareholders, Section 5 adopts an intention-to-treat approach and adapts (3) into a difference-in-differences framework, where the crisis start determines the post-period, and AGM_f and Ownership_f define the treatment. We will examine pre-trends and evaluate results with event studies.

4 Estimating Shareholder Values

This section focuses on shareholder influence during the onset of the COVID-19 pandemic. We begin by presenting the data (Section 4.1), estimation results (Section 4.2), and mechanism (Sections 4.3). We then assess the external validity of the voice channel using another crisis (the Russia-Ukraine conflict) as well as a period without crises in Section 4.4. Section 4.5 summarizes our main findings.

4.1 Data and Balance Checks

We construct a dataset on US-based S&P 500 firms using various sources. Table 1 organizes the information into panels. The first panel reports financial and operational data from Refinitiv, Orbis, and Compustat. The second panel presents COVID exposure data from Johns Hopkins University (Dong *et al.*, 2020). The third panel covers shareholding composition, focusing on individual and institutional shareholders (banks, mutual funds, and insurance firms), with only shareholders holding at least 0.1% of equity. The fourth panel highlights prosocial characteristics, including ESG scores from Refinitiv and donation data sourced from news media, internet searches, and company reports. The final panel defines the treatment condition as firms holding their 2020 AGM before April 15, 2020, with AGM dates obtained from the SEC's N-PX form. Excluding non-US-headquartered S&P 500 firms, we analyze 433 firms, with financial and operational data as of December 2019.

Table 1: Firm and shareholder characteristics at treated and control groups

	Quantiles			Average				
	25% (1)	50% (2)	75% (3)	Overall (4)	Treated (5)	Control (6)	Diff. (5)-(6)	p-value (8)
i. Firm characteristics								
Revenues (bn $)	5.16	10.32	22.44	27.00	26.84	28.42	-1.60	0.82
Share of revenues from the US (%)	15.00	19.63	25.42	20.03	19.99	20.42	-0.40	0.82
EBIT to revenue	0.09	0.16	0.23	0.16	0.16	0.13	0.00	0.14
Earnings per share, EPS ($)	2.07	3.91	6.19	4.78	4.83	4.41	0.40	0.44
Workforce (headcount, thousands)	8.55	18.80	55.30	54.00	53.39	59.81	-6.40	0.63
Number of branches	9.00	40.00	171.00	310.52	310.19	313.42	-3.20	0.98
Total debt (bn $)	3.40	7.18	16.51	16.02	16.53	11.78	4.80	0.13
Interest expenses (m $)	28.00	59.83	142.00	121.20	125.25	88.62	36.60	0.08
Market capitalization (bn $)	13.22	23.85	50.52	60.05	57.77	80.12	-22.40	0.42
Brokers' recommendations [sell= -2,buy= 2]	0.32	0.62	0.87	0.58	0.58	0.61	-0.00	0.72
ii. Covid exposure								
Covid cases at HQ state (thousands)	15.85	28.89	52.92	69.52	71.79	49.58	22.20	0.04
Covid deaths at HQ state (thousands)	0.78	1.27	2.45	4.70	4.91	2.85	2.10	0.02
iii. Shareholding composition								
Individual ownership (%)	0.00	0.00	0.09	1.38	1.37	1.47	-0.10	0.93
Institutional ownership (%)	40.52	46.89	52.78	46.47	47.08	41.13	5.90	<0.01
- Banks (%)	29.18	33.58	38.92	33.69	34.20	29.37	4.80	<0.01
- Mutual Funds (%)	4.61	6.64	9.92	7.98	8.00	7.80	0.20	0.74
- Insurance Companies (%)	2.59	3.65	5.46	4.66	4.76	3.81	0.90	0.02
Shares owned by individuals with > 5% (%)	32.86	62.77	81.88	59.95	60.36	56.26	4.10	0.83
Shares owned by institutions with > 5% (%)	42.10	52.73	63.73	53.44	53.18	56.31	-3.10	0.50
iv. Prosocial characteristics								
ESG scores [0,100]	49.69	63.05	72.83	61.10	60.95	62.46	-1.50	0.49
Share of firms donating by April 15 (%)	0.00	0.00	100.00	43.05	42.58	47.17	-4.60	0.53
Amount donated (m $)	1.00	6.50	26.00	42.44	44.19	28.89	15.30	0.40
Amount donated to revenue (%)	0.01	0.03	0.11	0.13	0.13	0.15	-0.00	0.84
Amount donated to dividends (%)	0.19	0.55	1.65	2.18	2.25	1.64	0.60	0.50
i. Definition of the treatment group								
AGM date relative to April 15	-	-	-	-	Before	After	-	-
Number of firms	-	-	-	433	53	380	-	-

Note: "Treated" in Column (5) refers to firms with an AGM before April 15, 2020. "Control" refers in Column 6 to firms with an AGM after April 15, 2020. Accounting and financial data are measured on Dec. 31, 2019.

4.1.1 Balance Checks

Columns 5 to 8 in Table 1 report summary statistics for treated firms (AGMs before April 15, 2020) and control firms (other S&P 500 firms), with p-values from t-tests of the difference in means showing no substantial discrepancies. Financial (e.g., debt, market capitalization, brokers' recommendations) and operational characteristics (e.g., revenues, EBIT, workforce, branches, EPS, ESG scores) are similar across the groups. The differences in covid cases and deaths are primarily driven by variations in the size of headquarters states across groups. All analyses control for these differences using fixed effects. Robustness checks in Section 4.3.4 investigate changes in firms' responses as the pandemic intensifies.

While institutional ownership is 5.9 percentage points higher in control firms, there are no significant differences in shares held by large shareholders (those with more than 5%). The share of donating firms and donation amounts by April 15, 2020, are comparable across groups, with average donations of $42m, or 0.1% of revenues. These values do not include in-kind donations, such as facemasks, sanitizing gel, software to manage the pandemic, and ventilators, whose dollar value is hard to measure and may vary over the pandemic. These balance checks suggest that the AGM treatment is exogenous to firms' characteristics.

4.1.2 Samples

We conduct two main analyses. The first uses data from Table 1, whose sample size is consistent with other recent cross-sectional studies using field experiments or surveys.[7] Given that most S&P 500 firms hold AGMs in the summer, 53 firms in our sample had their AGMs between January 15 and April 15, 2020, representing 14% of the control group (see the last panel of Table 1). This size difference introduces a downward bias in estimating β_{treat} in (3), so our estimates should be viewed as lower bounds of the true effect.

The analysis employing (3) serves as the "first stage" of our broader research question, which links heterogeneous shareholder preferences to (adverse) distributional outcomes for "unheard" or "silent" shareholders. However, the latter groups are not the only stakeholders affected by the firm's strategy. For example, consumers, workers and suppliers may also be impacted, although measuring their effects is more challenging as one may need to assume their utility functions (e.g., Fioretti, 2022, Allcott *et al.*, 2022).

The second analysis focuses on distributional consequences and extends this framework to the largest 1,000 U.S. firms, examining the distributional consequences across shareholders of pursuing the values of a few shareholders (Section 5). Moreover, to the extent that productivity changes affect other stakeholders, this analysis extends more broadly beyond the direct consequences on shareholders. Thus, while the dataset in Table 1 provides key insights into the mechanism of influence through shareholders' voice, we see it as a "first stage" for its broader consequences, which are explored out-of-sample in an intent-to-treat framework on a much larger dataset.

[7] For example, Bassi *et al.* (2022) examines the role of the rental market for production machines in carpentry, Bandiera *et al.* (2013) compares individual and team incentives, and Jones and Olken (2005) investigates the impact of leaders in autocracies and democracies, all using similar sample sizes to ours.

4.2 Main Results

We start with a graphical representation of our empirical approach using the following event study regression:

$$\text{donated by April } 15_f = \sum_{w=\text{Week of Jan 15}}^{\text{Week of June 15}} \beta_w \, \text{AGM}_{w,f} + \sigma_{s(f)} + \iota_{s(f)} + \varepsilon_f. \quad (4)$$

The dependent variable is 1 if firm f donated between January 15 and April 15, 2020, and 0 otherwise. A positive (negative) β_w indicates that holding an AGM in week w increases (decreases) donation rates relative to the reference week of June 15, 2020.[8] Donations are measured by April 15 since the SEC allowed firms to change AGM dates in April, which could affect exogeneity for firms planning later AGMs.[9] As in most analyses below, we focus on the extensive margin rather than the donation amount because nearly all firms donated both cash and in-kind. To highlight the trade-off between shareholder types, Figure 2 plots the $\hat{\beta}_w$ coefficients estimated via (4) for firms with individual shareholders with at least 0.1% shares (blue circles) and those more concentrated in large institutional shareholders (red triangles) as of December 2019.[10]

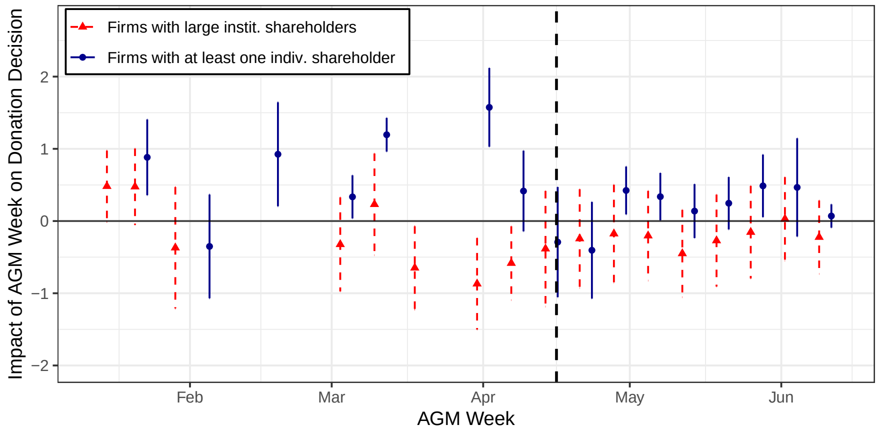
We note three key results. First, donations are more likely at firms with individual shareholders if they hold an AGM before April 15, 2020 (blue dots). Second, consistent with our theory, institutional blockholders drive the decline in donations (red triangles), as they expect dividend losses and no private returns from the donations. The opposition to covid donations is more effective when institutional shareholders hold larger stakes. Third, these effects dissipate for firms with AGMs after April 15, as shareholders have less incentives to influence managers; individual shareholders receive no additional image benefit if a firm

[8] As most AGMs occur in May/June, this analysis covers 85% of the AGMs in our sample. Extending the analysis to the full year does not change the results.

[9] The SEC (2020) states that a firm "can notify shareholders of a change in the date, time, or location of its shareholder meeting without mailing additional soliciting materials or amending its proxy materials" under certain conditions. The change took place on April 7; since the seven S&P 500 firms with AGMs between April 7 and April 15 also held an AGM within less than a week from April 7, 2019, it is unlikely that these firms set their 2020 AGM dates based on shareholder preferences relative to covid donations. Panel (b) of Appendix Figure B1 shows that most AGM date changes made in the first four months of 2020 concerned only firms that held AGMs in (late) April 2019.

[10] In April 2020, the US Government invoked the Production Defense Act to support large-scale transformations (e.g., Ford's medical ventilator production). Our dataset only includes voluntary donations, excluding government contracts. As some industries were more likely to engage in government contracts (e.g., the car industry), we control for industries to account for potential biases from lobbying efforts, which, nevertheless, are orthogonal to our AGM timing.

Figure 2: Shareholders' influence on donations by AGM week



Note: Estimated $\hat{\beta}_w$ from (4) using a dummy variable for whether a firm donated between January and April 2020 as dependent variable. Blue dots (red triangles) report estimates on a sample with only firms with at least one individual (institutional) shareholder with at least 0.1% (5%) shares. Vertical bars are 95% CI. SEs are clustered by industry.

donates in a non-AGM period, resulting in no greater effort by institutional shareholders to preclude donations.

Treatment effect estimate. Table 2 estimates (3) using OLS, with the dependent variable indicating whether firm f donated by April 15 (1 if donated, 0 otherwise), as in (4). Ownership$_f$ is defined as the share of individual (or institutional) shareholders holding more than 10% in Column 1 (or 4), more than 5% in Column 2 (or 5), or less than 2% in Column 3 (or 6) of equity in December 2019. Ownership$_f$ is standardized to compare coefficients across columns.[11] The model includes industry- and state-fixed effects.

Focusing on the interaction term, the estimated $\hat{\beta}_{treat}$ is positive and significant for individual blockholders (Columns 1 and 2), with a large coefficient indicating that a one standard deviation increase in individual blockholders raises the probability of donating by over 9%. In contrast, minority shareholders (Column 3) do not influence donations. These findings support the conceptual framework in Section 2, suggesting that prominent individual investors, with larger equity stakes, exert more pressure to encourage donations due to greater image gains. In contrast, $\hat{\beta}_1$ and $\hat{\beta}_2$ are insignificant, suggesting no selection.

We find consistent results for institutional investors (banks, mutual funds, and insurance firms). The rightmost columns of Table 2 show that the probability

[11] An alternative specification using a dummy (one if at least one shareholder has x% shares) does not qualitatively change the results, and is omitted. Standard errors are clustered at the industry level to account for potential stochastic shocks (Deeb and de Chaisemartin, 2019).

Table 2: Shareholders' influence on covid donations

	Whether Firm f has Donated (0/1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Ownership ($\hat{\beta}_1$)	0.014	0.018	-0.036^{*}	-0.014	-0.014	0.055^{*}
	(0.017)	(0.011)	(0.020)	(0.025)	(0.026)	(0.029)
AGM ($\hat{\beta}_2$)	0.095	0.097	0.089	0.082	0.083	0.092
	(0.099)	(0.099)	(0.102)	(0.081)	(0.104)	(0.101)
Ownership × AGM ($\hat{\beta}_{treat}$)	0.093^{***}	0.096^{**}	-0.013	-0.150^{***}	-0.021	-0.033
	(0.021)	(0.034)	(0.042)	(0.043)	(0.066)	(0.065)
Ownership is defined as	Individuals			Institutional		
Ownership is the share of investors owning:	$> 10\%$	$> 5\%$	$(0\%, 2\%)$	$> 10\%$	$> 5\%$	$(0\%, 2\%)$
Industry fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓
N	433	433	433	433	433	433
Adjusted R-squared	0.1595	0.1599	0.1597	0.1668	0.1562	0.1657

$^{*} - p < 0.1$; $^{**} - p < 0.05$; $^{***} - p < 0.01$.

Note: Estimated coefficient from (3) using an indicator variable that is one if firm f has donated by April 15, 2020. The variable *Ownership* is the share of either individual (Columns 1-3) or institutional investors (Columns 4-6) among all investors owning at least a share of total equity, as defined in the middle panel. The variable *Ownership* is standardized. The AGM variable is an indicator variable taking value one if the firm has an AGM before April 15, 2020, and zero otherwise. Standard errors are clustered by industry.

of donating decreases by approximately 15% of a standard deviation as the share of large institutional blockholders rises (Column 4), with no significant effect for smaller shareholders (Columns 5 and 6). Thus, large institutions oppose donations.[12] Again, $\hat{\beta}_1$ and $\hat{\beta}_2$ are zero pointing to no selection on observables.

In conclusion, the treatment effect among the treated (ATT) in Column 1 tells that firms are 46% more likely to donate if their shareholding base include at least one prominent individual or family investor (with at least a 10% share). The effect drops to 40% in Column 2. In contrast, firms with large institutional shareholders are 26% less likely to donate for covid relief as seen in Column 4.

4.3 Mechanism

4.3.1 The Pass-Through of Image Gains

Our conceptual framework explains shareholder influence through different pass-through channels of image gains across investor types. Does the data support this hypothesis? To test for a shock to shareholders' private returns, we re-examine media exposure of shareholders around donation events. Using

[12] Appendix Table A1 reports separate estimates for the main institutional investor type. Banks and insurers exercise most influence against donations.

shareholder names as Google search keywords, we run the following regression:

$$y_{ift} = \sum_{d=-10}^{10} \psi_d \text{News}_{f(i)t+d} + \gamma_d \text{News}_{f(i)t+d} \times \text{Individual}_i + \alpha_i + \tau_{ft} + \varepsilon_{ift}, \quad (5)$$

where the dependent variable is the logarithm of the cumulative Google Trends score over a ten-day period starting on day t for shareholder i in firm f. On the right-hand side, the vector $\{\text{News}_{it+d}\}_{d=-10}^{+10}$ represents day dummies around the donation event. We interact them with an indicator for individual investors. We also include firm, shareholder, and day-fixed effects. The vector ψ_d captures the impact of donations on Google searches for nonindividual investors, while γ_d reports the visibility gap between individual and nonindividual investors.

Figure 3 shows the estimated $\hat{\gamma}$ using cumulative Google Trends scores as the dependent variable and clustering standard errors at the firm-by-shareholder level.[13] Panel (a) uses shareholders with at least 1% of shares in December 2019, while Panel (b) focuses on those with more than 5%.[14] Across both panels, Google searches remain flat before the donation news is released. In Panel (a), after the news breaks, the coefficient estimates jump to about 50% from day 3 to day 10. In Panel (b), the effect is stronger, with significant $\hat{\gamma}_d$ already before the news announcement due to the forward cumulation of Google searches in (5).

4.3.2 Different Measures of Shareholder-Firm Visibility

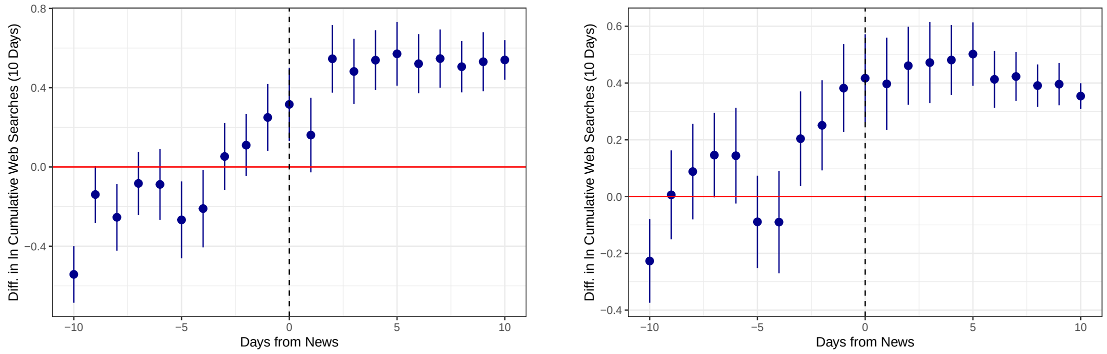
Large shareholding is a coarse measure of a firm's association with its most visible shareholders. To refine it, we analyze the correlation between Google Trends data for each firm and its individual shareholders over 2018–2019. We redefine Ownership_f as one if the firm's highest correlation with a shareholder exceeds the S&P 500 median and zero otherwise.

Due to space constraints, we focus on the estimated causal effect of interacting Ownership_f with AGM_f without reporting the relative table. We find $\hat{\beta}_{\text{treat}} = 0.731$ (SE 0.151), indicating that donation rates are 73pp higher for firms whose Google searches strongly align with a shareholder's. Defining Ownership_f based on the average correlation between a firm and all its individual shareholders estimates a similar $\hat{\beta}_{\text{treat}}$ ($\hat{\beta}_{\text{treat}} = 0.729$, SE = 0.155). Notably, $\hat{\beta}_{\text{treat}}$ becomes much larger when restricting the sample to firms with below median institutional

[13] Shareholder types include "banks," "hedge funds," "insurers," "mutual funds," "other financial firms," "individuals and families," "government," "self-ownership," and "other firms."

[14] Following Table 2 we disregard small shareholders with less than 1% shares. Appendix Table A2 and Figure B2 show robust results for different time intervals (7, 10, and 14 days).

Figure 3: Individual sh. receive more Google searches after a firm donates



(a) Only shareholders with +1% (b) Only shareholders with +5%

Note: Both panels report the estimated gap in Google Trends between inidividual and institutional shareholders from (5) estimated around a firm's donation on two different samples. Vertical bars represent 95% confidence intervals, with standard errors clustered by firm and shareholder type (bank, company, individual, financial company, government, hedge fund, insurance, mutual fund, self-ownership).

ownership ($\hat{\beta}_{\text{treat}} = 0.922$, SE = 0.240), as institutional investors have much less to lose from costly expenditures in this sample. Hence, they counter-influence managers less than firms with higher institutional shareholding ($\hat{\beta}_{\text{treat}} = 0.695$, SE = 0.130), as described in Section 2.[15]

Overall, these results confirm our findings from Table 2, which portrays our favorite specification. First, Google Trends-based measures correlate well with individual shareholding. Second, this alternative measure requires researchers to specify a "training." A longer training period than 2018–19 decreases the salience of current events, while a shorter period places more emphasis on them, potentially changing the results qualitatively. Finally, these estimates are consistent with the ATTs estimated in Section 4.2. For these reasons, we focus on shareholding in the rest of the paper.

4.3.3 Donate Directly or Through the Financial Footprint?

Do financial investors openly oppose covid-related donations? To address this question and to understand the tradeoff faced by institutional investors, we compare the donation decisions of financial corporations in the S&P 500 (e.g., BlackRock and Bank of America) with those of the S&P 500 firms in their

[15]For institutional investors, instead, $\hat{\beta}_{\text{treat}}$ is smaller and insignificant ($\hat{\beta}_{\text{treat}} = 0.193, SE = 0.113$). This may stem from industry-wide correlations in Google searches and the shared ownership as highlighted by the common ownership literature (Azar *et al.*, 2018).

investment portfolios.[16] More specifically, we analyze the correlation between two vectors: a vector of donation decisions and a vector of donation shares. The vector of donation decisions is a list of binary dummies, one for each of the 37 financial corporations in our data, indicating whether a corporation donated by April 15, 2020 (19 of them donated). The second vector reports the share of firms in the portfolio of a financial shareholder that also donated. A positive correlation between these vectors suggests that donation intents of investors and firms are aligned, while a negative correlation points to a misalignment.

Table 3: Correlation of donations of financial shareholders' and their portfolios

	Spearman Correlations		
Minimum Equity Share Considered (1)	Weighted Average [p-values] (2)	Simple Average [p-values] (3)	Weighted Avg. × AGM [p-values] (4)
0%	-0.062	0.442	-0.211
(Avg. $N = 222$)	[0.721]	[0.007]	[0.238]
1%	0.079	0.064	-0.093
(Avg. $N = 100$)	[0.696]	[0.751]	[0.705]
2%	0.077	-0.230	-0.439
(Avg. $N = 57$)	[0.721]	[0.280]	[0.089]
3%	0.180	-0.105	-0.617
(Avg. $N = 48$)	[0.423]	[0.643]	[0.077]
4%	0.060	-0.112	-0.878
(Avg. $N = 42$)	[0.795]	[0.630]	[0.021]
5%	0.275	0.124	-0.289
(Avg. $N = 35$)	[0.285]	[0.637]	[0.638]

Note: The table computes the Spearman correlation between whether a financial firm donates and the share of donations at the firms in its portfolio. In each row, we vary the minimum share (x%) that a firm must have in another firm to be considered part of the portfolio of an investor. Column 1 also reports the average number of S&P500 firms in the portfolio of a financial investor in parenthesis. Column 2 computes the total donations of the firms that financial firm i has invested in using equity shares at Dec 2019 as weights (i.e., $\sum_j share_{ij} \times \mathbf{1}[\text{firm } j \text{ donated}] \times \mathbf{1}[i\text{'s share in } j \text{ is greater than } x\%]$), Column 3 computes simple averages (i.e., $N_i^{-1} \times \sum_j \mathbf{1}[\text{firm } j \text{ donated}] \times \mathbf{1}[i\text{'s share in } j \text{ is greater than } x\%]$), and Column 4 considers only firms in i's portfolio with an AGM before April 15 (i.e., $\sum_j share_{ij} \times \mathbf{1}[\text{firm } j \text{ donated}] \times \mathbf{1}[i\text{'s share in } j \text{ is greater than } x\%] \times \mathbf{1}[j \text{ has an AGM}]$). p-values are in square brackets.

Table 3 presents this correlation considering increasingly larger minimum equity shares across rows. Column 2 weights donations by a financial investor's share in the donating firm and, surprisingly, finds positive correlations between the investor's covid-related donations and those in its footprint. However, none

[16] We focus on only S&P 500 firms that invested in other S&P 500 firms due to data availability. However, we expect our result to hold more broadly because, on average, it should be more difficult to influence the management of an S&P 500 corporation than that of a smaller one.

of the coefficients are statistically significant, possibly due to the influence of a few donating firms with large financial investor ownership. Column 3 addresses this by using simple averages, showing smaller and negative correlations when the threshold is 2%, 3%, or 4%. More conclusively, Column 3 considers only the donation of firms with an AGM meeting in each financial investor's portfolio. The correlation are now negative and statistically significant, approaching −1 for higher shareholding thresholds.

These results suggest that financial shareholders do not oppose *all* donations, as they pledge donations themselves. However, as influence shifts from individual to institutional shareholders—i.e., as we move down Table 3—these shareholders oppose donations at treated firms within their footprint. This is consistent with the fact that these donations yield them little image gain (Figure 3) but may reduce earnings, as we discuss in Section 5.

4.3.4 Alternative Mechanisms

Intensity of the pandemic. Firms might be simply responding to the need for ventilators and similar items and our empirical approach could miss this if this need is correlated with the AGM treatment. We modify (3) as follows to control for COVID cases and deaths occurring in a firm's headquarter state over time:

$$y_{ft} = \beta_1 \text{Covid Rate}_{ft} + \beta_2 \text{Covid Rate}_{ft} \times \text{Ownership}_f + \beta_3 \text{Covid Rate}_{ft} \times \text{AGM}_f + \beta_{treat} \text{Covid Rate}_{ft} \times \text{Ownership}_f \times \text{AGM}_f + \alpha_f + \tau_t + \varepsilon_{ft}, \quad (6)$$

where the dependent variable, y_{ft}, is equal to one if firm f has publicly committed to donating by day t and zero otherwise. The main coefficient of interest is β_{treat}, which captures the interaction between the cumulative covid rate at firm f's headquarters state, Covid Rate$_{ft}$, the fraction of equity owned by the reference blockholder, Ownership$_f$, which varies across specifications, and the AGM treatment, AGM$_f$. We use headquarter-state covid rates because Appendix Figure B11 shows a clear spatial pattern across these two variables, with firm f being more likely to donate for covid relief as the pandemic heightens in f's state. Finally, α_f and τ_t are firm- and day-fixed effects.

The first three columns of Appendix Table A3 present results using individual shareholders as the reference category, with Ownership$_f$ and Covid Rate$_{ft}$ standardized to facilitate comparisons across columns with different x-blockholding percentages, covid cases (in Panel a), and deaths (in Panel b). While one standard deviation in covid rates increases donation rates by about 1%-2%, this effect is overshadowed by the AGM treatment effect at firms with larger shares of individual shareholders, β_{treat}, estimated to be 10 to 20 times larger. In contrast, treatment effect estimates for banks, mutual funds, and insurers (Columns 4–12) are negative, consistent with previous findings, while the unconditional effect of covid rates remains negligible.[17]

Financial motives. Abnormal returns do not explain covid-related donations. To compute abnormal returns, we predict daily stock returns using the Fama-French three factors, namely, daily market returns (R^{MKT}_{ft}, proxied by the S&P 500 Index), daily returns on a portfolio of "small minus big stocks" (R^{SMB}_{ft}, from Kenneth French's website), and daily returns on a portfolio of stocks with "high minus low" book-to-market value ratios (R^{HML}_{ft}, also from French's website). We retrieve the betas (β_f) of those three portfolios for the stocks in our sample from CRSP. Then, stock f's abnormal return (AR_{ft}) on day t is given by the difference between the actual excess return of the stock over the risk-free rate (R_{ft}) and the prediction of the 3-factor model, as $AR_{ft} = R_{ft} - (\beta^{MKT}_f \cdot R^{MKT}_{ft} + \beta^{SMB}_f \cdot R^{SMB}_{ft} + \beta^{HML}_f \cdot R^{HML}_{ft})$. We then plug the realized AR_{ft} in the following event study:

$$y_{ft} = \sum_{-5 \leq d \leq 5} \theta_d \text{ News Day}_{ft+d} + \alpha_f + \tau_t + \varepsilon_{ft},$$

where the left-hand side refers to either firm f's abnormal return (AR_{ft}) or its cumulative abnormal return (CAR) on day t. The regression includes firm- and date-fixed effects. Appendix Figure B3 reports $\hat{\theta}_d$. Panel (a) shows no abnormal returns before the news is broken, while the abnormal returns are actually negative (although not significant) right after it. Panel (b) reports the CAR over five days, showing a negative drop after the news date.[18] In summary, we find a negative but transient effect of the news on firms' financial returns.

Consumer pressure. We exploit exogenous variation in a firm's exposure to covid through its branches to assess whether consumers pressured firms to donate. Using the Orbis database, we compute the weighted cumulative averages of covid cases and deaths using the number of branches a firm has in each state

[17]We replicate the analysis using cumulative national covid cases and deaths at the national level instead of at the headquarters-state level as they could be more salient than headquarters-state rates for large financial investors. The results, which we omit because of space constraints, are consistent with those presented thus far, with the only difference being that the estimates for individual and family shareholders are now close to zero.

[18]We find similar results for the CAR over longer horizons (Appendix Table A5).

as weights. We denote the standardized versions of these two new variables by Exposure at Branches$_{ft}$ and estimate the following linear probability model:

$$y_{ft} = \beta_1 \text{ Exposure at Branches}_{ft} + \beta_{treat} \text{ Exposure at Branches}_{ft} \times \text{Number of Branches}_f + \alpha_f + \tau_t + \varepsilon_{ft}, \tag{7}$$

where Number of Branches$_f$ is the reported number of branches as of December 2019.[19] The results show a null effect of covid exposure (Appendix Table A4).

Managerial freedom. We proxy managerial freedom by the share of a firm's equity owned by the firm itself and analyze the probability of observing a donation by time t using (6), where Ownership$_f$ equals one if firm f owns more than the median amount of its own shares, and zero otherwise. Leveraging the AGM period as an opportunity for managers to showcase achievements, Appendix Table A6 estimates the causal impact of managers' private or image returns on donations by comparing treated and control firms. While donations during a crisis can benefit managers of underperforming firms (Akey *et al.*, 2021), the results suggest that managers align with financial investors in opposing donations. This opposition likely stems from the potential cost of donations, which may reduce managerial compensation.

Competition. We also examine whether firms donated in response to past COVID-related donations by direct competitors by including in (6) a variable equal to one if at least one S&P 500 firm in the focal firm's industry donated in the previous week, and zero otherwise.[20] The results in Appendix Table A7 indicate a limited role of competition, while the treatment effect coefficients remain consistent with those in Table A3. These findings align with prior research suggesting that managers face pressure to report positive results during AGM periods (Dimitrov and Jain, 2011). Large donations during a crisis may strain a firm's financial position, potentially impacting managerial compensation.

Missing observations in Orbis. This section has focused on a sample of firms without missing financial and ownership information in Orbis to ensure consistency across the empirical exercises. We replicate our main results – the evidence of influence by individual and institutional shareholders (Figure 2

[19] The distribution of the number of branches for S&P 500 firms ranges from 0 to 13,582 with a median of 40 branches; since we do not know whether a branch is a shop or a factory, it is fair to assume that firms with more branches are the most exposed to final consumers.

[20] Competitors' donations in the past week help isolate a firm's response to peer donations. Results are robust to different lag specifications.

and Table 2) and by financial shareholders within their portfolio (Table 3) – in Appendix Section C using Refinitiv's consolidated ownership data, a slightly larger dataset, that provides historical shareholding information but, unlike Orbis, lacks self-ownership data. Across analyses, not only the signs but also the magnitude of the coefficients stays almost unchanged.

4.4 Shareholder Influence Beyond the Pandemic

Does shareholders' influence through voice extend beyond pandemic periods? We test external validity over time and crises by focusing on another time of crisis, the recent Russian invasion of Ukraine in Section 4.4.1 and by using various measures of prosociality over the last decade in Section 4.4.2.

4.4.1 Shareholder Influence and the Russian Invasion of Ukraine in 2022

On February 24, 2022, the President of the Russian Federation, Vladimir Putin, launched the so-called "special military operation," beginning with the invasion of Ukraine and escalating into a war that continues at the time of writing. Shortly thereafter, media scrutiny of multinational corporations intensified as the public questioned Western firms continuing operations in Russia. In response, many firms reduced their exposure to Russian consumers and businesses, with several exiting Russia altogether.

In this section, we examine whether the differential pass-through of image gains to individual and institutional shareholders influenced these decisions, without addressing whether exiting was the socially optimal decision. We view rushed exits as consequential, costly decisions with significant media impact: they could enhance the image of synonymous shareholders while imposing substantial costs on others, given the unplanned expenses associated with relocation (e.g., urgently securing new suppliers and consumers).

Using the approach outlined in Section 4.1, we test shareholders' influence on firms' decisions to exit Russia, using a dataset documenting the actions taken by international corporations regarding Russia (Sonnenfeld *et al.*, 2022). Our data includes US-listed firms that publicly announced actions by March 23, 2022—a month after the conflict began (164 firms).[21] Appendix D describes the data and balance checks across treated and control firms.

[21] We focus on US-listed firms due to the applicability of SEC rules. The emphasis on the first month ensures we capture firms most exposed to the Russian market while excluding actions influenced by government sanctions implemented later. Most firms in the dataset are part of the S&P 500 index, spanning various sectors.

The firms' decisions range from exiting Russia to limiting current and future investments or continuing business as usual. Of the 164 firms, 51 decided to leave the Russian market. We focus on this radical decision due to its high visibility for the public and cost due to its rushed nature. Importantly, exiting Russia exceeded the scope of international sanctions during the first month of the conflict and was not mandated by regulations.

Table 4 reports the results: Columns 1 to 3 refer to individual blockholders, while Columns 4 to 6 refer to institutional blockholders. As in the previous tables, we vary the blockholding thresholds as described in the middle panel: the magnitude of the treatment effect, $\hat{\beta}_{treat}$, increases for higher thresholds. Consistent with previous results, the presence of prominent individual shareholders positively correlates with exits, while the presence of similarly large institutional investors pushes firms' decisions in the opposite direction. Moreover, the magnitudes of the estimated coefficient are in line with those reported in Section 4.3.2 and the ATT in Section 4.2.

Robustness checks. In Online Appendix D.2, we conduct several robustness tests to validate our empirical findings. First, we show that the negative β_{treat} coefficient for institutional investors is primarily driven by banks. Consistent results are also obtained when modifying Equation 3 to account for simultaneous treatment effects for individual and institutional blockholders or when excluding firms that opted for business as usual. Similar results are also obtained when we include all US S&P 500 firms, assuming that those not covered by Sonnenfeld *et al.* (2022) took no action against Russia. Finally, we find that exit decisions are not simply driven by firm size, as measured by market capitalization or net income in 2021, suggesting a significant role for shareholder influence.

Impacts on supply chains. Appendix D.3 applies our methodology on Factset data on supply relationships between US and Russian. Setting $y_f = 1$ if firm f cut ties with Russia post-February 24, 2022, we find that large individual shareholders pushed firms to sever Russian suppliers.

4.4.2 Shareholder Influence Beyond Crises

We explore whether shareholder influence on prosocial matters is limited to crises by analyzing firms' ESG-related news coverage and donations during AGM periods, across firms with varying shares of individual shareholders. We expect any changes to be temporary, as shareholders' reputation gains are likely confined to the AGM period if they drive influence.

Table 4: Shareholders' influence on the decision to exit the Russian market

	Exited Russia in the Frist Month of Conflict (0/1)					
	(1)	(2)	(3)	(4)	(5)	(6)
AGM ($\hat{\beta}_1$)	−0.067	−0.080	−0.094	0.144	0.035	0.043
	(0.090)	(0.087)	(0.090)	(0.115)	(0.116)	(0.111)
Above Median Blockholding ($\hat{\beta}_2$)	−0.547***	−0.542***	−0.428***	0.116	0.070	0.148
	(0.181)	(0.145)	(0.128)	(0.132)	(0.134)	(0.137)
AGM × *Above Median Blockholding* ($\hat{\beta}_{treat}$)	0.705***	0.316	0.263	−0.341**	−0.152	−0.188
	(0.254)	(0.244)	(0.175)	(0.165)	(0.160)	(0.159)
Above Median Blockholding (0/1) defined for:	Individual			Institutional		
Threshold to be considered a blockholder:	>10%	>5%	>2%	>10%	>5%	>2%
Controls	✓	✓	✓	✓	✓	✓
Sector fixed effects	✓	✓	✓	✓	✓	✓
N	138	138	138	138	138	138
Adjusted R-squared	0.2762	0.2923	0.2879	0.2642	0.2320	0.2372

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

The table presents the coefficients from OLS regressions of an indicator that is one if firm f has exited Russia by March 23, 2022, and zero otherwise on covariates. The regressions only exploit cross-section variation across firms at March 23, 2022. Italicized variables are defined in the middle panel. *Above Median Blockholding* is one if firm f has more blockholders of the reference category than the median S&P 500 firm and zero otherwise. The reference category and the blockholding thresholds are defined in the middle panel. Control variables include the share of revenues that come from activities in the US and Canada, the exposure to Russia, brokers' recommendations, CEO age, and net income. Market capitalization, revenues, and net income are highly correlated; controlling for any of these two variables instead of net income does not change the results qualitatively. For models where individual investors are the reference category (Columns 1 to 3), we also include a dummy equal to 1 for above-median institutional ownership. This variable is necessary to control whether institutional investors are heavily invested in a firm, as this channel could reduce the voice of individual and family shareholders. This variable would have been unnecessary if we could have exploited firm-fixed effects. All columns include sector-fixed effects. Robust standard errors in parenthesis.

Data. We use ESG-related news data from RepRisk (2011-2021), which screens over 80,000 documents daily in 15 languages for adverse ESG incidents. We focus on incidents rather than favorable news to avoid greenwashing. Donation data comes from Ravenpack, which identifies news on donations made by US corporations between 2011 and 2021. This is merged with historical shareholder information from Refinitiv. AGM dates are sourced from ISS. The ESG dataset covers 642 firms over eight years, with an average of 772 incidents per firm, 651 of which are social ("S") incidents. The donation dataset spans 988 firms over 11 years, with 760 firms making 4,439 donations. These firms represent over 90% of the market capitalization of the original datasets (details are in Appendix E).

Methodology. Since shareholders can submit proposals up to 120 days before the AGM's proxy statement release, we distinguish two periods: a pre-period, during which formal proposals can be made, and a post-period, during which engagement is informal. We categorize firms by the level of individual and institutional blockholders. To address two issues—(i) GM dates vary across firms within a year, and (ii) firms have AGMs every year—we modify the calendar such that month 0 coincides with the third month before each firm's AGM. The pre-period spans months -4 to 0, and the post-period spans months 0 to 7. We then stack yearly difference-in-differences analyses as suggested by Cengiz *et al.* (2019). We focus on the following event study regression:

$$y_{fmt} = \sum_{k=-7, k\neq -4}^{4} \lambda_k \mathbb{1}_{\{m+k,t\}} \times \text{Treat}_{ft} + \mathbf{X}_{fmt}\beta + \alpha_{ft} + \tau_{mts(f)} + \tau_{mtc(f)} + \varepsilon_{fmt}. \quad (8)$$

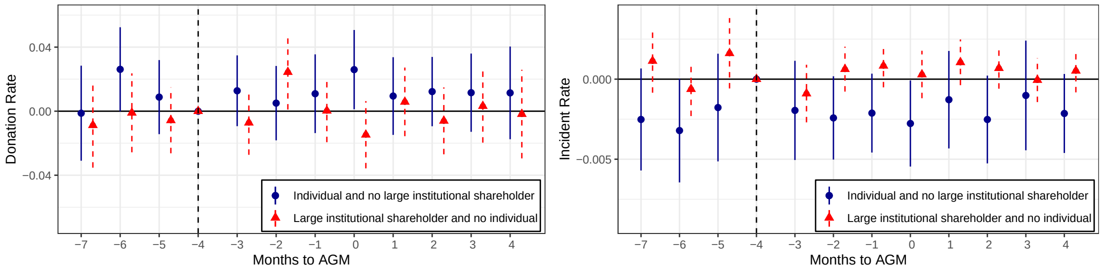
To avoid double counting the same news, we define y_{fmt} as an indicator equal to one if firm f made at least one donation (or had an S-incident) in month m of year t, and zero otherwise. Treat_{ft} is an indicator based on firm f's ownership at the start of year t, defined in the next paragraph. To control for endogenous variation in stock ownership, we hold this variable constant within each year. As in an event study, we interact Treat_{ft} with $\mathbb{1}_{\{m+k,t\}}$, which is one in month $m+k$ of year t and zero otherwise. This variable is also included in $\mathbf{X}_{fmt}$ to control for calendar date effects, as AGMs in different months (e.g., April vs. December) may attract different media attention. We also control for lagged quarterly cash holdings (in logs) and leverage to account for financial resources, which could vary by time and firms. Since (8) stacks multiple yearly difference-in-difference estimators, fixed effects are at the firm-by-year, month-by-year-by-state, and month-by-year-by-industry levels. Standard errors are clustered by firm.[22]

Results. Figure 4 presents the $\hat{\lambda}_k$ coefficients from estimating (8) by OLS: Panel (a) studies donations and Panel (b) social incidents. Each panel reports the estimates from two regressions based on the definition of Treat_{ft} in (8). The blue dots define firms with prominent individual shareholders as treated. Red triangles consider firms with prominent institutional and no individual shareholders treated.

We begin with a null result: the red triangles show no significant difference around the AGM period. This aligns with the framework in Section 2, where institutional shareholders do not oppose prosocial behavior if no private gains are expected (i.e., individual shareholders). In contrast, firms with individual shareholders (blue dots) exhibit prosocial actions around the AGM month ($m = 0$). Panel (a) shows a three percentage point increase in donations, a 60% rise

[22] The recalendarization forces all AGMs to happen at the same time, preventing the negative weighting of some AGMs that can occur with staggered designs (Sun and Abraham, 2021).

Figure 4: Shareholders' influence on firms' prosociality around AGMs



(a) Donations

(b) Social ("S") incidents

Note: Estimated $\hat{\lambda}_k$ from (8) using either an indicator for a donation event (Panel a) or for the occurrence of a social incident (Panel b) in a given month as dependent variables. Treated firms have at least one large institutional shareholders with at least 10% shares and no individual shareholder (at least one individual shareholder and no institutional shareholders with a 10% share) and are shown with red triangles (blue circles). Standard errors are clustered by firm.

in donation probability. This effect is transitory, peaking around the AGM when media attention is high and individual investors can gain private returns (Fioretti *et al.*, 2024).

The evidence is more nuanced in Panel (b). Consistent with our mechanism, firms with individual shareholders (blue dots) have fewer social incidents during the AGM month. However, although insignificant, the coefficients remain negative across all periods. This may be due to the social category including not only "donations," where prominent shareholders can influence firm behavior to avoid negative publicity, but also issues like "social discrimination" and "corruption," which may require structural changes and are less visible to the public, potentially confounding the results.

4.5 Summary of Results

This section empirically tests the theoretical framework from Section 2, using the pandemic as the main testbed. Our results suggest that the balance between a shareholder's private returns and potential earnings losses from visible but costly prosocial decisions drives different pressures on managers. Exploiting AGM timings as a shock to shareholder returns, we find that individual shareholders push for greater adoption of prosocial measures (Figure 2), with results robust to various measures of shareholder-firm visibility (Section 4.3.2). We also show a significant gap in image gains between individual and institutional shareholders, with the latter potentially opposing costly donations during crises due to profit concerns (Section 4.3.1). However, institutional shareholders may still support prosocial actions when they can benefit from publicity (Section 4.3.3). Our analysis rules out alternative explanations such as financial returns, consumer pressure, and managerial preferences (Section 4.3.4).

These findings are not limited to the pandemic; applying our framework to the onset of the Russia-Ukraine conflict yields similar results, with ATTs comparable in both sign and magnitude (Section 4.4.1). Additionally, using data on ESG news and donations over the past decade, we show that private returns incentivize individual shareholders to influence firms' behaviors even in non-crisis periods (Section 4.4.2). Thus, our framework infers influence based on shareholder incentives, which are present also in the absence of a crisis.

Finally, while our framework infers influence, we cannot directly observe whether influence actually occurred—e.g., no shareholder proposal in 2020 addressed covid-related donations—or whether managers responded to shareholder expectations. Nevertheless, we observe that managers' responses to shareholding characteristics, as affected by the AGM treatment, align with shareholders exerting influence over prosocial changes. The next question is: what is the cost of these positive changes for "silent" or "unheard" shareholders?

5 The Shared Costs of Influence

What are the implications for "unheard" shareholders when others influence managerial decisions? Consider a firm with revenues R, operating costs C, and operating income $\pi = R - C$. The firm can reinvest π to support future income, distribute it as dividends, or yield to shareholder demands by spending π on non-productive activities, such as donations (Section 4) or abrupt exits from markets like Russia (Section 4.4.1). Such choices can reduce the discounted value of future incomes, imposing net losses on shareholders who do not benefit privately (e.g., via image returns).

Measuring a firm's productivity is challenging, but we leverage two variables to address this, aided by the exogenous timing of AGMs and crises: *operating income* and *market capitalization*.[23] Operating income reflects how effectively the firm converts costs into revenues and serves as a rough productivity measure given demand (e.g., Harberger, 1954). Market capitalization, on the other hand, captures shareholder losses through stock price changes.

As productivity influences both R and C, identifying productivity changes

[23] Dividends are not a good measure of rent extraction because firms often adopt dividend policies with the aim to keep dividends constant over time (e.g., La Porta *et al.*, 2000).

requires isolating demand fluctuations affecting R. Consumer demand likely reacted to both COVID-19 and the invasion of Ukraine through lockdowns and protests. However, it is reasonable to assume that demand changes are unrelated to the share of individual or institutional shareholders and to the AGM treatment before a crises (Section 4.3.4).

To address this issue, we employ a triple differences-in-differences approach. Treatment firms are those that held AGMs during the crisis onset as defined in Sections 4.2 and 4.4.1, while other firms serve as controls. We further stratify firms based on pre-crisis individual shareholder presence. Our identification strategy relies on a weaker parallel trends assumption than standard difference-in-differences: the relative outcomes between firms with and without prominent individual shareholders need only trend similarly in both AGM-treatment and control states. This identification holds even with biased difference-in-differences estimators, provided the bias is similar across estimators.[24] Following Olden and Møen (2022), we include control variables to account for compositional differences between groups, thereby addressing potential biases arising from observable characteristics that may influence treatment state or group assignment.

5.1 Data

We perform our analysis on two distinct samples. The first sample examines the pandemic's effects, focusing on the 1,000 largest US-listed firms as of December 2019 to study their productivity between 2016 and 2022. For the Ukraine invasion case, we use quarterly data from 2020 to the third quarter of 2022 to capture the immediate impact of a disorganized exit from Russia. This sample is further restricted to firms with dealings in Russia prior to 2022, as identified by Refinitiv, excluding firms with no reported revenue from Russia since they are only indirectly affected by this crisis. The final sample for the Ukraine-Russia case consists of the largest 1,153 US-listed firms with Russian ties.

Consequently, the first sample includes larger firms than the second, with average operating income and market capitalization approximately four times greater. The Ukraine-Russia sample is also more heterogeneous, exhibiting operating incomes nearly twice as skewed as those in the COVID-19 sample. For

[24]For instance, while NGOs may target firms during AGMs, potentially impacting their demand and the likelihood of firm's reactions (Fioretti *et al.*, 2024), this does not affect identification as long as such attacks are unrelated to shareholder composition. This reasoning extends to other unobserved factors.

both samples, historical ownership and financial data are sourced from Refinitiv and Compustat, while AGM dates are obtained from ISS.

5.2 Methodology and Results

5.2.1 Crisis 1: Covid Pandemic

Starting with the COVID-19 crisis, the left panels of Figure 5 depict quarterly average operating income and market capitalization by group and treatment condition from 2016 to 2022. Treated firms are shown with solid lines and control firms with dotted lines; firms with large individual shareholders are represented in blue, and those without in red. Pre-trends appear parallel across groups—compare the difference between AGM-treated firms with and without individual shareholders (solid blue minus red lines), and the same difference across AGM-control firms (dotted blue minus dashed red lines)—especially since 2016.[25] However, during 2020 and 2021, the gap between the bold blue and red solid lines widens, while the gap between the dotted lines narrows. This suggests that firms with individual shareholder influence experienced drops in operating income and stock prices, highlighting negative consequences for other shareholders.

To assess magnitudes, the right panels of Figure 5 estimate the event study:

$$y_{ft} = \sum_{k \neq 2019} \theta_k \, \mathbb{1}_{\{t+k\}} \times \text{Treat}_f \times \text{Ownership}_f + \mathbf{X}_{ft}\,\beta + \alpha_f + \tau_t + \iota_{s(f)t} + \varepsilon_{ft}, \quad (9)$$

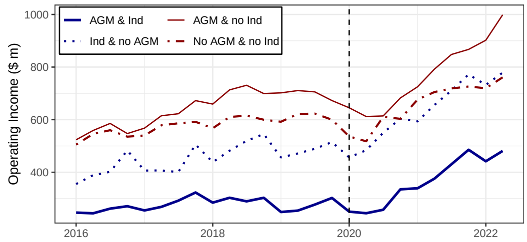
where y_{ft} is operating income or market capitalization (in logs). Treat_f identifies firms holding AGMs within 90 days post-January 15, 2020, and Ownership_f is the standardized share of individual shareholders with at least a 5% equity stake.[26] $\mathbf{X}_{ft}$ includes the direct effect of these two variables on y_{ft}, lagged assets to account for firm size, and α_f, τ_t, and $\iota_{s(f)t}$ denote firm, year, and sector-year fixed effects, respectively. The regression residuals are likely correlated within states (e.g., state policy) and across firms in the same industry (e.g., demand responses). Thus, we cluster the standard errors at these levels.

Panels (b) and (d) measure the impact of shareholders' voice on productivity. Operating income dropped sharply in 2020 by \$81m of a standard deviation and further by \$359m in 2021 (p-value: 0.09) before recovering to pre-COVID levels.

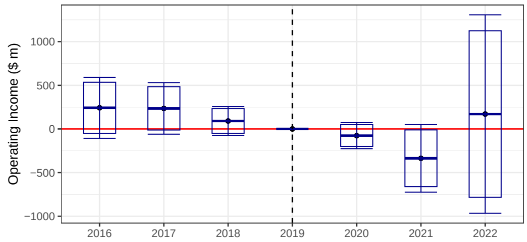
[25] We acknowledge that the two red lines cross in 2016. We present the whole trends for completeness, but all the following results also hold in the subsample starting in 2016.

[26] We winsorize Ownership_f at the 99th percentile to handle outliers.

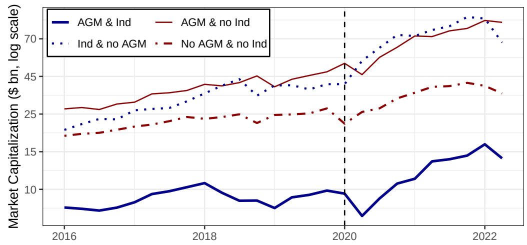
Figure 5: Documenting rents: covid case



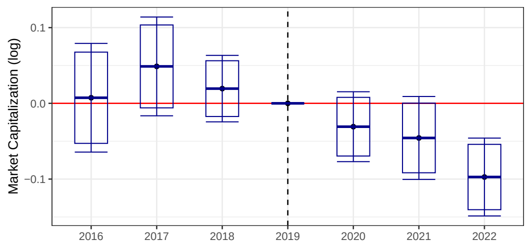
(a) Operating income (quarterly data)



(b) Operating income - event study



(c) Market cap (quarterly data)



(d) Market cap (log) - event study

Note: Panels (a) and (c) plot the operating income and the market cap (in logs) for firms with and without an AGM between January 15 and April 15, 2020, and at least an individual shareholder with a 5% shares. Panels (b) and (d) plot the estimated coefficients from (9), where the coefficients of interest are the interaction between time dummies, a dummy equal to one if the firm holds an AGM between January 15 and April 15, 2020, and the share of individual shareholders with at least a 5% share. The regressions include controls and firm, year, and year-by-industry fixed effects. Standard errors are clustered at the industry and state levels. Error bars (boxes) report the 95% (90%) CI. Vertical dashed lines indicate the first covid case in the USA.

Appendix Table A8 shows that a 1% increase in the share of individual investors holding at least 10% equity reduces operating income by $130m on average (p-value $\leq$ 5%). For individual investors with a 5% stake, the loss is $76m (p-value $\leq$ 5%), equating to a -1.7% yearly drop in operating income. Notably, the loss is entirely driven by concentration among large individual shareholders (cf. Columns 1 and 3, Appendix Table A8), supporting the mechanism in Section 2.

Mechanism: fewer investments at treated firms. Operating income declined due to increased costs rather than reduced revenues. Appendix Figure B4 shows that sales as a fraction of total assets remained constant, consistent with Section 4.3.4 findings that consumer demand did not influence COVID donations, while operating income relative to assets declined sharply post-2020. Costly donations reduced cash holdings in 2020–2021 (Appendix Figure B5), leading to fewer investments, particularly in manufacturing, where investments fell by 4%–10% of a standard deviation (p-value $\leq$ 0.08) relative to 2019 (Appendix Figure B6).

Treated firms' shareholders bore the cost, with market capitalization dropping by 5%–8% of a standard deviation (Figure 5, Panel (d)).[27] These losses are significant: Appendix Table A8, Column 3 (4), estimates a 4% (3%) drop per 1% increase in individual shareholders owning at least 10% (5%) equity.

5.2.2 Crisis 2: Invasion of Ukraine

Figure 6 extends the analysis to the Ukrainian invasion. Panel (b) uses an event study similar to (9), applying an inverse hyperbolic sine transformation to operating income due to skewness and negative values.[28] In Q1 2022, transformed operating income dropped by 10% of its pre-2022 average value per standard deviation of individual blockholding. It recovered by Q3 2022. Stock prices at firms exposed to individual shareholders' voices fell by 6%–8% of a standard deviation in each quarter post-crisis. The shareholder cost mirrors the COVID-19 findings, equating to a 1% drop in quarterly market capitalization per 1% increase in individual blockholding (Appendix Table A8).[29]

Mechanism: restructuring costs. As before, we investigate changes in revenue or costs as the main source of the loss observed at treated firms. Appendix Figure B9 shows that operating income as a fraction of assets dropped substantially, while sales remained constant, suggesting that the costs of rushing out of Russia, such as finding new suppliers (as discussed in Section 4.4.1), outweighed the lost Russian revenues. Therefore, rushed exits may primarily increase costs rather than affect consumer demand.

What are these costs? One possibility is that firms were forced to sell past investments at a heavily discounted price or even at a loss. Panel (a) of Appendix Figure B10 shows that treated firms sold their past investments at a significantly higher rate than control firms, with 20% more sales per standard deviation increase in individual blockholders' shares in each quarter after the crisis.[30] The associated costs are visible in Panel (b), which plots the differential evolution of the cash-to-asset ratio, showing a drop of up to 3% per standard deviation

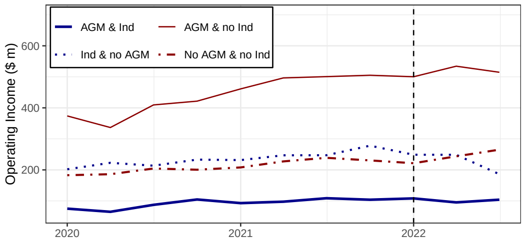
[27] Market capitalization as a fraction of total assets fell 5%–16% at treated firms—Panel (a), Appendix Figure B7.

[28] The transformation, $\ln(x+\sqrt{x^2+1})$, approximates the log function for large $|x|$ and is applied to operating income in dollars rather than millions (Bellemare and Wichman, 2020). Appendix Figure B8 tests alternative concave transformations, yielding consistent results.

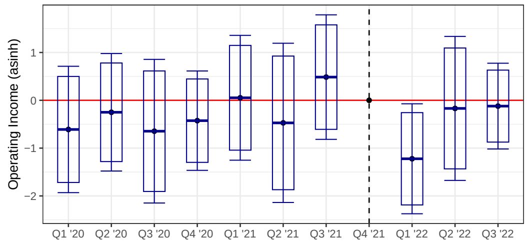
[29] Direct comparison of samples in Sections 5.2.1 and 5.2.2 is inappropriate as yearly averages of operating income and market capitalization are four times larger in the COVID sample.

[30] As a result, the ratio between equity and total assets, shown in Panel (b) of Appendix Figure B7, remained constant in the post-period.

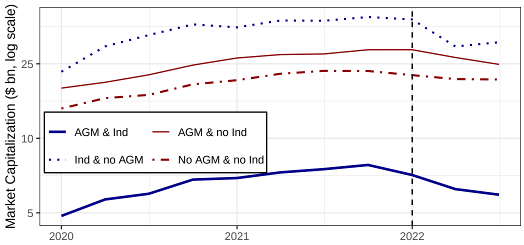
Figure 6: Documenting rents: Russian invasion of Ukraine



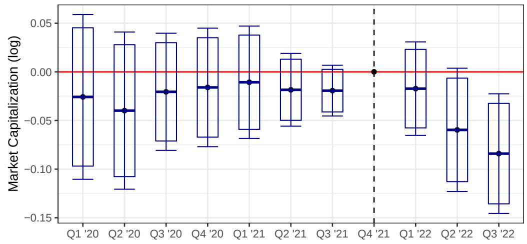
(a) Operating income



(b) Operating income - event study



(c) Market cap



(d) Market cap (log) - event study

Note: Panels (a) and (c) plot the operating income and the market cap (in logs) for firms with and without an AGM between February 24 and May 24, 2022, and at least an individual shareholder with a 5% shares. Panels (b) and (d) plot the estimated coefficients from (9), where the coefficients of interest are the interaction between time dummies, a dummy equal to one if the firm holds an AGM between February 24 and May 24, 2022, and the share of individual shareholders with at least a 5% share. The regressions include controls, firm, time, and time-by-industry-fixed effects. Standard errors are clustered at the industry and state levels. Error bars (boxes) report the 95% (90%) CI. Vertical dashed lines indicate the start of the invasion of Ukraine.

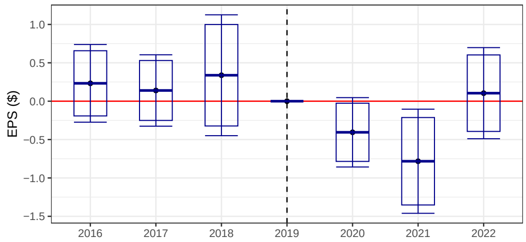
increase in individual blockholders' share.

5.3 Discussion: The Cost for "Unheard" Shareholders

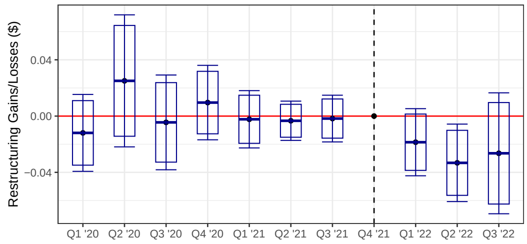
In the previous sections, we inferred that visible, connected shareholders motivated by personal interests seek to extract rents by influencing firms to take costly but visible prosocial actions. This section estimates the "welfare cost" of shareholder voice, focusing on the distributional consequences for "silent" shareholders. We find that shareholder influence leads to a non-negligible cost: the average treatment effect for the COVID case is -1.7% in yearly operating income and -3.36% in market capitalization, with treated firms losing about 7% of operating income. The Ukraine-Russia case shows slightly smaller, but comparable, losses.

The timing of these drops supports the proposed mechanism. In the Ukraine-Russia case, the drop in operating income occurs immediately after the invasion

Figure 7: The distributional consequences of shareholders' voice



(a) Covid: Earnings per share (EPS)



(b) Ukraine: restructuring costs for EPS

Note: The figure reports estimated coefficients from (9). The dependent variable is EPS, including extraordinary items (Panel a), and the change in EPS due to restructuring gains and costs (Panel b), which include Chapter 11 costs, workforce reductions, and relocation charges (special item incomes are coded as positive, and expenses as negative). Standard errors are clustered at the state and industry levels. Error bars (boxes) represent 95% (90%) CI. Vertical dashed lines indicate the event time.

(Figure 6) and continues to affect market capitalization through 2022. The costs are linked to disorganized exits from Russia, such as relocating activities and selling investments quickly at discounted prices. For instance, Panel (b) of Figure 7 shows that restructuring charges, one-time expense that a company pays when reorganizing its operations such as employee severance and facility closures, were $0.3 per share higher at treated firms post-invasion, corroborating this claim. These charges directly decrease profits, and amounted to 5% of pre-crisis earnings per share (EPS).

In contrast, the covid case shows that donations increased operating costs without boosting revenues, reducing cash flows and future investments. Panel (a) of Figure 7 shows that EPS dropped $0.4 - $0.8 more at treated firms in 2020 and 2021, over 8% of the average 2019 EPS. These donations thus reduced both current and future shareholder payoffs.

"Who watches the watchman?" Our results suggest that large shareholders monitor each other, anticipating each other's motives to influence management. This monitoring is driven by (i) shareholder preferences, (ii) influence costs on managers, and (iii) potential future earnings losses (see Section 2). Therefore, shareholder preferences are crucial for minority rights protection. While previous literature has explored the monitoring role of large shareholders (e.g., Shleifer and Vishny, 1997), our findings highlight the importance of *preference heterogeneity*: when preferences align, large shareholders may pursue rents at the expense of minorities and other stakeholders. Thus, blockholder heterogeneity can create value for minority shareholders.

As the slogan "you can't keep a good robber baron down" captured the spirit of the 1890s (McAfee, 1983, p. 735), we are once again witnessing corporate wealth increasingly serving the interests of a selected few. This trend not only harms shareholders, as documented in this paper, but also permeates politics, where private resources influence candidate success and reward firms for political investments (e.g., Tufekci, 2017, Durante *et al.*, 2019, Bertrand *et al.*, 2020). Many manifestations of shareholder *market power* remain overlooked and are seldom addressed in policy debates. Our findings highlight shareholder preferences as a critical avenue for future research to strengthen corporate governance and mitigate undue influence. This approach shifts the focus from board composition to shareholders' preferences and access to management (Chakraborty and Yılmaz, 2017, Dyck *et al.*, 2023), ensuring that the pursuit of some shareholders' interests does not come at the expense of other stakeholders (Hart and Zingales, 2017, Fioretti, 2022, Hu *et al.*, 2024).

Our approach offers a novel framework for conceptualizing and measuring such unobserved influences. In doing so, it opens avenues for future research, such as distinguishing whether managers react to realized or expected shareholder pressures. Behavioral models like warm glow utility (Andreoni, 1989) or reputation concerns (Bar-Isaac *et al.*, 2008) could micro-found shareholders' preferences. One empirical strategy to distinguish these channels might involve examining whether shareholder influence wanes over time, conditional on holding shares. However, this is infeasible with our data due to reliance on a single large shock, and, thus, we treat these motives as mere externalities impacting other shareholders.

In conclusion, the shift towards a sustainable economy introduces new rent-seeking opportunities for shareholders, adding concerns like private image gains to traditional profit motives. As the quote by Grossman and Hart (1979) in the introduction states, our study suggests that today it is more important than ever that "the manager of a firm [...] not only [...] organize production, but also learns about the preferences of the firm's shareholders." We view this paper as a first step in this direction.

6 Conclusion

Stakeholder concerns play a crucial role in shaping a firm's strategic decisions. This paper introduces a flexible framework that leverages novel quasi-experimental variations typical of listed corporations to analyze how shareholders, as a central stakeholder group, influence corporate strategies, particularly in relation to visible but costly prosocial actions. We apply this framework to two key cases: corporate donations for covid relief and firm exits from the Russian market after the invasion of Ukraine. While prosocial actions can enhance welfare and appeal to shareholders if they derive utility from addressing specific issues related to the firm's business (e.g., a chemical company donating sanitizing products during a pandemic), a critical question remains: what is the firm's optimal course of action when shareholder preferences conflict?

Our findings show that firms are more likely to undertake costly prosocial actions when their shareholder base includes identifiable individual or family investors. Conversely, large financial shareholders tend to oppose such actions. This divergence arises from the unequal distribution of reputational benefits, as evidenced by internet search data: while all shareholders share the costs, only some gain image-related benefits. This trade-off privileges the "value" of certain shareholders at the expense of others. The resulting misalignment is reflected in a significant and persistent decline in productivity at treated firms following both the pandemic and the Russian invasion. Therefore, shareholders anticipate efforts by other large shareholders to influence managers—efforts that may remain unobservable due to their private nature, such as bilateral meetings or phone calls. To counterbalance this influence, large shareholders apply pressure in the opposite direction. These findings highlight shareholder preferences as a novel dimension of monitoring and competition among shareholders, offering an important avenue for future research on how stakeholders' actions impact civil society.

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Online Appendix

A Omitted Tables

Table A1: The impact of institutional blockholders on covid donations

	Whether Firm f has made a Donation (0/1)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ownership	−0.030	−0.018	0.100***	−0.026	−0.038	−0.105***	0.058***	0.069***	0.018
	(0.020)	(0.017)	(0.025)	(0.016)	(0.025)	(0.020)	(0.012)	(0.010)	(0.030)
AGM	0.094	0.077	0.089	0.082	0.093	0.090	0.099	0.086	0.082
	(0.090)	(0.098)	(0.098)	(0.097)	(0.102)	(0.103)	(0.098)	(0.095)	(0.111)
Ownership × AGM	−0.073**	−0.020	−0.049	−0.030	−0.002	0.083**	−0.142***	−0.040	−0.049
	(0.030)	(0.062)	(0.046)	(0.043)	(0.035)	(0.030)	(0.018)	(0.059)	(0.079)
Ownership is defined as:	Banks			Mutual Funds			Insurance		
Ownership is the shares of shareholders owning:	>10%	>5%	(0%, 2%)	>10%	>5%	(0%, 2%)	>10%	>5%	(0%, 2%)
Industry fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
N	433	433	433	433	433	433	433	433	433
Adjusted R-squared	0.1638	0.1565	0.1909	0.1575	0.1606	0.1921	0.1716	0.1696	0.1559

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

Note: This table zooms in on which institutional blockholders impacted covid-related donations the most. The table presents the coefficients from OLS regressions of an indicator variable that is one if firm f has donated by April 15, 2020, on covariates. Italicized variables are defined in the middle panel. The variable *Ownership* is the share of institutional investors (of the reference category defined in the middle panel) among all investors owning at least a share of total equity as defined in the middle panel. The variable *Ownership* is standardized. The AGM variable is an indicator variable taking value one if the firm has an AGM before April 15, 2020, and zero otherwise. All columns include industry- and state-fixed effects. Standard errors are clustered by industry.

Table A2: Differential increase of Google Trend scores to individual over institutional investors around a donation announcement

	Google Trends Scores		(log) Comulative Google Web Searches Over					
	Daily		14 days		10 days		7 days	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Indiv. Sh.holder × 10 Days Before	−8.701***	−11.095***	−0.259***	−0.102	−0.542***	−0.227**	−0.337***	−0.132
	(1.617)	(2.884)	(0.079)	(0.072)	(0.073)	(0.075)	(0.058)	(0.072)
Indiv. Sh.holder × 9 Days Before	−11.347***	−14.754***	−0.195**	−0.018	−0.139*	0.006	−0.396***	−0.164*
	(0.910)	(1.781)	(0.084)	(0.074)	(0.073)	(0.080)	(0.064)	(0.077)
Indiv. Sh.holder × 8 Days Before	−8.722***	−12.710***	−0.131	0.044	−0.254**	0.088	−0.414***	0.004
	(1.276)	(3.061)	(0.087)	(0.087)	(0.086)	(0.086)	(0.078)	(0.085)
Indiv. Sh.holder × 7 Days Before	−11.431***	−16.198**	0.127	0.361***	−0.083	0.146*	−0.598***	0.033
	(1.755)	(4.901)	(0.080)	(0.080)	(0.081)	(0.076)	(0.081)	(0.081)
Indiv. Sh.holder × 6 Days Before	−5.798**	−8.352	0.149	0.383***	−0.088	0.144	−0.053	0.271**
	(2.581)	(5.907)	(0.087)	(0.086)	(0.091)	(0.086)	(0.099)	(0.098)
Indiv. Sh.holder × 5 Days Before	−2.846	−3.702	−0.033	0.171*	−0.267**	−0.089	−0.336***	−0.036
	(2.358)	(4.651)	(0.087)	(0.080)	(0.099)	(0.083)	(0.101)	(0.087)
Indiv. Sh.holder × 4 Days Before	−4.770*	−5.242	0.030	0.212**	−0.210*	−0.090	−0.135	−0.026
	(2.373)	(5.523)	(0.094)	(0.084)	(0.100)	(0.092)	(0.096)	(0.086)
Indiv. Sh.holder × 3 Days Before	−9.395***	−11.464**	0.091	0.231**	0.053	0.204**	−0.170	−0.056
	(1.975)	(4.360)	(0.096)	(0.090)	(0.086)	(0.085)	(0.099)	(0.083)
Indiv. Sh.holder × 2 Days Before	−7.173***	−8.182	0.242**	0.308***	0.110	0.251**	−0.051	0.073
	(1.811)	(4.527)	(0.093)	(0.082)	(0.080)	(0.081)	(0.101)	(0.085)
Indiv. Sh.holder × 1 Day Before	−5.140**	−5.507	0.289**	0.330***	0.250**	0.382***	0.085	0.152
	(2.220)	(5.913)	(0.092)	(0.074)	(0.086)	(0.079)	(0.099)	(0.086)
Indiv. Sh.holder × News Day	6.610*	2.246	0.334***	0.324***	0.316***	0.417***	0.400***	0.431***
	(3.522)	(6.770)	(0.088)	(0.065)	(0.094)	(0.079)	(0.074)	(0.077)
Indiv. Sh.holder × 1 Day After	−6.287**	−9.775*	0.306***	0.307***	0.161	0.397***	0.209**	0.388***
	(2.493)	(4.995)	(0.086)	(0.062)	(0.096)	(0.083)	(0.076)	(0.072)
Indiv. Sh.holder × 2 Days After	0.480	−2.515	0.384***	0.298***	0.546***	0.461***	0.384***	0.499***
	(2.234)	(3.410)	(0.074)	(0.055)	(0.087)	(0.070)	(0.074)	(0.073)
Indiv. Sh.holder × 3 Days After	−0.345	−0.037	0.385***	0.312***	0.482***	0.472***	0.220**	0.566***
	(1.806)	(2.785)	(0.076)	(0.046)	(0.084)	(0.073)	(0.087)	(0.082)
Indiv. Sh.holder × 4 Days After	3.035	3.911	0.404***	0.330***	0.539***	0.481***	0.446***	0.619***
	(1.742)	(2.211)	(0.074)	(0.042)	(0.077)	(0.063)	(0.076)	(0.085)
Indiv. Sh.holder × 5 Days After	0.739	−1.051	0.402***	0.290***	0.571***	0.502***	0.747***	0.630***
	(1.404)	(3.061)	(0.084)	(0.039)	(0.082)	(0.057)	(0.077)	(0.080)
Indiv. Sh.holder × 6 Days After	2.055	−0.048	0.419***	0.264***	0.521***	0.413***	0.683***	0.595***
	(2.192)	(3.311)	(0.080)	(0.038)	(0.076)	(0.051)	(0.074)	(0.073)
Indiv. Sh.holder × 7 Days After	−2.397	−4.423	0.404***	0.253***	0.547***	0.423***	0.693***	0.574***
	(1.735)	(2.759)	(0.074)	(0.034)	(0.075)	(0.044)	(0.069)	(0.059)
Indiv. Sh.holder × 8 Days After	−1.216	−2.355	0.375***	0.212***	0.506***	0.391***	0.688***	0.608***
	(2.281)	(3.572)	(0.081)	(0.037)	(0.066)	(0.038)	(0.072)	(0.059)
Indiv. Sh.holder × 9 Days After	6.062**	6.669**	0.498***	0.317***	0.531***	0.396***	0.689***	0.571***
	(2.062)	(2.536)	(0.069)	(0.031)	(0.076)	(0.038)	(0.062)	(0.052)
Indiv. Sh.holder × 10 Days After	7.752***	7.812***	0.377***	0.142***	0.540***	0.354***	0.697***	0.529***
	(1.403)	(1.617)	(0.067)	(0.034)	(0.051)	(0.023)	(0.049)	(0.034)
Consider only shareholders holding:	> 1%	> 5%	> 1%	> 5%	> 1%	> 5%	> 1%	> 5%
Time fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Firm fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Shareholder fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
N	397,893	125,772	350,276	110,504	365,106	115,206	376,035	118,728
Adjusted R-squared	0.6328	0.6609	0.7695	0.8009	0.7728	0.7898	0.7801	0.7880

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

Note: This table finds that Google Trends scores are substantially higher for individual shareholders in the days after their firms pledge a donation. The table reports the OLS regression of Equation 5; the dependent variable is either the number of daily Google Trends scores (Columns 1 and 2) or the (log) cumulative Google Trends scores (Columns 3 to 8) of shareholder i's name owning shares in firm f on time dummies in a ten-day window around the date when firm f donated. The regression also includes the interaction of these dummy variables with an indicator that is one if shareholder i is an individual or family shareholder and zero otherwise. Only the interactions of the time dummies with the Individual Shareholder dummy are reported due to space constraints. All columns include firm-, shareholder-, and day-fixed effects. The dataset starts on January 15, 2020, and ends on April 15, 2020. Standard errors are clustered by firm-by-shareholder type (bank, company, individual, financial company, government, hedge fund, insurance, mutual fund, self-control) and presented in parenthesis.

Table A3: The impact of various class of blockholders on covid donations through covid cases and deaths

	Whether Firm f has Donated by Time t (0/1)											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Panel a. Using Cumulative Covid Cases											
Covid Rate	0.018*	0.018*	0.020*	0.019*	0.021*	0.016	0.018	0.015	0.018	0.021*	0.021*	0.020*
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Covid Rate × *Ownership*	0.009**	0.008**	−0.015**	−0.008	−0.006	0.028***	−0.021*	−0.027**	−0.019*	0.002	−0.000	0.010
	(0.005)	(0.003)	(0.008)	(0.012)	(0.009)	(0.008)	(0.012)	(0.011)	(0.010)	(0.005)	(0.007)	(0.010)
Covid Rate × AGM	0.033	0.037	0.011	−0.023	0.008	0.043	−0.055	−0.040	0.000	0.063*	0.042	0.137
	(0.039)	(0.039)	(0.038)	(0.040)	(0.062)	(0.083)	(0.038)	(0.041)	(0.066)	(0.037)	(0.030)	(0.115)
Covid Rate × *Ownership* × AGM	0.127***	0.143***	0.042	−0.104***	0.007	0.002	−0.264***	−0.118***	0.034	−0.019***	−0.017	0.111
	(0.016)	(0.020)	(0.101)	(0.024)	(0.057)	(0.057)	(0.026)	(0.045)	(0.060)	(0.007)	(0.013)	(0.096)
Covid Rate is defined as:	Cumulative cases			Cumulative cases			Cumulative cases			Cumulative cases		
Reference shareholder category for *Ownership*:	Individual and family			Banks			Mutual Funds			Insurance		
Ownership is the shares of shareholders owning:	>10%	>5%	(0%, 2%)	>10%	>5%	(0%, 2%)	>10%	>5%	(0%, 2%)	>10%	>5%	(0%, 2%)
Adjusted R-squared	0.5017	0.5019	0.5008	0.5011	0.4997	0.5051	0.5008	0.5025	0.5019	0.5011	0.5001	0.5014
	Panel b. Using Comulative Covid Deaths											
Covid Rate	0.016*	0.016*	0.017*	0.017*	0.018*	0.014	0.016*	0.014	0.015	0.018*	0.018**	0.017*
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Covid Rate × *Ownership*	0.007*	0.007**	− 0.013*	−0.006	−0.004	0.023***	−0.013	−0.020*	−0.014	0.001	−0.002	0.008
	(0.004)	(0.003)	(0.007)	(0.010)	(0.008)	(0.007)	(0.013)	(0.012)	(0.009)	(0.004)	(0.006)	(0.009)
Covid Rate × AGM	−0.060	0.068*	0.015	−0.081**	0.028	−0.035	−0.154***	−0.128**	−0.052	0.053***	0.041**	0.095
	(0.040)	(0.041)	(0.034)	(0.040)	(0.080)	(0.074)	(0.038)	(0.051)	(0.048)	(0.020)	(0.018)	(0.179)
Covid Rate × *Ownership* × AGM	0.308***	0.340***	0.123	−0.234***	0.028	−0.055	−0.649***	−0.317***	0.086*	−0.015***	−0.018**	0.073
	(0.053)	(0.070)	(0.160)	(0.042)	(0.062)	(0.051)	(0.047)	(0.092)	(0.048)	(0.005)	(0.008)	(0.148)
Covid Rate is defined as:	Cumulative deaths			Cumulative deaths			Cumulative deaths			Cumulative deaths		
Reference shareholder category for *Ownership*:	Individual and family			Banks			Mutual Funds			Insurance		
Ownership is the shares of shareholders owning:	>10%	>5%	(0%, 2%)	>10%	>5%	(0%, 2%)	>10%	>5%	(0%, 2%)	>10%	>5%	(0%, 2%)
Adjusted R-squared	0.5005	0.5005	0.5001	0.5003	0.4991	0.5028	0.4996	0.5008	0.5008	0.5001	0.4998	0.4996
Time fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Firm fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N	36,805	36,805	36,805	36,805	36,805	36,805	36,805	36,805	36,805	36,805	36,805	36,805

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

Note: The table reports the OLS regressions based on Equation 6 where the dependent variable is an indicator that is one if firm f has donated by day t and zero otherwise on covariates. The table has three panels: Panel a. reports estimated coefficients when *Covid Rate* are defined as cumulative covid cases at the headquarters state of firm f by time t, Panel b. reports the same coefficients for cumulative covid deaths, and the bottom panel indicates the used fixed effects and the number of observations in each column. Italicized variables are defined in the middle panel. The evidence in this table suggests that institutional blockholders negatively impacted covid donations using covid cases as a proxy for the salience of the pandemic on the media. The variable *Ownership* varies across columns based as the share of a certain class of investors owning at least a given share of total equity (greater than 10%, greater than 5%, or between 0 and 2%). The AGM variable is an indicator variable taking value one if the firm has an AGM before April 15, 2020, and zero otherwise. All columns include day- and firm-fixed effects. The interaction *Ownership* × AGM and the direct effect of the variables *Ownership* and AGM are accounted for by the firm-fixed effects. The dataset starts on January 15, 2020, and ends on April 15, 2020. Standard errors are clustered by firm and presented in parenthesis.

Table A4: The impact of covid exposure at branches on donations

	Whether Firm f has Donated by Time t (0/1)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exposure at branches	0.007	0.009	0.012	0.014	0.008	0.008	0.010	0.011
	(0.017)	(0.013)	(0.012)	(0.012)	(0.015)	(0.011)	(0.010)	(0.010)
Exposure at branches × Number of branches (ln)	0.003				0.001			
	(0.005)				(0.005)			
Exposure at branches × *More than x branches*		0.024	0.039	0.020		0.018	0.039	0.016
		(0.024)	(0.028)	(0.045)		(0.024)	(0.029)	(0.050)
Exposure at branches is defined as:	Cumulative cases				Cumulative deaths			
More than x branches (0/1) is 1 if the firm has more branches than the x quantile:		50%	75%	90%		50%	75%	90%
Time fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Firm fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
N	33,490	37,570	37,570	37,570	33,490	37,570	37,570	37,570
Adjusted R-squared	0.4979	0.4967	0.4969	0.4958	0.4978	0.4961	0.4965	0.4956

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

Note: This table finds that consumers were not a driver of covid-related donations because covid exposure in the states where firms had their branches does not correlat with donations rates across firms. The table presents the coefficients from OLS regressions based on Equation 7 based on an indicator variable that is one if firm f has donated by day t and zero otherwise on covariates. Italicized variables are defined in the middle panel. Columns 1 to 4 use cumulative covid cases at the headquarters state, and Columns 5 to 8 use cumulative covid deaths. The variable *Number of branches* in Columns 1 and 5 is in log. The remaining columns use a dummy variable (*More than x branches*) for whether the focal firm has more than the x-percentile than the distribution of brunches: this value is 40 branches in Columns 2 and 6, 170 branches in Columns 3 and 7, and 664 branches in Columns 4 and 8. Orbis data do not report branches for 15 firms, which are therefore omitted from the analysis. All columns include day- and firm-fixed effects. For this reason, the table does not report the direct effect of the *Number of Branches*, which does not vary over time and, thus, is captured by the firm-fixed effects. The dataset starts on January 15, 2020 and ends on April 15, 2020. Standard errors are clustered by firm and presented in parenthesis.

Table A5: Abnormal and cumulative abnormal returns, using stock return forecasts based on data from the 60 days before a donation announcement

	Abnormal Returns	Comulative Abnormal Returns		
		7 days	10 days	14 days
	(1)	(2)	(3)	(4)
10 Days Before	−0.136	0.543	0.216	−0.771
	(0.302)	(0.789)	(0.806)	(0.768)
9 Days Before	−0.172	1.197	0.106	−0.734
	(0.365)	(0.889)	(0.868)	(0.837)
8 Days Before	0.168	1.219	0.879	−0.255
	(0.333)	(0.997)	(0.946)	(0.892)
7 Days Before	0.524	0.267	0.228	−0.568
	(0.352)	(1.078)	(0.982)	(0.981)
6 Days Before	−0.204	−0.208	−1.166	−1.555
	(0.478)	(1.070)	(1.010)	(1.070)
5 Days Before	−0.418	0.747	−0.944	−1.242
	(0.432)	(0.977)	(0.970)	(1.017)
4 Days Before	0.961**	0.786	−0.436	−1.138
	(0.407)	(0.951)	(0.972)	(1.036)
3 Days Before	0.761	−1.396	−1.149	−2.140*
	(0.464)	(1.051)	(1.045)	(1.129)
2 Days Before	−0.426	−2.204**	−2.674**	−3.544***
	(0.539)	(1.116)	(1.100)	(1.239)
1 Day Before	−0.702	−1.571	−2.381**	−3.226**
	(0.559)	(1.202)	(1.140)	(1.343)
Day of the Donation	−0.334	−1.054	−1.944*	−2.777*
	(0.544)	(1.286)	(1.110)	(1.485)
1 Day After	0.929	−1.453	−1.866*	−2.536*
	(0.598)	(1.113)	(1.042)	(1.414)
2 Days After	−1.036*	−2.201**	−3.404***	−3.799***
	(0.540)	(1.077)	(1.102)	(1.403)
3 Days After	−1.337**	−1.043	−2.046*	−2.444
	(0.547)	(1.055)	(1.117)	(1.488)
4 Days After	0.827	0.144	−0.108	−0.346
	(0.523)	(1.293)	(1.280)	(1.630)
5 Days After	0.046	−1.144	−1.132	−1.588
	(0.769)	(1.507)	(1.420)	(1.867)
6 Days After	0.606	0.171	−1.353	−1.470
	(0.755)	(1.345)	(1.418)	(1.670)
7 Days After	−0.717	−0.288	−1.733	−1.240
	(0.555)	(1.046)	(1.250)	(1.338)
8 Days After	−0.366	0.940	0.106	0.312
	(0.641)	(1.110)	(1.411)	(1.274)
9 Days After	0.063	0.790	1.578	1.540
	(0.525)	(0.979)	(1.134)	(1.112)
10 Days After	1.214	0.969	1.689	1.985
	(0.764)	(1.403)	(1.331)	(1.456)
Time fixed effects	✓	✓	✓	✓
Firm fixed effects	✓	✓	✓	✓
N	22,246	22,246	22,246	22,246
Adjusted R-squared	0.0331	0.1039	0.1401	0.1880

* − $p < 0.1$; ** − $p < 0.05$; *** − $p < 0.01$.

Note: This table reports the coefficients from an event study using the abnormal returns (ARs) and cumulative abnormal returns (CARs) around the day of the donation (model 4.3.4). ARs are computed as the difference between realized excess returns and the prediction of a one-factor model (the market factor), for which the stock's beta is computed over the last 60 days. The sample period goes from January 1 to April 15, 2020. All columns include firm and day-fixed effects. Standard errors are clustered by firm and are presented in parenthesis.

Table A6: The impact of self-ownership on covid donations

	Whether Firm f has Donated by Time t (0/1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Covid Rate	0.022**	0.019**	0.114***	0.100***	−0.003	−0.001
	(0.011)	(0.009)	(0.007)	(0.006)	(0.015)	(0.012)
Covid Rate × *Ownership*	−0.035	−0.034	−0.019	−0.016	0.010	−0.007
	(0.028)	(0.024)	(0.028)	(0.026)	(0.060)	(0.052)
Covid Rate × AGM	0.067*	0.057***	0.028	0.025	0.068	0.084
	(0.038)	(0.021)	(0.028)	(0.025)	(0.055)	(0.070)
Covid Rate × *Ownership* × AGM	−0.109**	−0.091***	−0.079	−0.075	−0.024	0.075
	(0.048)	(0.031)	(0.068)	(0.063)	(0.283)	(0.349)
Covid Rate is defined as:	Cases	Deaths	Cases	Deaths	Cases	Deaths
Ownership (0/1) is:	High self-ownership At Headquarter		High self-ownership National Rates		High self-ownership At Branches	
Time fixed effects	✓	✓	✓	✓	✓	✓
Firm fixed effects	✓	✓	✓	✓	✓	✓
N	38,845	38,845	38,845	38,845	29,665	29,665
Adjusted R-squared	0.4958	0.4948	0.4927	0.4924	0.5007	0.5006

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

Note: This table finds that greater self-ownership shares negatively affect the probability that a firm donates. We use this variable as a proxy for managerial freedom. Thus, the table implies that managers did not favor donations. The table presents the coefficients from OLS regressions based on Equation 6 of an indicator variable that is one if firm f has donated by day t and zero otherwise on covariates. Italicized variables are defined in the middle panel. We vary the definition of *Covid Rate* across columns. Columns 1 and 2 measure covid at the headquarters state, Columns 3 and 4 measure covid at the national level, and Columns 5 and 6 measure covid at the state of the branches using the number of branches as weights. The last two columns restrict the data to firms with at least five branches. The variable *Ownership* is one if the share of equity owned by the firm itself is greater than its median value in the dataset and zero otherwise. The variable *Covid Rate* is standardized. The AGM variable is an indicator variable taking value one if the firm has an AGM before April 15, 2020, and zero otherwise. All columns include day- and firm-fixed effects. The interaction *Ownership* × AGM and the direct effect of the variables *Ownership* and AGM are accounted for by the firm-fixed effects. The dataset starts on January 15, 2020, and ends on April 15, 2020. Standard errors are clustered by firm and presented in parenthesis.

Table A7: The impact of individuals blockholders on covid donations

	Whether Firm f has Donated by Time t (0/1)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Competitor Donating (0/1)	0.018*	0.017*	0.018**	0.017*	0.018*	0.018*	0.018**	0.018*
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Cum. Covid Rate	0.021	0.023*	0.050**	0.023*	0.018	0.020*	0.042**	0.020*
	(0.013)	(0.013)	(0.024)	(0.013)	(0.012)	(0.011)	(0.021)	(0.012)
AGM × *Cum. Covid Rate*	0.047	0.023	0.145**	0.008	0.062	0.023	0.159***	-0.019
	(0.053)	(0.052)	(0.068)	(0.052)	(0.054)	(0.048)	(0.049)	(0.036)
Ownership × *Cum. Covid Rate*	0.008**	-0.020**	-0.056	-0.003	0.007*	-0.017**	-0.046	-0.003
	(0.004)	(0.009)	(0.043)	(0.009)	(0.004)	(0.008)	(0.040)	(0.008)
AGM × *Ownership* × *Cum. Covid Rate*	0.133***	0.042	-0.310*	-0.047	0.264***	0.121	-0.379***	-0.082*
	(0.025)	(0.101)	(0.169)	(0.058)	(0.061)	(0.171)	(0.116)	(0.045)
Covid Rate is defined as:	Cumulative cases				Cumulative deaths			
Shareholder type is defined as:	Individual		Institutional		Individual		Institutional	
Ownership is the share of shareholders owning:	> 5%	(0%, 2%)	> 5%	(0%, 2%)	> 5%	(0%, 2%)	> 5%	(0%, 2%)
Time fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Firm fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
N	43,300	43,300	43,300	43,300	43,300	43,300	43,300	43,300
Adjusted R-squared	0.5538	0.5537	0.5549	0.5526	0.5529	0.5530	0.5542	0.5525

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

Note: The evidence in this table suggests a negligible impact of peer pressure on covid-related donations. To do so, we add an indicator variable that is one if a competitor in the same industry has pledged a donation in the last seven days (*Competitor donating (0/1)*) and zero otherwise to (6) where the dependent variable is an indicator that is one if firm f has donated by day t and zero otherwise on covariates. Italicized variables are defined in the middle panel. Columns 1 to 3 use cumulative covid cases at the headquarters state of firm f at time t as a measure of covid rates, and Columns 4 to 6 use cumulative covid deaths. The variable *Ownership* is the share of individual investors among all investors owning at least a share of total equity, as defined in the middle panel. The variables *Ownership* and *Covid Rate* are standardized. The AGM variable is an indicator variable taking value one if the firm has an AGM before April 15, 2020, and zero otherwise. All columns include day- and firm-fixed effects. The interaction *Ownership* × AGM and the direct effect of the variables *Ownership* and AGM are accounted for by the firm-fixed effects. The dataset starts on January 15, 2020, and ends on April 15, 2020. Standard errors are clustered by firm and presented in parenthesis.

Table A8: The average cost shared by shareholders

	Crisis 1: Covid Pandemic						Crisis 2: Russian Invasion of Ukraine					
	Operating Income ($m)			Market Cap (ln)			Operating Income ($m)			Market Cap (ln)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Main Coefficients												
Ownership (≥ 10%) × Treat (0/1) × Post (0/1)	-13,014**			-4.09***			-308‡			-1.31*		
	(6,046)			(1.38)			(214)			(0.77)		
Ownership (≥ 5%) × Treat (0/1) × Post (0/1)		-7,644*			-3.36***			-319†			-1.086†	
		(4,431)			(1.09)			(199)			(0.661)	
Ownership (0/1) × Treat (0/1)			200			-0.1864*			-2.63			-0.0296
			(340)			(0.0963)			(37.89)			(0.0588)
Direct Effects												
Ownership (≥ 10%) × Post (0/1)	6,731			1.995**			-35.4			0.528		
	(5,248)			(0.908)			(168.4)			(0.335)		
Ownership (≥ 5%) × Post (0/1)		3080			1.595**			-87.1			0.504*	
		(3,214)			(0.668)			(128.4)			(0.292)	
Ownership (0/1) × Post (0/1)			242			-0.00794			-6.77			0.0208
			(237)			(0.04712)			(21.51)			(0.0469)
Treat (0/1) × Post (0/1)	336	339	9.56	0.0917	0.1017	0.1938**	45.2	45.7	44.4	0.0998***	0.1036***	0.1030**
	(389)	(407)	(462.14)	(0.0741)	(0.0749)	(0.0925)	(31.3)	(32.0)	(38.5)	(0.0336)	(0.0339)	(0.0488)
Ownership is the Ownership of individuals:	≥ 10%	≥ 5%	1 if ≥ 5%	≥ 10%	≥ 5%	1 if ≥ 5%	≥ 10%	≥ 5%	1 if ≥ 5%	≥ 10%	≥ 5%	1 if ≥ 5%
Time fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Firm fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Industry-by-Time fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N	7,644	7,644	7,644	8,420	8,420	8,420	12,440	12,440	12,440	12,608	12,608	12,608
Adjusted R-squared	0.929	0.929	0.929	0.917	0.917	0.917	0.936	0.936	0.936	0.975	0.975	0.975

‡ – $p < 0.16$; † – $p < 0.12$; * – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

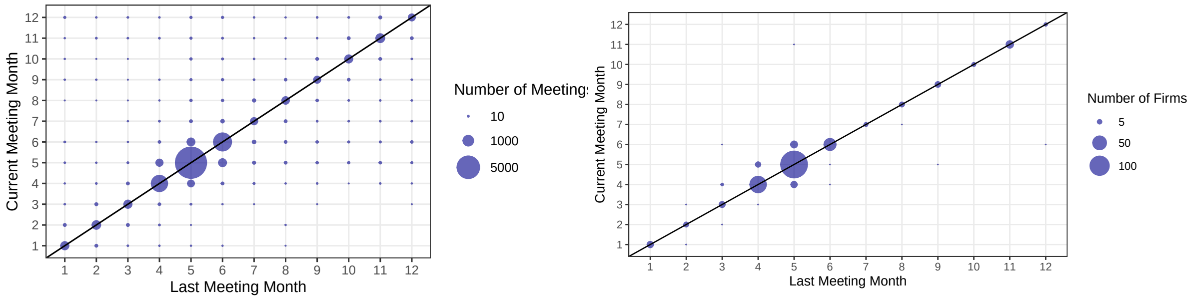
Note: This table presents the coefficients from the triple difference-in-differences analysis described in Section 5 for either the covid crisis (Columns 1 to 6) or the Russian invasion of Ukraine (Columns 7 to 12). The model is as follows:

$$y_{ft} = \beta_0\, Ownership_f \times \text{Treat}_f \times \text{Post}_t + \beta_1\, Ownership_f \times \text{Post}_t + \beta_2\, \text{Treat}_f \times \text{Post}_t + \mathbf{X}_{ft}\gamma + \alpha_f + \tau_t + \iota_{i(f)t} + \varepsilon_{ft},$$

where the dependent variable is defined in the header of each column. $Ownership_f$ varies across columns and can be either the share of individual investors with at least 10%, the share of individual investors with at least 5%, or a dummy variable that is one if the firm has at least one individual shareholder with a 5% share. In Columns 1 to 6 (7 to 12), $Treat_f = 1$ if firm f had an AGM between January 15, 2020, and April 15, 2020 (February 24, 2022, and May 24, 2022), and zero otherwise and $Post_t = 1$ from 2020 onwards (from the first quarter of 2022 onwards). Columns 1 to 6 use yearly data, while Columns 7 to 12 use quarterly data. Each column control for the past lagged total assets and fixed effects by firm, time, and industry by time. Operating income is winsorised at 1% and 99%. The standard errors are clustered by state and industry.

B Omitted Figures

Figure B1: Stability of the AGM month over time

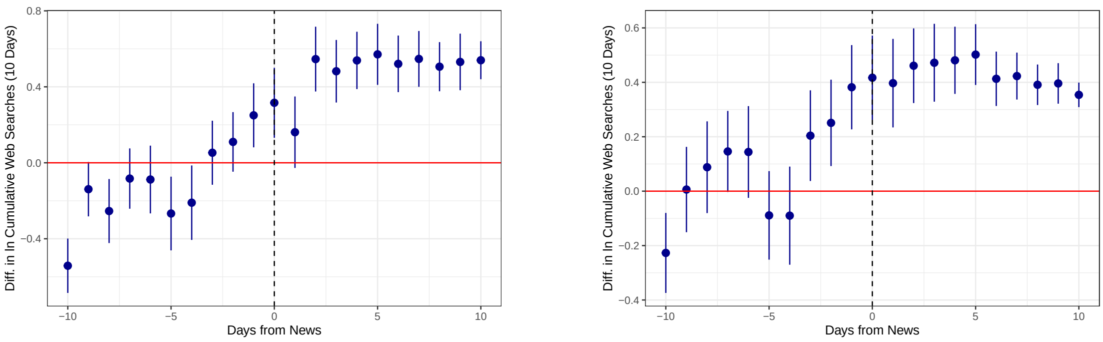


(a) 2012 to 2019

(b) 2019 and 2020

Note: Both panels count the occurrences of the AGM month over two adjacent years. A dot in position (2,3) means that at least one firm with an AGM in March of year t had an AGM in February of year $t-1$. The size of the blue dot refers to the number of firms. Dots on the diagonal solid line indicate firms that did not change AGM month over time. Panel (a) focuses on data from 2012 to 2019, while Panel (b) zooms in on the first six months of 2020. Observations are at the firm-by-year level as firms have more than one AGM, in Panel (a).

Figure B2: Google Trends scores for individual and institutional blockholder

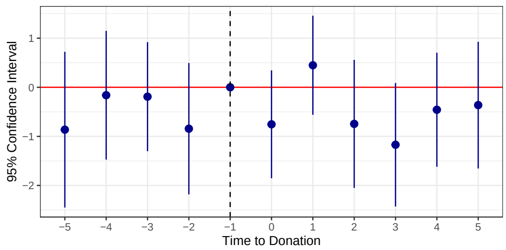


(a) Shareholders holding more than 1% of a firm's equity

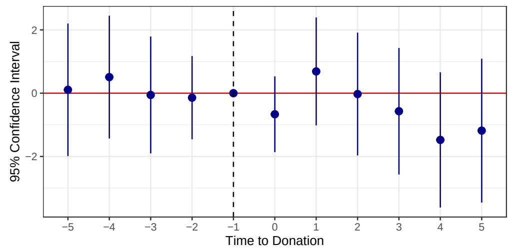
(b) Shareholders holding more than 5% of a firms's equity

Note: This figure presents results consistent with Figure 3 in the main text, but cumulating Google Trends scores over two weeks instead of 10 days. The panels show the difference in cumulative scores of individual and institutional shareholders around a donation event. The regression is detailed in Section 4.3.1. Appendix Table A2 reports the coefficient estimates. Standard errors are clustered by firm-by-shareholder type (bank, company, individual, financial company, government, hedge fund, insurance, mutual fund, self-control) and presented in parenthesis.

Figure B3: Abnormal and cumulative abnormal returns - event study



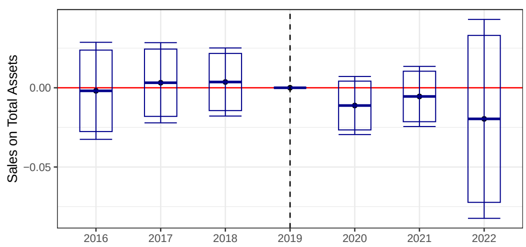
(a) Abnormal returns (AR)



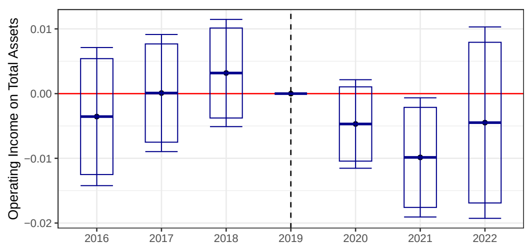
(b) Cumulative AR over 5 days (CAR)

Note: This figure suggests that firms do not choose to donate to improve their performance on the stock market. Panel a plots abnormal returns (ARs) while Panel b plots cumulative abnormal returns (CARs) computed using the methodology outlined in Section 4.3.4. Date 0 is the date when the donation was made public. All coefficients are relative to the AR or CAR computed for the day before the donation event. We report the event study for a five-day window around the donation announcement. Appendix Table A5 shows that the analysis is robust to various definitions of ARs and CARs and to various lengths of the event study interval.

Figure B4: Sales or costs: What drove productivity down during the Covid crisis?



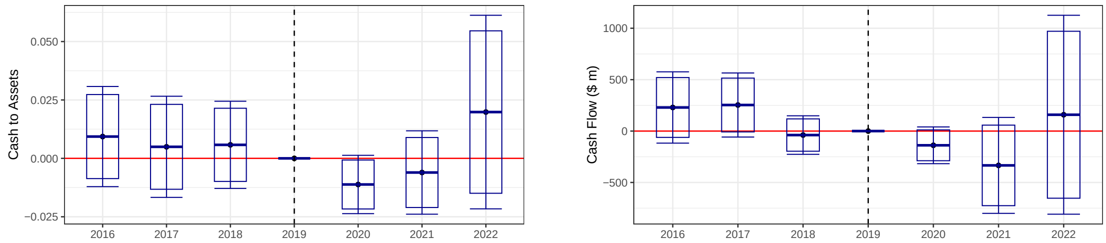
(a) Sales on total assets



(b) Operating Income on total assets

Note: The figure reports the estimated coefficients from an event study as in (9), with sales on total assets as the dependent variable in Panel (a) and operating income on total assets in Panel (b). We report only the estimated coefficients of interest – the interaction between the time dummies and a dummy equal to one if the firm has an AGM in the 90 days after the onset of the emergency and the share of individual shareholders with more than 5% equity shares. Each regression also includes controls and firm-, time-, and time-by-industry-fixed effects as described in Section 5. The dataset considers the largest 1,000 US-listed firms. Standard errors are clustered at the state and industry levels. Error bars (boxes) report the 95% (90%) CI. Vertical dashed lines indicate the time of the event.

Figure B5: Cash imbalances due to shareholders' rent-extraction during covid

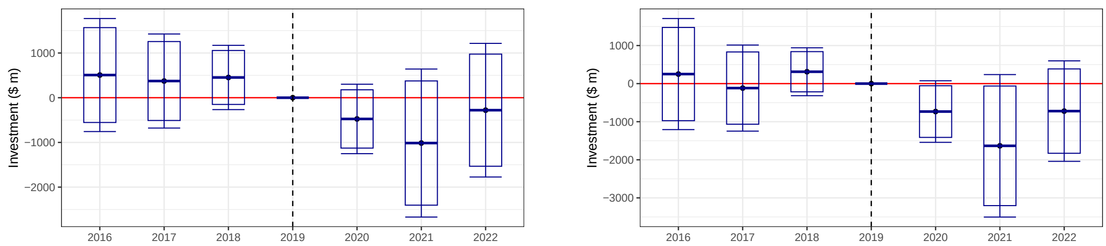


(a) Cash holdings on total assets

(b) Cash flows

Note: The figure reports the estimated coefficients from an event study as in (9), with cash holdings on total assets as the dependent variable in Panel (a) and cash flows on total assets in Panel (b). We report only the estimated coefficients of interest – the interaction between the time dummies and a dummy equal to one if the firm has an AGM in the 90 days after the onset of the emergency and the share of individual shareholders with more than 5% equity shares. Each regression also includes controls and firm-, time-, and time-by-industry-fixed effects as described in Section 5. The dataset considers the largest 1,000 US-listed firms. Standard errors are clustered at the state and industry levels. Error bars (boxes) report the 95% (90%) CI. Vertical dashed lines indicate the time of the event.

Figure B6: Investments dropped at treated manufacturing firms

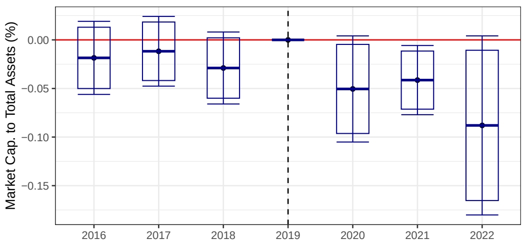


(a) All sectors

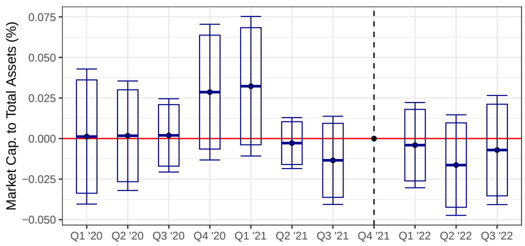
(b) Excluding service sectors

Note: The figure reports the estimated coefficients from an event study as in (9), with total invested capital as the dependent variable. Panel (a) shows the average effect in the whole sample (1,000 firms). Panel (b) excludes firms in service sectors (health care, financial, telecommunication services, utilities, real estate – 549 firms in total). We report only the estimated coefficients of interest – the interaction between the time dummies and a dummy equal to one if the firm has an AGM in the 90 days after the onset of the emergency and the share of individual shareholders with more than 5% equity shares. Each regression also includes controls and firm-, time- and time-by-industry-fixed effects as described in Section 5. The dataset considers the largest 1,000 US-listed firms. Standard errors are clustered at the state and industry levels. Error bars (boxes) report the 95% (90%) CI. Vertical dashed lines indicate the time of the event.

Figure B7: The Equity to Asset ratio dropped for the Covid case only



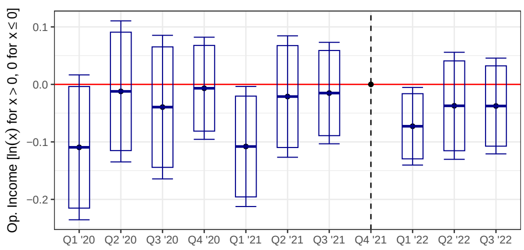
(a) Covid



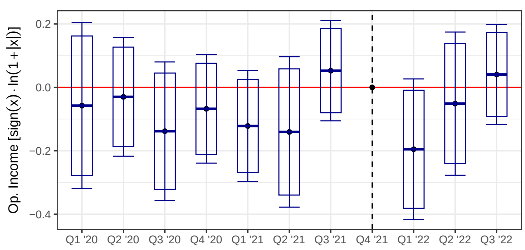
(b) Russia-Ukraine

Note: The figure reports the estimated coefficients from an event study as in (9) with market capitalization on total assets as the dependent variable. Panels (a) and (b) focus on the covid and the Russia-Ukraine cases, respectively. We report only the estimated coefficients of interest – the interaction between the time dummies and a dummy equal to one if the firm has an AGM in the 90 days after the onset of the emergency and the share of individual shareholders with more than 5% equity shares. Each regression also includes controls and firm-, time- and time-by-industry-fixed effects as described in Section 5. The dataset in Panel (a) considers the largest 1,000 US-listed firms and that in Panel (b) considers the largest US-listed firm with a positive revenue share from Russia (1,153 firms). Standard errors are clustered at the state and industry levels. Error bars (boxes) report the 95% (90%) CI. Vertical dashed lines indicate the time of the event.

Figure B8: Monotonic transformations of operating income – Russia-Ukraine



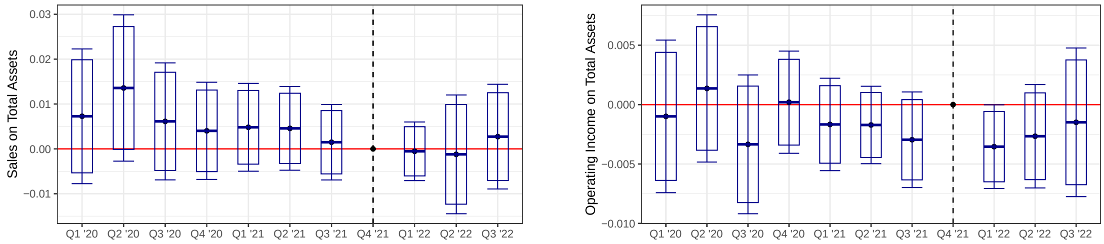
(a) ln(Op. In.) if OP. In. > 0, 0 otherwise



(b) $sign(\text{Op. In.}) \cdot \ln(1 + |\text{Op. In.}|)$

Note: The figure reports the estimated coefficients from an event study as in (9), with a monotonic transformation of operating income (OI) as the dependent variable. Panel (a) takes the log of OI for positive values of OI and 0 for values of OI less or equal to zero. Panel (b) takes $sign(OI) \cdot \ln(1 + |OI|)$. We report only the estimated coefficients of interest – the interaction between the time dummies and a dummy equal to one if the firm has an AGM in the 90 days after the onset of the emergency and the share of individual shareholders with more than 5% equity shares. Each regression also includes controls and firm-, quarter-by-year- and quarter-by-year-by-industry-fixed effects as described in Section 5. As in Panel (b) of Figure 6 in the main text, the coefficient for Q1 2022 is statistically significant at 10% level in both panels. Its magnitude can be interpreted as a 7.4% (p-value = 0.036) drop compared to the average value of the transformed OI in Panel (a) and 6.5% (p-value = 0.086) for the transformation in Panel (b). The dataset considers the largest US-listed firms with a positive revenue share from Russia (1,153 firms). Standard errors are clustered at the state and industry levels. Error bars (boxes) report the 95% (90%) CI. Vertical dashed lines indicate the time of the event.

Figure B9: Sales or costs: What drove productivity down in the Russia-Ukraine case? Service sectors are excluded

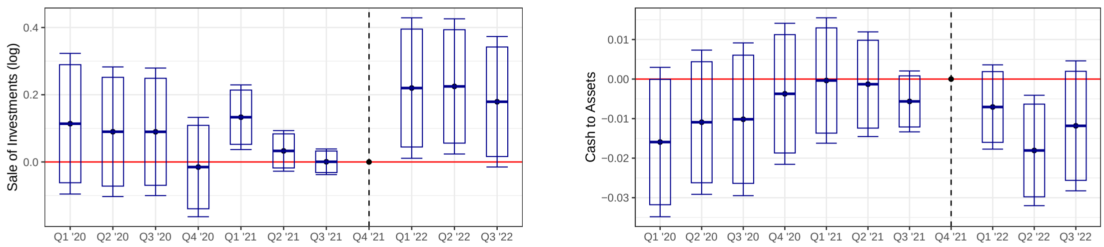


(a) Sales on total assets

(b) Operating income on total assets

Note: The figure reports the estimated coefficients from an event study as in (9), with sales on total assets as the dependent variable in Panel (a) and operating income on total assets in Panel (b). We exclude firms in non-manufacturing sectors like health care, financial, telecommunication services, utilities, and real estate. As a result, the number of firms is 511 and 512 in Panels (a) and (b), respectively. We report only the estimated coefficients of interest – the interaction between the time dummies and a dummy equal to one if the firm has an AGM in the 90 days after the onset of the emergency and the share of individual shareholders with more than 5% equity shares. Each regression also includes controls and firm-, quarter-by-year- and quarter-by-year-by-industry-fixed effects as described in Section 5. The dataset considers the largest US-listed firm with a positive revenue share from Russia (1,153 firms). Standard errors are clustered at the state and industry levels. Error bars (boxes) report the 95% (90%) CI. Vertical dashed lines indicate the time of the event.

Figure B10: Rushing out of Russia: sales of investments and cash holdings

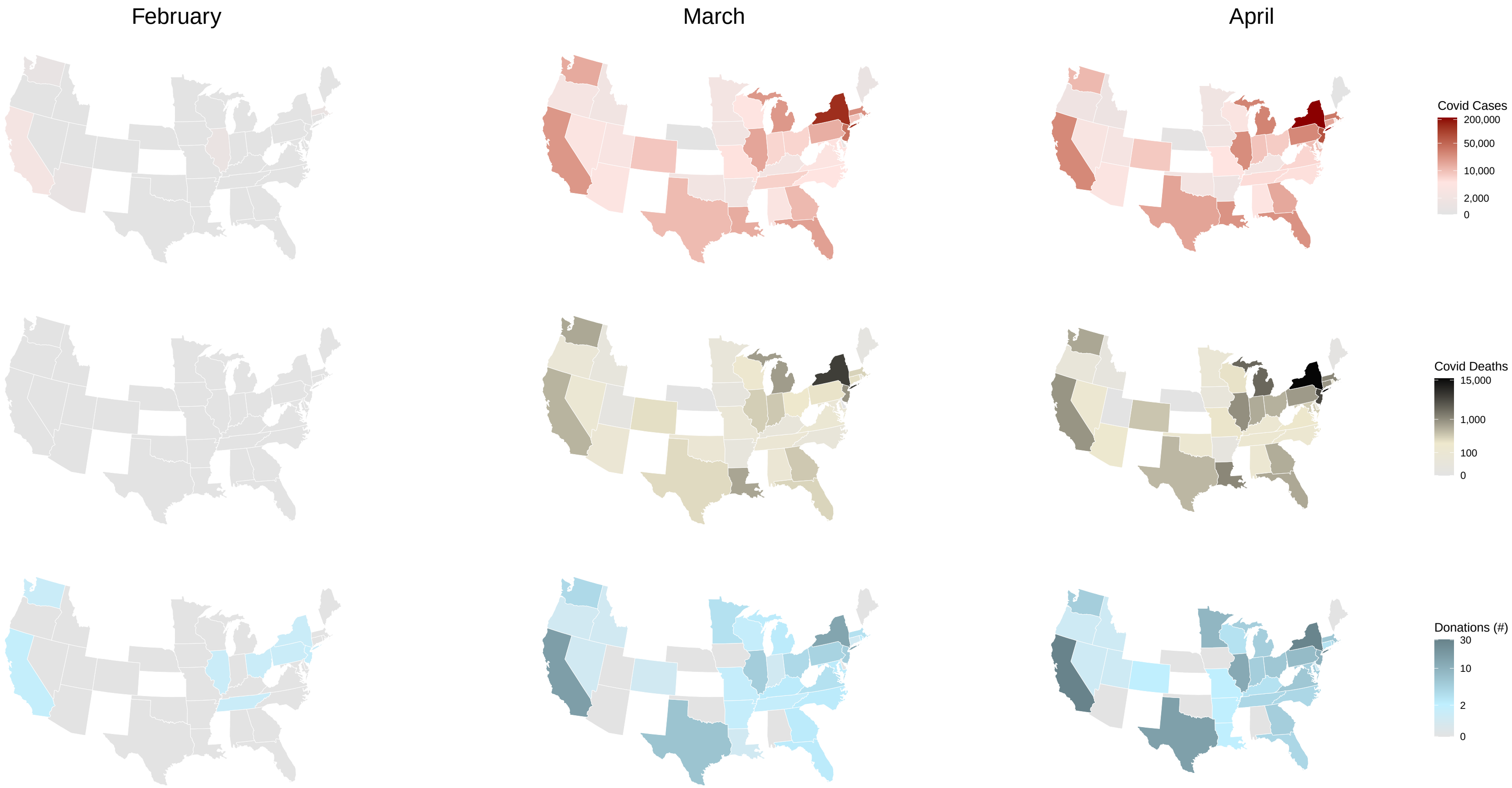


(a) Sales of investments

(b) Cash to Assets ratio

Note: The figure reports the estimated coefficients from an event study as in (9), with the sale of investments (log) and the ratio between cash holdings and total assets as dependent variables in Panels (a) and (b), respectively. We report only the estimated coefficients of interest – the interaction between the time dummies and a dummy equal to one if the firm has an AGM in the 90 days after the onset of the emergency and the share of individual shareholders with more than 5% equity shares. Each regression also includes controls and firm-, time- and time-by-industry-fixed effects as described in Section 5. The dataset considers the largest US-listed firm with a positive revenue share from Russia (1,153 firms). Standard errors are clustered at the state and industry levels. Error bars (boxes) report the 95% (90%) CI. Vertical dashed lines indicate the time of the event.

Figure B11: Covid cases, deaths, and corporate donations by US state and month



Note: The figure highlights the spatial and temporal correlation between the cumulative number of covid cases (first row), deaths (second row), and donations of S&P 500 companies (third row). Each column reports the breakdown for each variable across US states on February 29 (Column 1), March 31 (Column 2), and April 15 (Column 3), when our sample ends. States in white do not house S&P 500 firms. Covid rates come from Johns Hopkins University. Donation data are hand-collected using various online sources.

C Main Results with Alternative Datasets

Section 4 uses financial and ownership data from Orbis, with some missing data. This section checks the robustness of the main results using ownership data from Refinitiv. The following exhibits present analyses from Figure 2 and Tables 2 and 3 with the Refinitiv Consolidated Ownership dataset, with variables defined as in Section 4.

Despite the slightly larger dataset, the results are nearly identical to those in the main text. Figure C1 reports coefficients from the event study in (4), showing that only firms with individual shareholders (blue circles) are more likely to donate. The differences between red triangles and blue dots are consistent across Table C2, with coefficients matching those in the main text. Finally, C1 shows a negative (and statistically significant) correlation between the donations of financial shareholders and firms in their portfolios for blockholding shares ($\geq 2\%$).

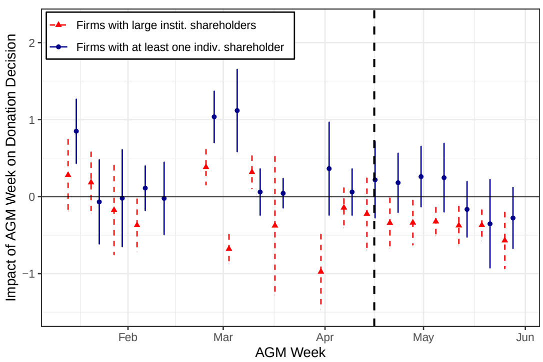


Figure C1: Shareholders' influence on donations by week

Minimum Equity Share Considered (1)	Spearman Correlation Weighted Average × AGM [p-values] (2)
0%	-0.082
(Avg. $N = 374$)	[0.668]
1%	0.073
(Avg. $N = 75$)	[0.840]
2%	-0.933
(Avg. $N = 60$)	[0.007]
3%	-0.889
(Avg. $N = 66$)	[0.044]
4%	-0.889
(Avg. $N = 81$)	[0.044]
5%	-0.943
(Avg. $N = 52$)	[0.057]

Table C1: Donations of financial shareholders' and their portfolios

Note: The results in Figure C1 replicate Figure 2, while Table C1 replicate Table 3 using Refinitiv data instead of Orbis data. Figure C1 estimates of $\hat{\gamma}_w$ measuring the difference in search rates across individual and non-individual shareholders in week w according to (2). Red triangles (blut dots) report the $\hat{\gamma}_w$ when using only firms with shareholders with +1% (+5%) shares. Vertical bars are 95% CI. SEs are clustered by firm- and shareholder-type (bank, individual, insurance, mutual fund). Table 3 considers the correlation between the donations of a financial institution (e.g., BlackRock) and those of the firm in its portfolio that had an AGM (i.e., $\sum_j share_{ij} \times \mathbb{I}_{[\text{firm } j \text{ donated}]} \times \mathbb{I}_{[i\text{'s share in } j \text{ is greater than } x\%]} \times \mathbb{I}_{[j \text{ has an AGM}]}$), where $x\%$ is defined across rows. p-values are reported in square brackets.

Table C2: Shareholders' influence on covid donations - Refinitiv data

	Whether Firm f has Donated (0/1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Ownership	-0.0092	0.0003	-0.0140	-0.0181	-0.0880***	0.0432*
	(0.0138)	(0.0128)	(0.0397)	(0.0276)	(0.0207)	(0.0209)
AGM	0.1104	0.1118	0.0809	0.1084	0.1143	0.1335
	(0.1244)	(0.1254)	(0.1345)	(0.1167)	(0.1287)	(0.1200)
Ownership × AGM	0.0808**	0.0828**	0.0574	-0.1664**	0.0013	-0.0846
	(0.0255)	(0.0265)	(0.0644)	(0.0667)	(0.0643)	(0.1361)
Ownership is defined as	Individuals			Institutional		
Ownership is the shares of investors owning:	$> 10\%$	$> 5\%$	$(0\%, 2\%)$	$> 10\%$	$> 5\%$	$(0\%, 2\%)$
Industry fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓
Observations	482	482	482	482	482	482
Adjusted R-squared	0.2165	0.2166	0.2150	0.2208	0.2389	0.2184

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

Note: The table presents the coefficients from OLS regressions of an indicator variable that is one if firm f has donated by April 15, 2020, on covariates. Compared to Table 2, this table uses ownership data from Refinitiv instead of Orbis. Italicized variables are defined in the middle panel. The variable *Ownership* is the share of either individual (Columns 1-3) or institutional investors (Columns 4-6) among all investors owning at least a share of total equity, as defined in the middle panel. Institutional investors include the largest financial investors in Table 1, namely, banks, mutual funds, and insurance firms. The variable *Ownership* is standardized. The AGM variable is an indicator variable taking value one if the firm has an AGM before April 15, 2020, and zero otherwise. All columns include industry- and state-fixed effects. Robust standard errors in parenthesis.

D Private Sanctions on Russia

This section focuses on shareholder influence after Russia invaded Ukraine in February 2022 as an external validity exercise for the mechanism exposed in the main text.

D.1 Background and Data

On February 24, 2022, Russia started the so-called "special military operation." We take this date as the beginning of our sample. Sonnenfeld *et al.* (2022) list firms exposed to the Russian economy (e.g., exporters to Russia) that took a pro or against position vis-á-vis Russia.[1]

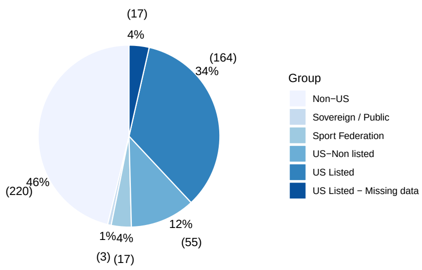
Data construction. We accessed this list on March 23, a month after the beginning of the invasion. The list contains 476 international firms operating in Russia at the time. Figure D1a shows a breakdown of this sample based on different firm categories. Most of the observations belong to non-US firms (especially from the UK, Germany, and France) and international sports federations (e.g., UEFA), which quickly denied access to Russian sports teams in the days after the beginning of the invasion. We exclude these firms since our exogenous variation is based on the SEC rules and ISS requirements. Excluding another 12% of the observations that account for US non-listed firms for which we lack shareholding data, we are left with 164 US-listed firms for which the 2022 AGM date is available on the Refinitiv database.[2] This dataset is not the whole universe of US-listed firms operating in Russia but a collection of the firms that took actions, either pro or against Russia, in the first month of the war. By taking early actions, this dataset spans the firms that are most exposed to Russia, and thus, these firms are the most relevant for our analysis. 85% of the firms in this list have a market capitalization above $8bn, which is the limit for inclusion in the S&P 500 index.

[1] The list is freely available at https://som.yale.edu/story/2022/almost-500-companies-have-withdrawn-russia-some-remain.

[2] We contacted Sonnenfeld about the data construction by email. On March 28, 2022, Professor Sonnenfeld informed us by email that "Our data sources are drawn upon multi-method anchoring with triangulation confirmation across expert and authoritative resources such as US Securities & Exchange Commission filings and along with other global regulatory reports; operational data available through Bloomberg; Thomson Reuters, and FactSet, company annual reports and shareholder communications, industry analyst reports, a wiki network of 300 company insiders across sectors and nations, personal exchanges with company executives, official company pronouncements on websites and press releases. We then review this data as a team in evaluating the categorizations."

Classification of firms' decisions. Sonnenfeld *et al.* (2022) categorizes firms as: (1) *Grade A - Surgical Removal, Resection* (51 firms) for firms that left Russia; (2) *Grade B – Keeping Options Open for Return* (69 firms) for firms that paused their ongoing projects; (3) *Grade C – Reducing Current Operations* (9 firms), for firms that paused certain operations; (4) *Grade D – Holding Off New Investments/Development* (27 firms), for firms that halted future investments; (5) *Grade F – Defying Demands for Exit or Reduction of Activities* (9 firms), for firms that kept working in Russia.

Data summary. Among the 164 firms in our database, 94 had an AGM in the three months following the outbreak of the war, whereas the 70 remaining firms had AGMs in another period. Table D2 shows summary statistics comparable to those in Table 1 of the main text for the two groups. Column 3 performs balance checks over observable variables such as market capitalization, revenues, net income, fraction of revenues coming from the US and Canada, age of the CEO, ESG scores, average brokers' recommendations, and shareholding. Overall, control (treatment) firms are more represented in Grade A (D). The remaining two columns illustrate the variation in Grade across firms with at least 2% of individual shareholders or with at least 5% of institutional shareholders. Finally, Figure D1b shows that, within sectors, firms are almost evenly distributed between treatment (blue) and control firms (red) – this further corroborates the exogeneity of selection into treatment.



(a) Surveyed firms

(b) Industry breakdown

Note: Panel (a) 34% of the firm surveyed in Sonnenfeld *et al.* (2022) are U.S.-listed firms. Panel (b) Number of firms by sector. Red (light blue) bars indicate control (treatment) group firms. Firms with a 2022 AGM scheduled between February 24 and May 24, 2022, are in the treated group as they have an AGM in the three months after February 24.

D.2 Robustness Checks

Below, we present robustness checks for the analysis in Section 4.4.1, which used (3) to study whether firms with larger shares of individual (institutional) blockholders support (oppose) exiting Russia. Exit is the highest sanction firms can take against Russia, not mandated by international sanctions. Since optimal actions may vary by sector, we exclude *Grade F* firms and include industry-fixed effects and several covariates.[3] To capture individual shareholder voice, we control for a dummy indicating if a firm has above-median institutional blockholding, as large institutional blockholders may reduce individual shareholder influence, as discussed in Section 2. This ensures proper identification of the coefficient of interest, β_{treat}.

Note. Because of space constraints, we report the full regression tables only for selected analyses. For the others, we only discuss the results, which are available upon request.

Measuring large blockholding. Table 4 measures the association between a firm and its largest shareholders using a variable that is 1 if a firm has above-median blockholding from a specific shareholder group with at least a x% share, and zero otherwise. We vary x across columns (10%, 5%, or 2%). Using the continuous variable for the share of a specific shareholder group (e.g., individuals) with at least a x% share yields qualitatively identical results.

Which institutional blockholders opposed exits? To highlight the role of prominent shareholders in opposing exit decisions, we run the analysis in (3) using Above Median Blockholding$_f$ to measure a firm's association with its main shareholders. As in Section 4.4.1, this variable is 1 if the firm has above-median blockholding from a specific shareholder group with x% share, and 0 otherwise. Table D3 shows that mutual fund blockholders play the most significant role, followed by banks and insurance companies, consistent with our findings for the pandemic in Appendix Table A3. This likely reflects mutual funds being the largest shareholders (Table D2) and more actively managing their investments due to their statutes.

Including *Grade F* firms. Excluding firms that announced they would not exit Russia does not materially affect our results. Unreported analyses show that

[3] We include the fraction of revenues from America and Canada, average broker recommendation, CEO age, net income, and industry dummies. Net income is highly correlated with market cap (90%), EBIT (92%), and revenues (79%), which we omit from the analysis. Including any of these in place of net income does not qualitatively affect the results.

β_{treat} is 0.656 (S.E. 0.255) for firms more exposed to individual shareholders with at least a 5% share, and -0.320 (S.E. 0.157) for the same analysis with institutional shareholders. These coefficients were 0.316 and -0.152 in Table 4, which excludes the nine *Grade F* firms.

Excluding airline companies. Excluding airline companies (3 observations: American Airlines, Delta Airlines, and United Airlines), which may be affected by Russia's ban on Western carriers, does not change our results qualitatively.

Only S&P 500 firms in the list. Excluding firms not on the S&P 500 list, which reduces the sample to 103 observations, does not qualitatively affect our results despite the smaller sample size.

All S&P 500 firms. To address potential selection bias, we run (6) on all U.S.-listed S&P 500 firms. Since firms with no business dealings with Russia make no exit decisions, we subset the dataset to include only firms with exposure to Russia above the median for S&P 500 firms. We consistently find that firms most exposed to large individual shareholders are most likely to exit Russia.

A different specification. The proposed regressions focus on either institutional or individual shareholders, but firm decisions may result from pressure by both types. To account for this, we update (6) as follows:

$$\begin{aligned}\text{Exit}_f = {} & \tilde{\beta}_0 + \tilde{\beta}_1 \text{AGM}_f \\ & + \gamma_1 \text{Above Median Indiv. Block.}_f + \gamma_2 \text{Above Median Indiv. Block.}_f \times \text{AGM}_f \\ & + \theta_1 \text{Above Median Instit. Block.}_f + \theta_2 \text{Above Median Instit. Block.}_f \times \text{AGM}_f \\ & + \tilde{\beta}_2 \text{X}_f + \tilde{\varepsilon}_f, \end{aligned} \tag{D1}$$

where $\{\gamma_i\}_{i=1}^2$ and $\{\theta_i\}_{i=1}^2$ represent individual and institutional blockholders above the median. This specification accounts for the effect of treatment on both shareholder types. Table D4 reports results varying blockholder thresholds and whether the reference institutional shareholders include all institutional investors (Columns 1–4) or only mutual funds (Columns 5–8). Overall, results are consistent with previous analyses, with the shareholder's influence increasing as the blockholding threshold rises.

Financials in 2022. Exit from Russia could be costly, pushing financially struggling firms to stay. For example, Shell estimated its exit would cost \$4bn to \$5bn.[4] However, whether a firm had negative financial results is orthogonal

[4]CNBC reports that "Shell was forced to apologize on March 8 [2022] for buying a heavily

to the timing of the AGM. Unreported results show that negative net income is not associated with Grade F, and Grade A firms are not the most profitable. Furthermore, Grade A and Grade F firms are comparable in terms of market capitalization.

D.3 Dropping Russian Suppliers

This section extends Appendix D by examining the decision to sever supply chain relationships with Russian firms shortly after the invasion. Using Factset's Supply Chain Relationships data, we identify 102 U.S. firms with active relationships with at least one Russian firm as of February 24, 2022, and with available shareholding and AGM data. Ninety-six of these also have all the control variables used in the previous analysis.

Table D1: Blockholders' influence on the decision to cur supply chain relationships with Russian corporations

	Drop Relationship (0/1)	
	(1)	(2)
Above Median Blockholding	-0.107	-0.380***
	(0.129)	(0.060)
AGM	-0.159*	-0.103
	(0.088)	(0.072)
AGM × *Above Median Blockholding*	0.152	0.456***
	(0.186)	(0.112)
Threshold to be considered a blockholder:	>0%	>5%
Sector FE	✓	✓
Controls	✓	✓
N	96	96
Adjusted R-squared	0.1928	0.2079

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

Note: This table examines the influence of individual blockholders on U.S. firms' decisions to sever supply chain ties with Russian companies following the Ukraine invasion. It regresses a dummy variable (1 if firm f stopped doing business with at least one Russian firm between February 24 and May 24, 2022) on a dummy for firms with individual shareholding above the median (Column 1) or individual blockholding (> 5%) above the median (Column 2), a dummy for early AGMs (between February 24 and May 24, 2022), and their interaction. The regressions include sector fixed effects and controls for the share of revenue from the U.S. and Canada, revenue from Russia, CEO age, net income, and a dummy for above-median institutional ownership.

discounted consignment of Russian oil. It subsequently announced that it was withdrawing from Russia." Source: https://www.cnbc.com/2022/04/07/shell-to-write-down-up-to-5-billion-in-assets-after-exiting-russia.html.

Table D2: Summary of the sample of listed firms exposed to the Russian economy by group

	(1)	(2)	(3)	(4)	(5)
	Annual General Meeting (AGM) between 02/22 and 05/22		p-values	Individual Shareholders	Institutional Shareholders
	Yes (treat)	No (control)	(1) - (2)	With ≥ 2%	With ≥ 5%
i. Firm Characteristics					
Market Cap (bn USD)	109.4	186.9	0.202	129.9	143.2
Brokers' Recommendation [-2, 2]	1.0	1.1	0.291	1.0	1.0
Revenue (bn USD)	33.2	35.1	0.849	33.8	33.5
EBIT (bn USD)	5.0	4.6	0.859	2.7	4.8
- EBIT > (dummy) 0	87.1	81.7	0.352	88.9	84.3
Net Income (bn USD)	4.9	5.6	0.724	2.5	5.3
- Net Income > 0 (dummy)	87.1	80.3	0.25	77.8	84.3
% of Revenues from US and Canada	51.8	51.9	0.98	51.9	52.0
CEO Age	61.6	60.4	0.337	62.1	61.0
ESG Score	71.3	66.6	0.101	63.5	69.2
ii. Shareholding (% Ownership)					
Share of Individual Investors With > 2%	1.4	3.3	0.15	13.6	2.0
Share of Institutional Investors With > 5%	28.6	25.0	0.08	23.7	27.9
- Mutual Funds	10.1	9.6	0.746	8.1	10.2
- Banks	0.5	0.0	0.07	0.2	0.3
- Insurance	1.1	0.0	0.029	0.0	0.6
iii. Corporate Actions as of March 23, 2022 (% of each group)					
Grade A - Surgical Removal, Resection (51 firms)	22.6	40.8	0.014	25.9	31.4
Grade B – Keeping Options Open for Return (69 firms)	41.9	42.3	0.968	55.6	42.1
Grade C – Reducing Current Operations (9 firms)	8.6	1.4	0.028	3.7	5.7
Grade D – Holding Off New Investments/Development (27 firms)	22.6	8.5	0.011	11.1	15.1
Grade F – Defying Demands for Exit or Reduction of Activities (9 firms)	4.3	7.0	0.462	3.7	5.7

Note: This table compares the firms in the treatment and control groups used in the empirical analysis of the corporate sanctions against the Russian economy executed in the first month of the 2022 war in Ukraine. This data was collected by Jeffrey Sonnenfeld and his team at Yale SOM, which we thank for sharing the data and explaining the data construction. Columns 1 focuses on firms with AGM within 3 months after the start of the war and Columns 2 the other firms. Column 4 focuses on firms with at least one individual shareholder owning more than 2% of total equity. Column 6 focuses on firms with at least one institutional investor owning more than 5% of total equity. Shareholding, profitability and control variables come from Refinitiv. The variable *Brokers' Recommendation* refers to the recommendations of equity analysts and it ranges between -2 and 2, where strong sell = −2, sell = −1, hold/neutral = 0, buy = 1, strong buy = 2. ESG score is the Social score of the firm as computed by Refinitiv.

Table D3: Blockholders' influence on the decision to exit the Russian market after the invasion of Ukraine - breakdown by blockholder types

	Exited Russia (0/1)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
AGM	−0.067	−0.094	0.144	0.043	−0.012	−0.022	−0.028	0.003	−0.032	0.098
	(0.090)	(0.090)	(0.115)	(0.111)	(0.085)	(0.086)	(0.090)	(0.091)	(0.089)	(0.099)
Above Median Blockholding	−0.547***	−0.428***	0.116	0.148	0.703***	0.423**	0.163	0.262	−0.067	0.206
	(0.181)	(0.128)	(0.132)	(0.137)	(0.193)	(0.213)	(0.264)	(0.272)	(0.181)	(0.129)
AGM × *Above Median Blockholding*	0.705***	0.263	−0.341**	−0.188	−0.584**	−0.309	−0.150	−0.332	−0.176	−0.293*
	(0.254)	(0.175)	(0.165)	(0.159)	(0.230)	(0.245)	(0.283)	(0.292)	(0.198)	(0.154)
Above Median Blockholding (0/1) defined for:	Individual		Institutional		Banks		Insurance		Mutual Funds	
Threshold to be considered a blockholder:	>10%	>2%	>10%	>2%	>2%	>1%	>2%	>1%	>10%	>5%
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sector fixed effect	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N	138	138	138	138	138	138	138	138	138	138
Adjusted R-squared	0.2762	0.2879	0.2642	0.2372	0.2818	0.2628	0.2280	0.2378	0.2397	0.2523

* – $p < 0.1$; ** – $p < 0.05$; *** – $p < 0.01$.

Note: This table indicates that banks and mutual funds mostly opposed exiting from Russia. The table reports the coefficients from OLS regressions of whether firm f has exited Russia as of March 23, 2022, on (i) the AGM treatment and (ii) a dummy *Above Median Blockholding* for whether the shareholders of firm f include blockholders with shares above the median value for that specific category, and (iii) their interaction. Categories vary across columns based on the reference shareholder type, and the minimum blockholding threshold considered and are defined in the middle panel. Firms with Grade F (i.e., firms that announced business as usual) are not included in the analysis. Institutional investors include mutual funds, banks, insurance, hedge funds, private equity, and venture capital. All columns include sector-fixed effects. Control variables include the share of revenues that come from activities in the US and Canada, brokers' recommendations, CEO age, and net income. Market capitalization, revenues, and net income are highly correlated; controlling for any of these two variables instead of net income does not change the results qualitatively. For models where individual investors are the reference category, we also include a dummy equal to 1 for above-median institutional ownership to account for the importance of institutional blockholders among the firms in this sample, and for the impossibility of exploiting firm fixed effects with only cross-sectional variations. Robust standard errors are reported in parenthesis.

Table D4: Blockholders' influence on the decision to exit the Russian market after the invasion of Ukraine - simultaneous effect of different blockholder types

	Exited Russia (0/1)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
AGM	0.099	−0.014	−0.011	0.015	−0.067	0.055	−0.098	−0.093
	(0.114)	(0.112)	(0.112)	(0.105)	(0.089)	(0.096)	(0.110)	(0.111)
Above Median Indiv. Block.	−0.518***	−0.541***	−0.430***	−0.152	−0.531***	−0.548***	−0.419***	−0.191
	(0.189)	(0.144)	(0.125)	(0.141)	(0.184)	(0.131)	(0.130)	(0.146)
AGM × Above Median Indiv. Block.	0.786***	0.335	0.271	0.099	0.658**	0.344	0.245	0.114
	(0.238)	(0.254)	(0.173)	(0.183)	(0.269)	(0.230)	(0.183)	(0.191)
Above Median Institut. Block.	0.100	0.067	0.168	0.281*	−0.053	0.211*	0.028	0.037
	(0.125)	(0.123)	(0.129)	(0.144)	(0.171)	(0.119)	(0.117)	(0.136)
AGM × *Above Median Institut. Block.*	−0.326**	−0.136	−0.189	−0.282*	−0.175	−0.292**	0.023	0.023
	(0.163)	(0.150)	(0.150)	(0.165)	(0.189)	(0.145)	(0.146)	(0.164)
Above Median Institut. Block. (0/1) defined for:	All institutional investors				Only mutual funds			
Threshold to be considered a blockholder:	>10%	>5%	>2%	>1%	>10%	>5%	>2%	>1%
Sector FE	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
N	138	138	138	138	138	138	138	138
Adjusted R-squared	0.3012	0.2915	0.2921	0.2666	0.2762	0.3140	0.2799	0.2341

* − $p < 0.1$; ** − $p < 0.05$; *** − $p < 0.01$.

Note: This table considers the influence of large institutional and large individual blockholders simultaneously. The regression equation is presented in Equation D1; it regresses whether firm f has exited Russia as of March 23, 2022, on the (i) the AGM treatment and (ii) a dummy *Above Median Indiv. Blockholding* for whether the shareholders of firm f include blockholders with shares above the median value for individual shareholders, (iii) their interaction, (iv) another dummy *Above Median Institut. Blockholding* for whether the shareholders of firm f include blockholders with shares above the median value for that specific category, and its interaction with the AGM treatment. Categories vary across columns based on the reference institutional shareholder (either all institutions in Columns 1 to 4, or only mutual funds in Columns 5 to 8) and the minimum blockholding threshold considered, and are defined in the middle panel. Also, firms with Grade F (i.e., firms that announced business as usual) are included in the analysis. Institutional investors include mutual funds, banks, insurance, hedge funds, private equity, and venture capital. Control variables include the share of revenues that come from activities in the US and Canada, the exposure to Russia, brokers' recommendations, CEO age, and net income. Market capitalization, revenues, and net income are highly correlated; controlling for any of these two variables instead of net income does not change the results qualitatively. All columns include sector-fixed effects. Robust standard errors are reported in parenthesis.

E Data on Donations and ESG between 2011-2021

This section describes the data used in Section 4.4.2. We collect donation news from Ravenpack, focusing on U.S. firms with positive event sentiment and an ”entity relevance” score above 75%, covering 2011 to 2021. The sample starts with 2,722 Compustat firms, narrowing down to 988 U.S.-listed firms on the NYSE or NASDAQ with no missing data and available Refinitiv ESG scores and historical shareholding data. These firms represent 90% of the market capitalization of the original sample.

Table E1 shows summary statistics on market capitalization, ESG risk incidents, ownership, and ESG scores. The average market cap is $53 billion, with a range from $1 million to $1.7 trillion. Firms report an average of 772 ESG incidents, with a 30% chance of an incident in a given month. The statistics highlight individual and institutional investor holdings, including banks and insurance companies. ESG scores are industry-scaled and typically updated annually.

Table E1: Summary statistics of ESG data from 2011 to 2021

	Mean (1)	Median (2)	25% (3)	75% (4)	s.d. (5)
Market Capitalization (m USD)	21,269	4,831	1,553	16,192	60,631
RepRisk Incidents & Donations Data					
Number of Incidents	772.4	96	0	594	1,889.2
Number of E-Incidents	188.7	12	0	96	611.3
Number of S-Incidents	651.4	84	0	498	1,616.6
Number of G-Incidents	129.9	6	0	60	448.9
Probability of Having a High-Severity S-Incident (%)	4.5	0	0	0	27.3
Number of Donations	4.5	2	1	5	7.4
Ownership Data					
Individual Investor Ownership (%)	2.7	0	0	0.7	9.9
Institutional Ownership (%)	43.8	35.6	16.0	55.1	70.3
ESG Scores Data					
Environmental Score (%)	52.6	55.8	34.0	74.0	25.9
Social Score (%)	42.7	45.4	9.4	71.0	31.2
Governance Score (%)	54.4	58.1	37.8	75.1	25.7

Note: Summary statistics of the ESG Refinitiv news coverage data. Shares are computed over total equity. *Institutional Owernship* is the sum of the shares owned by Banks, Hedge Funds, Insurance Companues, Investment Advisors, Mutual Funds, Pension Funds, Private Equity, and Venture Capital firms. Risk Incidents data report the number of incidents observed by firms during the whole sample period.