

Block Diversity and Governance

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Governance practices differ significantly across blockholder types. Compared with financial blockholders, nonfinancial blockholders are six times more likely to identify as activists. A textual analysis of regulatory filings shows that nonfinancial blocks govern through customized governance actions, while financial blocks follow generic performance metrics. Furthermore, blockholdings drive an important limitation in using Russell index thresholds as an identification strategy. Manipulation of index weights by Russell is strongly correlated with nonfinancial block ownership, confounding previous research on passive ownership. Using both reduced-form and structural estimates, we find that the market expects greater value creation from the entry of a nonfinancial blockholder. (JEL: G30, G34, G39, G23)

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We test whether different types of blockholders influence corporate governance differently. Building on the work of Cronqvist and Fahlenbrach (2009) and Edmans and Holderness (2017), we investigate whether differences in blockholder preferences and incentives lead to distinct patterns in corporate governance mechanisms. Additionally, we assess whether the market reaction varies based on the quality of the match between blockholders and firms.

We find clear differences in governance practices employed by financial blocks versus nonfinancial blocks. We define a financial blockholder as an institution that holds at least 5% of a firm and files form 13F. Consider

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Walmart, where the Walton family holds nearly half of all shares in large blocks, versus a firm like Target, where only large financial institutions, such as Fidelity and State Street, hold significant stakes. Each of these firms likely employs different governance mechanisms and practices because it is held by substantially different types of blockholders.

Financial institutions act as agents for many clients, increasing the costs associated with delegated monitoring and may require formal monitoring rules that specify how they expect firm to carry out their business. For example, they may require a certain percentage of outside directors (Jensen 1986; Dasgupta, Fos, and Sautner forthcoming). In contrast, nonfinancial blockholders may be more actively involved in the firm's operations and require fewer formal rules and guidelines (Villalonga and Amit 2006; Anderson and Reeb 2003; Cheung et al. 2006). Consequently, nonfinancial blockholders may employ less rigid governance rules if they are deeply involved in the company and have more direct control.

Several recent studies test whether differences in ownership by passive index funds or large financial institutions drive governance decisions (e.g., Boone and White 2015; Appel, Gormley, and Keim 2016; McCahery, Sautner, and Starks 2016; Crane, Michenaud and Weston 2016). However, detailed data on nonfinancial blocks are difficult to observe. Edmans and Holderness (2017) point out that much less is known about governance by "nonfinancial" blockholders (who do not file form 13F), such as private firms, wealthy individuals, or some private equity firms. A notable exception is Clifford and Lindsey (2016), who study how block heterogeneity drives compensation and performance. Our study, while related, is focused on blockholder heterogeneity and corporate governance.

To test the hypothesis that governance varies by block type and to understand how the governance varies, we compile a unique data set for both financial and nonfinancial blocks. Our findings reveal several notable economic distinctions. Nonfinancial blockholders typically hold a single large block in younger firms, while financial blockholders own, on average, nearly 11 smaller blocks distributed among larger, older, and more established firms. Moreover, nonfinancial blocks are often located closer geographically to the firms they hold. These distinctions imply that nonfinancial blocks adopt a more hands-on approach to active governance.

To understand the differences between financial and nonfinancial blocks, we dive deeper into the regulatory filings of blockholders that state, from their perspective, how they intend to govern. We focus first on blockholders' decision to file form 13D or 13G which represents a decision to identify as active or passive. Based on filings over 20 years (1998–2018), we find that financial blockholders mainly file form 13G, reflecting passive involvement, while nonfinancial blocks are much more likely to file an activist form 13D. In our data, only 7.1% of financial blockholders identify as activists, whereas nonfinancial blocks are 6 times more likely to self-identify as active. This

large difference suggests that different types of blockholders have differing economic perceptions of their role as shareholders. Furthermore, we also report analysis for finer block categories: individuals, hedge funds, financial institutions, and other private entities, and in a separate analysis break down financial blocks into short-term and long-term blocks. The results from our finer classifications show that while there are large differences between financial and nonfinancial blockholders, there are smaller differences across these other categories.

We extend our analysis following [Brav et al. \(2008\)](#) by examining the “Purpose of Transaction” statements provided by blockholders in our full sample of 48,863 13D filings, that is, for all types of blocks. This statement offers direct insight into how blockholders perceive their role in governance and disclose how they intend to govern. Using unsupervised machine learning textual analysis tools, we find that different types of blockholders use different governance practices: financial blocks prioritize conventional performance measures, while nonfinancial blockholders prioritize active internal management of corporate policies. For example, roughly 25% of financial blocks use terms like “maximize shareholder value” and/or “undervalued,” while only 3.3% of nonfinancial blocks do so. In contrast, discussions about director elections, nominations, or vacancies are present in over a third of nonfinancial blockholders’ 13D filings, but only in one-fifth of those filed by financial blocks. Our findings suggest that nonfinancial blocks perceive themselves as proactive, hands-on shareholders, whereas financial blocks tend to focus on generic/short-term performance measures. Nonfinancial blocks are 28.5% more likely to describe what we classify as specific governance actions. Financial blocks use more boilerplate language.

We next test whether blockholders’ stated intentions align with their actual governance practices. We find that firms with financial blockholders have greater external monitoring mechanisms, indicating higher expected agency costs and perhaps less active monitoring in equilibrium. Firms with nonfinancial blocks are targeted less by external activists, receive fewer activist shareholder proposals, have fewer successful activist attempts, and report vote outcomes that tend to favor management. Taken together, these correlations suggest that firms with nonfinancial blockholders rely less on external governance, appear more resistant to external control, and have fewer takeover defenses in place, such as poison pills or restrictive merger approval rules. The drivers of this difference, however, could come from two sources. On the one hand, firms with closely held long-run nonfinancial blockholder may not need external control mechanisms because their holdings make them more naturally aligned with external nonblock shareholders. On the other hand, closely held firms may pressure the board to avoid external monitoring for the exact purpose of extracting rents through perquisite consumption. Regardless of the direction, the basic governance patterns we see in the data appear to line up with our textual analysis of 13D filings.

These large sample correlations may reflect some endogenous matching between firms and blockholders. Indeed, some recent studies try to identify a causal relationship using a discontinuity in the Russell index weights as a source of exogenous variation in index fund ownership (e.g., [Boone and White 2015](#); [Appel, Gormley, and Keim 2016, 2018](#); [Crane, Michenaud, and Weston 2016](#)). Our analysis of this quasi-experimental setting intersects with these past studies in an unexpected way: shares owned by nonfinancial blockholders are excluded from Russell's calculation of a firm's public float. Because we have data on both financial and nonfinancial blocks, we can show that Russell's float adjustment leads to a discontinuity of 15.4% in ownership of nonfinancial blocks, as compared to a discontinuity of only 3.2% in the ownership of index funds near the Russell 2000 cutoff.

The discontinuity for the nonfinancial blocks is roughly 5 times larger than for index funds. Our analysis reveals that the Russell float adjustment violates the assumption of local continuity in outcomes around the threshold. This subtle bias is not a small econometric quibble, but rather changes the entire economic interpretation of prior Russell studies. Previous conclusions regarding governance by passive blocks may simply reflect variation in unobserved nonfinancial block ownership.

In our next set of tests, we focus on market reactions to blockholder entry, depending on the quality of the match between blockholders and firms. Prior studies have shown that active governance via close monitoring has a larger marginal benefit for small and risky companies.¹ Correspondingly, in our tests, we find that the announcement of a nonfinancial block results in a significantly more positive market reaction for small and risky firms.

Further, we extend our event study analysis of blockholder entry using the structural estimation in [Albuquerque, Fos, and Schroth \(2022\)](#). The structural approach allows us to separate announcement returns into activism, stock picking, and selection bias components. The results from our structural estimation are consistent with our reduced form event study results. We find that value of activism is larger for nonfinancial blocks, especially in small or volatile firms.

Finally, to further mitigate concerns regarding endogeneity and matching between specific block types and firm types, we leverage the ownership cycle across a firm's lifecycle, which commonly transitions from nonfinancial to financial ownership as firms age. We show that even amid this transition, the governance practices we document for financial versus nonfinancial blocks remain consistently different.

Our study makes several contributions. We document how governance varies depending on the block type. Our analysis generates fresh descriptive insights on the governance of heterogeneous blockholders, and is the first to

¹ See [Demsetz and Lehn \(1985\)](#) on volatility, [Helwege, Pirinsky, and Stulz \(2007\)](#) and [Grossman and Hart \(1980\)](#) on firm size.

examine, for *all* types of blockholders, the statements made by blockholders (via dissection of the language used by shareholders) in *all* their 13D filings on how they intend to govern.² Our results suggest that nonfinancial blocks are more likely to actively monitor with specific intentions while financial blocks tend to focus on generic boilerplate terms like “maximize shareholder value.”

Our results are distinct from prior studies that have focused on investor horizon diversity. For example, [Bushee \(1998, 2001\)](#) shows how the investment horizon of different financial institutions drive portfolio selection with a focus on 13F filers. Our findings highlight that even conditional on investment horizon, significant differences exist between financial and nonfinancial blocks.

Another important contribution is that we uncover a limitation in the Russell index discontinuity design. Our results question the interpretation of prior studies. We show that even if this method were statistically valid (which we argue is not the case), results observed on governance practices using the Russell discontinuity method, are, in fact, primarily driven by the ownership of nonfinancial blocks rather than index funds. Additionally, we show that when small and volatile firms are matched with nonfinancial blockholders, the market response is more positive.³ Finally, as detailed below, we make the blockholder-type classification publicly available on WRDS, providing researchers with access to this resource (we only ask that our paper is cited as the source for the data).

1. Data and Summary Statistics

Our data come from a variety of sources. When examining the entrance of a block, we use historical 13D, 13G, and ADV filings obtained from the SEC’s website, for the years 1994 through 2018 (these data are used in [Tables 2–4](#) and [8–10](#)). When examining annual snapshots of blockholdings ([Tables 1](#) and [5–7](#); [Figures 1–3](#)), we use FactSet blockholder data on all 5% ownership revealed in any public filing for the 2001–2014 period. [Schwartz-Ziv and Hadlock \(2019\)](#) previously described these data. CRSP and Compustat are used for financial data.⁴ The blockholder data (obtained from 13D, 13G, ADV filings, and FactSet) is matched with Compustat/CRSP by using common

² While some studies focus on governance by hedge funds (e.g., [Brav et al. 2008](#); [Klein and Zur 2009](#)), founders ([Li and Srinivasan 2011](#); [Anderson, Duru, and Reeb 2009](#)), or executives ([Jensen and Warner 1988](#); [Kim and Lu 2011](#)), they do not take a full overview of governance across all types of blocks.

³ Our blockholder classification data set is available on WRDS for free. This data set captures any blockholder who filed a 13D or a 13G filing between 1998 and 2018. The data set includes blockholder name, CIK, a 4-category classification (individuals, hedge funds, financial institutions, and other private entities), and a 2-category classification (whether the block is or is a financial or nonfinancial block).

⁴ We construct an annual snapshot of each firm’s ownership structure as of June 30. This assures that proxy statement information for firms with December fiscal year-endings will have been incorporated into the subsequent June ownership listing.

Table 1
Summary statistics

	Blockholder type	
	Nonfinancial	Financial
Agent for other investors?	No	Yes
Average number of blocks held	1.18	10.68
Block size / outstanding shares (%)	15.7	8.1
Implied duration of block (years)	3.57	2.7
Blockholder within 50 miles of firm (%)	12.4	7.0
Total shares held by blockholder (%)	13.88	13.98
Firms with at least one such block (%)	52.44	64.18
Average firm market capitalization (billions)	15.53	28.45
Average firm age (years since IPO)	13.9	17.8

This table reports summary statistics on nonfinancial and financial blocks during the 2001–2014 period. A blockholder is defined as an investor who owns at least 5% of a firm’s outstanding shares. A *Nonfinancial* block is defined as a block that does not file a 13F, whereas a *Financial* block is defined as a block that files a 13F. Implied duration is estimated by regressing an indicator variable documenting whether the observation year is the last year the block existed, conditional on being a nonfinancial (financial) block, and taking the inverse of the constant.

identifiers, followed by hand-checking of ambiguous cases. We match all Compustat records for the most recent fiscal year ending that falls on or before the ownership snapshot. ISS voting analytics, GMI, and Sharkwatch data sets are used for governance variables (we match the most recent data as of the ownership snapshot date). See [Appendix A](#) for definitions of all the data fields we use in the paper.

We define blockholders as investors who own at least 5% of a firm’s outstanding shares. A financial blockholder is defined as a blockholder who files form 13F, and all other blockholders are classified as nonfinancial blockholders.⁵ We use the 13F filing as our main classification because, shareholders who meet this requirement act as agents for a large number of clients, which, we argue, implies differences in the marginal cost of delegated monitoring. Additionally, this classification is consistent with prior studies that have focused on 13F blocks. Our classification allows a clear identification of the nonfinancial blocks excluded from other studies.⁶

[Table 1](#) reports summary statistics. The identification of the block type is based on the annual snapshot of ownership structure on June 30th each year. [Table 1](#) shows that nonfinancial blocks are more common in small firms. Firms with a financial block are roughly twice as large as firms with a nonfinancial block. The average block size of a nonfinancial block is 15.7% which is larger than the average of 8.1% for financial blocks. The implied holding period of a nonfinancial block is 3.6 years versus 2.7 years for a

⁵ Institutional investment managers who manage over \$100 million are required to file quarterly 13F reports disclosing their holdings.

⁶ By our definitions, about 30% of firms with a blockholder have both financial and nonfinancial blocks. In untabulated analysis, all of our main results are robust to conditioning on having only financial or nonfinancial blocks.

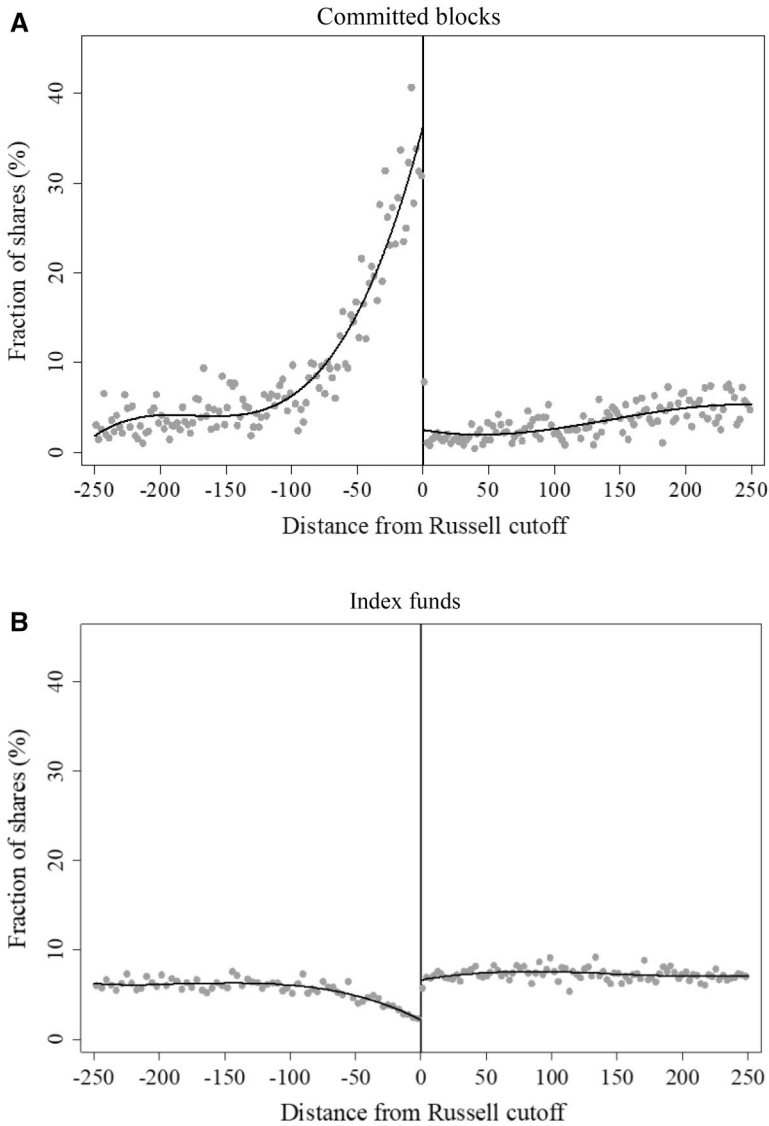


Figure 1
Blockholdings around Russell discontinuity ranked by Russell's weights
Panel A documents for the 2001–2014 period, the total fraction of shares held by nonfinancial blockholders (i.e., blockholders who do not file form 13F), ranked by the Russell weights. The company ranked 0 represents the first company within the Russell 2000, while the company ranked -1 represents the last company within the Russell 1000. Panel B estimates this figure for index funds. On the left side of the cutoff line, are the 250 firms ranked at the bottom of the Russell 1000; on the right side are the top 250 firms of Russell 2000 index. The company ranked as -250 is 250 companies away from the Russell 1000-2000 cutoff. The line in each panel estimates a third-degree polynomial function.

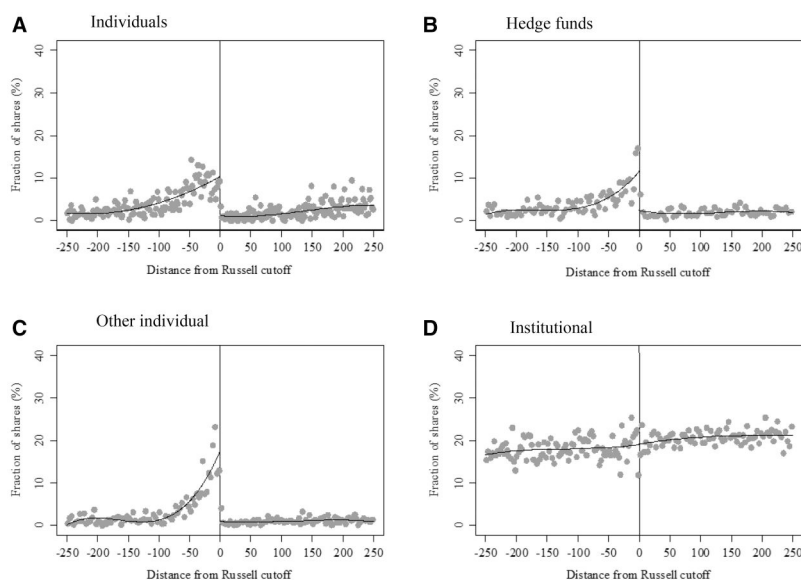


Figure 2
Block ownership around the Russell 2000 discontinuity

The figure reports for the 2001–2014 period, the total percentage of shares held by each type of blockholder. Companies are ranked by the Russell weights. The company ranked 0 represents the first company within the Russell 2000, while the company ranked -1 represent the last company within the Russell 1000. On the left side of the cutoff line, are the 250 firms ranked at the bottom of the Russell 1000; on the right side are the top 250 firms of Russell 2000 index. The company ranked as -250 is 250 companies away from the Russell 1000-2000 cutoff. The line in each panel estimates a third-degree polynomial. *Individual* are individual blockholders; *Hedge fund* blocks includes hedge funds and private equity investors; *Other private* include blockholders who do not file a 13F filing, and do not fall under the *Individual* or *Other private* category; and *Institutional* blocks are defined as financial institutions who do not fall into the remaining categories.

financial block.⁷ Financial blocks holding blocks for a shorter period is consistent with Dasgupta and Piacentino (2015), who show that firms held by financial institutions emphasize short-term gains. Apparently, the short-term return emphasis is also reflected in a more short-term holding period.

Importantly, nonfinancial blockholders only hold an average of 1.18 blocks while financial blocks hold over 10 blocks at the same time, on average. Nonfinancial blocks also tend to be more local. 12.4% of nonfinancial blockholders are located within 50 miles of the firm's headquarters, while only 7% of financial blocks are geographically close.⁸ Prior studies have argued that shareholders who are physically close to companies are better able to monitor

⁷ Implied duration is estimated by regressing an indicator variable documenting whether the observation year is the last year the block existed, conditional on being a nonfinancial block, or alternatively, a financial block, and taking the inverse of the constant.

⁸ We estimate this figure by extracting each blockholder's ZIP code from the 13D or 13G filing, obtaining the firm's headquarters' ZIP code from Compustat, and estimating the distance between these ZIP codes using the NBER ZIP Code Distance Database.

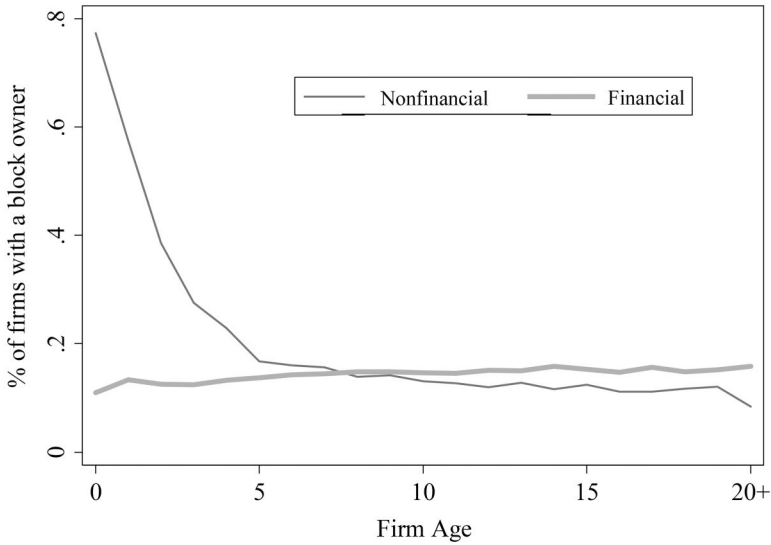


Figure 3
Company age and shareholder

The figure reports for the 2001–2014 period the average percentage of shares held by nonfinancial and financial blocks, as a function of firm age (i.e., the number of years the firm has been listed on Compustat with a nonmissing end-of-fiscal-year stock price as of the observation year).

these companies (e.g., [Coval and Moskowitz 1999](#); [Cumming and Dai 2010](#)). Collectively, these characteristics suggest that our sample of non 13F blockholders hold more focused, larger positions in smaller, geographically closer companies for longer periods.

To understand how financial versus nonfinancial blocks view their role in corporate governance, we first follow [Edmans, Fang, and Zur \(2013\)](#), and focus on how blocks self-identify. Specifically, in regulatory filings, blockholders must identify themselves either as active by filing form 13D or as passive by filing form 13G. [Table 2](#) reports that only 7.1% of the financial blockholders identify as active, while 45.4% of the nonfinancial blockholders identify as active shareholders, thus, nonfinancial blocks are at least 6 times more likely to self-identify as active.

To get a deeper sense of how different types of blockholders govern we extend our analysis from [Table 2](#) using four subcategories of blockholders: (1) individuals, which includes all individuals and family-owned firms (approximately half of these are executives); (2) hedge funds, which includes both hedge funds and private equity funds; (3) other private blocks, which includes private companies, public companies, nonprofit/government entities, public pension funds, firms' pension funds, and employee stock ownership plans; and (4) institutional blocks, which includes financial institutions

Table 2
Frequency of filings by blockholder type

Filing type	Investor type (2 groups)		Investor type (4 groups)				Investor horizon (financial)		Insiders/outside (nonfinancial)	
	Nonfinancial	Financial	Individual	Hedge funds	Other private	Institutional	Short term	Long term	Insiders	Outsiders
13D (%)	45.4	7.1	51.2	9.6	45.2	6.6	16.2	8.5	57.7	35.1
13G (%)	54.5	92.9	48.8	90.4	54.8	93.4	83.8	91.5	42.3	64.9
Total	88,729	119,164	38,036	91,403	40,039	38,344	25,590	40,160	29,770	53,262
13D/A (%)	48.3	12.0	49.0	16.7	55.5	9.1	28.6	11.3	60.0	39.8
13G/A (%)	51.7	88.0	50.1	83.3	44.5	90.9	71.4	88.7	40.0	60.2
Total	128,402	239,896	54,264	180,081	58,562	81,318	58,341	92,568	53,385	71,931

This table reports summary statistics on the frequency of 13D and 13G filings by nonfinancial and financial blocks during the 1998–2018 period. A *Nonfinancial* block is defined as a block that does not file a 13F, whereas a *Financial* block is defined as a block that files a 13F. *Individual* are individual blockholders; *Hedge fund* blocks includes hedge funds and private equity investors; *Other private* include blockholders who do not file a 13F filing, and do not fall under the *Individual* or *Other private* category; *Institutional* blocks are defined as investors who are required to file form 13F who do not fall into the remaining categories. *Short Term* (*Long term*) investors are *Financial* blockholders with average holding periods below (above) the sample median based on 13D filings only. 13D/A (13G/A) indicates amendments filed to the 13D (13G) form. *Insiders* (*Outsiders*) are blockholders that do (do not) file SEC form 3, 4, or 5 (in a given company). We use the latter classification to split the nonfinancial blocks. 13D/A (13G/A) indicates amendments filed to the 13D (13G) form.

managing investments for other investors (over 97% of these blocks are 13F filers). All these block categories are at defined at the investor level, and thus, are consistent across all blocks of a given investor (this is also true for the financial and nonfinancial categories). A finer categorization is possible, but this results in an unwieldy number of block types.

We choose these four categories based on prior studies that have shown each block type to be unique in certain ways. *Individuals* face fewer agency problems since they invest their own assets in the firm and are likely to be more hands-on and involved in the company’s daily operations (Agrawal and Knoeber 1996; Himmelberg, Hubbard, and Palia 1999). Individuals also include family firms, which are especially profitable when the family members are closely involved in the firm, for example, when a family member serves as the CEO (Villalonga and Amit 2006; Anderson and Reeb 2003). *Hedge funds* are likely to have intense discussions with management and promote the appointment of directors who represent their interests (Brav et al. 2008; Klein and Zur 2009).

Other private blocks primarily include private and public firm ownership. These blocks are often formed as part of a product-market relationship (Allen and Phillips 2000; Fee, Hadlock, and Thomas 2006). *Institutional* blockholders include both actively managed funds and passively managed funds (Dasgupta, Fos, and Sautner 2021). Our category of nonfinancial blocks essentially includes all *Individual* and *Other private blocks* and 58% of the

Table 3
Stated objectives in 13D filings broken down by investor type

Item 4 topic	2 investor types			4 investor types				Investor horizon		
	Nonfinancial	Financial	Difference (nonfin. - fin.)	Individual	Hedge funds	Other private	Institutional	Short-term	Long-term	Difference (ST - LT)
Maximize shareholder value	1.8	7.9	-6.1***	1.2	8.7	1.7	4.9	9.1	6.5	2.6***
Undervalued	2.5	20.3	-17.8***	1.8	19.7	2.7	10.0	27.8	11.3	16.5***
Max. sh. value / undervalued	4.0	25.6	-21.6***	2.8	26.1	4.0	13.5	33.8	16.0	17.8***
Economic/market/industry	16.1	37.5	-21.4***	11.5	43.0	18.3	17.6	51.1	21.7	29.4***
Capital structure	2.0	16.5	-14.5***	1.3	17.0	2.2	4.8	26.0	6.0	20.0***
Dividend	34.3	26.1	8.2***	37.7	29.3	31.6	21.6	30.7	21.7	9.0***
Repurchase	2.1	3.8	-1.7***	0.9	3.7	2.9	4.7	4.0	3.6	0.4***
Restructuring	1.5	10.1	-8.6***	0.8	10.6	1.8	2.1	17.3	2.6	14.7***
Elect/nominate	10.4	11.7	-1.3***	6.7	12.5	12.9	14.1	18.4	21.2	-2.8***
Vacancy	25.4	10.4	15.0***	30.1	11.8	22.2	12.8	11.8	11.4	0.4***
Elect/nominate/vacancy	32.8	19.8	13.0***	34.5	21.5	31.9	24.6	9.2	11.6	-2.4***
Operations	14.5	42.3	-27.8***	11.1	46.0	16.2	19.0	58.1	24.4	33.7***
Number of observations	29,754	6,637		12,958	6,693	12,543	1,936	3,391	2,897	

This table describes the stated objectives of blockholders, identified based on the most common one-, two-, three-, and four-word phrases used in item 4 (purpose of the transaction) of form 13D. Standard “stopwords” and boilerplate phrases are removed). Our sample includes all filings from the SEC website from 1998 to 2018. Investors are grouped into two categories in the first two columns based on whether they are *Nonfinancial* or *Financial* blocks. *Nonfinancial* blocks are held by blockholders that do not file a 13F form, while *Financial* blocks are held by blockholders that file a 13F form. The second set of columns present results for four block types: *Individual*, *Hedge fund*, *Other private blocks*, and *Institutional*. *Individual* are individual blockholders; *Hedge fund* blocks includes hedge funds and private equity investors; *Other private* include blockholders who do not file a 13F filing, and do not fall under the *Individual* or *Other private* category; *Institutional* blocks are defined as investors who are required to file form 13F who do not fall into the remaining categories. The final set of columns classifies *Financial* blockholders into short-term and long-term investors based on the mean investment horizon for a blockholder across all blocks requiring form 13D during the sample period. Short-term (long-term) investors are defined as those with mean investment horizon below (above) the median value in the sample. [Appendix B](#) specifies how each item 4 category is defined. * $p < .1$; ** $p < .05$; *** $p < .01$.

Table 4
Language use of stated objectives of 13D filings

Language measure	2 investor types			4 investor types				Investor horizon		Difference (ST - LT)
	Nonfinancial	Financial	Difference (com. - fin.)	Individual	Hedge funds	Other private	Institutional	Short-term	Long-term	
Specificity (%)	5.2	4.1	1.1***	4.8	4.2	5.5	5.0	3.8	4.6	-0.9***
Weak modal	7.1	11.3	-4.2***	6.7	11.7	7.2	9.3	12.2	10.3	1.9***
Strong modal	2.4	1.8	0.6***	1.8	2.0	3.1	2.1	1.6	2.0	-0.4***
Weak - strong modal	4.7	9.5	-4.8***	4.9	9.8	4.1	7.1	10.5	8.2	2.3***
Uncertainty	8.4	13.2	-4.8***	7.8	13.7	8.6	10.7	14.3	11.9	2.4***
Negative	8.8	7.7	1.1***	8.8	7.9	8.9	8.0	7.5	7.9	-0.5***
Positive	3.9	5.6	-1.7***	3.4	5.6	4.3	5.0	6.0	5.1	0.9***
Negative - positive	4.8	2.1	2.7***	5.4	2.3	4.6	3.0	1.4	2.8	-1.4***
N	30,353	6,716		12,958	6,693	12,679	1,955	3,391	2,897	

This table reports descriptive textual measures for item 4 of form 13D in which blockholders state the purpose of the transaction. Filings cover 1998 – 2018 and include all filings from the SEC website. *Specificity* is defined as the number of specific places, people, organizations, dates, times, and quantities using the Stanford Named Entity Recognizer (NER) as a percentage of all words. Additionally, we calculate and report wordcounts (per thousand words) using a set of word lists from the Loughran and McDonald (2011) dictionary to capture the language tone. The variables Weak Modal, Strong Modal, Uncertainty measures, Negative, and Positive are defined as the number of words from the corresponding word list divided by the total number of words. All values are multiplied by 1000. Investors are grouped into *Nonfinancial* or *Financial* blocks. *Nonfinancial* blocks are held by blockholders that do not file a 13F form, while *Financial* blocks are held by blockholders that file a 13F form. The second set of columns present results for four block types: *Individual*, *Hedge fund*, *Other private blocks* and *Institutional*. *Individual* are individual blockholders; *Hedge fund* blocks includes hedge funds and private equity investors; *Other private* include blockholders who do not file a 13F filing, and do not fall under the *Individual* or *Other private* category; *Institutional* blocks are defined as investors who are required to file form 13F who do not fall into the remaining categories. The final set of columns classifies *Financial* blockholders into short-term and long-term investors based on the mean investment horizon for a blockholder across all blocks requiring form 13D during the sample period. Short-term (long-term) investors are defined as those with mean investment horizon below (above) the median value in the sample.

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

Table 5
Governance mechanisms of financial and nonfinancial blocks

	Shark attack (1)	Shareholder proposal (2)	Say-on-pay (3)	Poison pill (4)	CEO tenure (5)	Outside directors (6)	Nonexec. meeting (7)
<i>Nonfinancial</i>	-0.007* (-2.01)	-0.026*** (-3.66)	0.012* (2.080)	-0.071** (-2.90)	1.939*** (5.810)	-0.026*** (-9.67)	-0.039*** (-4.70)
<i>Financial</i>	0.013*** (4.100)	-0.052*** (-4.20)	-0.008 (-1.48)	0.042** (2.880)	0.082 (.240)	0.017*** (5.240)	0.067*** (7.170)
<i>ln(Size)</i>	0 (.070)	0.096*** (22.750)	-0.006*** (-5.94)	-0.016*** (-3.99)	-0.292*** (-3.28)	0.011*** (12.310)	0.047*** (8.270)
<i>ROA</i>	0.000* (2.050)	-0.019 (-1.54)	0.011 (1.780)	-0.024 (-1.56)	2.065** (2.320)	0.000 (-0.76)	-0.011 (-1.17)
<i>Tobin's q</i>	-0.005*** (-6.42)	-0.019*** (-4.68)	0.007*** (4.890)	-0.001 (-0.14)	0.295** (2.950)	-0.006*** (-6.89)	-0.017*** (-4.41)
<i>ln(sigma)</i>	-0.031 (-0.52)	0.660* (2.030)	-0.667** (-3.12)	-0.417 (-1.24)	-11.553 (-1.31)	0.210** (2.470)	-0.327 (-0.82)
<i>R</i> ²	.02	.251	.033	.129	.054	.134	.123
<i>N</i>	47,203	16,992	6,606	22,935	19,852	24,892	27,478
Average	0.050	0.136	0.895	0.234	7.630	0.828	0.895

This table reports OLS regressions for the 2001–2014 period. The dependent variables measure a range of corporate governance practices (defined in [Appendix A](#)). In panel A the variable *Nonfinancial* is an indicator that equals one if the company is held by at least one nonfinancial block (a blockholder that does not file a 13F form), and *Financial* is an indicator that equals one if the company is held by at least one financial block (i.e., a blockholder that files the 13F form). In panel B *Individual* is a binary variable equal to one if the firm is held by at least one block held by an individual. *Hedge fund* is a binary variable equal to one if the firm is held by at least one hedge fund or private equity fund block. *Other private* is a binary variable equal to one if the firm is held by at least one non-13F filer block that is not an individual or a hedge fund block (e.g., a private company or a public company). *Institutional* is a binary variable equal to one if the firm is held by at least one financial institution that does not fall into the remaining categories. In both panels, year and industry fixed effects are included. Errors are clustered by company-year. All variables are defined in [Appendix A](#). *t*-statistics are reported in parentheses.

p* < .1; *p* < .05; ****p* < .01.

Hedge fund blocks, and the “financial” blocks include almost all (97%) of the *Institutional* blocks and 42% of the *Hedge fund* blocks.

We classify investors into these four categories using several criteria. First, we identify hedge fund investors by matching 13D filings to historical ADV filings using both names and addresses as well as phone numbers when possible. All registered investment advisors (RIAs) file form ADV with the SEC. The form includes investment style and client type, among other things, which can be used to identify hedge funds. When we find a match, we classify an investor as a hedge fund if at least half of the investment advisers’ clients are classified in the ADV filing as “High-Net-Worth Individuals” or “Other Pooled Investment Vehicles (e.g., Hedge Funds).”⁹ We then classify institutional blockholders as those who are required to file form 13F (excluding hedge funds). We then separate the remaining filings into individuals and other private investors based on the filer name. In the last step, we read

⁹ Our approach follows that of [Brunnermeier and Nagel \(2004\)](#), [Griffin and Xu \(2009\)](#), and [Ben-David, Franzoni, and Moussawi \(2012\)](#). In untabulated results, we use a more stringent threshold of 75% and find results that are very similar to those using the lower threshold.

Table 6
Discontinuities around index cutoffs
A. Ranking based on Russell's index weights

Bandwidth	[-250, 0] (1)	[0, 250] (2)	Diff (1)-(3) (3)	[-100, 0] (4)	[0, 100] (5)	Diff (4)-(5) (6)
Index funds total	5.74	7.41	-1.67	4.66	7.81	-3.15
Nonfinancial blocks total	8.90	3.96	4.94	18.24	2.81	15.43
Financial blocks total	20.60	23.33	-2.73	22.00	22.55	-0.55
All financial total	72.45	77.58	-5.13	66.22	78.93	-12.71
Mutual funds total	25.66	29.80	-4.14	22.20	31.43	-9.23

B. Ranking based on CRSP market capitalization

Bandwidth	[-250, 0] (1)	[0, 250] (2)	Diff (1)-(3) (3)	[-100, 0] (4)	[0, 100] (5)	Diff (4)-(5) (6)
Index funds total	6.11	6.77	-0.66	6.24	6.47	-0.23
Nonfinancial blocks total	6.98	8.96	-1.98	7.28	8.70	-1.42
Financial blocks total	20.65	20.71	-0.06	24.00	20.05	3.95
All financial total	73.98	73.90	0.08	73.60	74.52	-0.92
Mutual funds total	26.48	28.18	-1.7	26.26	27.83	-1.57

This table reports holdings of different types of shareholders just around the Russell 1000-Russell 2000 index cutoffs for the 2001–2014 period. Panel A ranks firms based on the Russell's index weights. For example, columns 1 and 2 report the holdings of the 250 firms ranked at the bottom of the Russell 1000 index (column 1) compared to the 250 firms ranked at the top of the Russell 2000 index (column 2). In panel B companies are ranked using CRSP market capitalization. *Index funds total* is the total percentage of shares held by index funds, *Nonfinancial blocks total* is the total percentage of shares held by nonfinancial blockholders, *Financial blocks total* is the total percentage of shares held by financial blockholders, *All financial total* is the total percentage of shares held by all financial institutional shareholders regardless of whether they are blockholders, and *Mutual funds total* is the total percentage of shares held both by index and by nonindex funds.

through the 13D forms filed by other private blockholders to spot check for misclassifications (e.g., hedge funds that don't file an ADV).¹⁰ We have posted on WRDS a detailed data set that includes all these classifications. Our blockholder classification data set is available on WRDS for free. The data set includes blockholder name, CIK, a 4-category classification (individuals, hedge funds, financial institutions, and other private entities), and a 2-category classification (whether the block is financial or nonfinancial block).

The results in Table 2 indicate a particularly sharp difference in the frequency individuals self-identify as activist by filing a 13D form (51.2% identify as active) as compared to financial institutions (6.6% identify as active). These two types of blocks represent, perhaps, the two extremes in terms of the agency conflict a block is likely to encounter. Large blocks held by individual investors are likely to face smaller agency conflicts, and this is likely reflected in their self-perception as active shareholders. On the other

¹⁰ The 4 block-type classifications map into the 2-block-type classification as follows: All "Individual" and "Other private blocks" (from the 4 block-type classification) are mapped into the "Nonfinancial" blocks category in the 2-block-type classification. All "Institutional" blocks are mapped to the "Financial" blocks category in the 2-block-type classification. 55% of the blocks classified as "Hedge funds" blocks are mapped to the "Financial" blocks category in the 2-block-type classification, while the remaining 45% are mapped to the "Nonfinancial" blocks category.

Table 7
Replication of prior studies

	<i>Index fund total</i>	<i>Activist event occurred</i>		<i>Dual class</i>		<i>Outside directors</i>	
	First stage	Second stage		Second stage		Second stage	
	(original) (1)	(original) (2)	(alternative) (3)	(original) (4)	(alternative) (5)	(original) (6)	(alternative) (7)
<i>R2000</i>	0.0207*** (0.003)						
<i>Index fund total</i>		-1.044*** (-2.241)	-1.841* (-1.82)	-5.873*** (-3.375)	-2.321 (-1.220)	1.209*** (2.772)	1.140 (1.48)
<i>NonFinBlocks</i>			0.007 (0.210)		-0.258** (2.040)		-0.086** (-2.215)
<i>NonFinBlocks* R2000</i>			0.059 (0.970)		0.236* (-1.852)		0.005 (0.100)
Bandwidth		250	250	250	250	250	250
AGK (2016) reference	Tab. 2, col. 2	Tab. 9, col. 3		Tab. 7, col. 3		Tab. 4, col. 3	
<i>R-squared</i>	.318	.014	.016	.058	.067	.204	.211
<i>N</i>	2,267	2267	2277	2,172	2,181	2,196	2,205

This table presents the results of two-stage least squares estimates of the effect of index ownership on governance outcome variables. Our analysis follows Appel, Gormley, and Keim (2016). *Index fund total* is the total percentage of shares held by index funds. *NonFinBlocks* is the total fraction of nonfinancial blocks (a non-financial block is equal to at least 5% of the company's outstanding shares, and does not file a 13F). *R2000* is a dummy variable equals to one if the observation is in the *R2000* index; zero if it is in the Russell 1000. Column 1 reports the first-stage regression while columns 2–7 report the second stage. In models 1, 2, 4, and 6, we follow the original specification using *R2000* as an instrument for *Index funds total*. In columns 3, 5, and 7, we augment the second-stage regression with *Blocks* and *Blocks*R2000*. All specifications include a third-order polynomial expansion of log market capitalization along with the estimate float-adjusted market value of equity and year fixed effects. *Activist event occurred* is equal to one if an activist event occurred and zero otherwise following Brav et al. (2008). *Dual class*, which is equal to one if the company has dual class shares; zero otherwise. *Outside directors* is the fraction of outside directors. All specifications are for the 2009–2013 period for which we were able to obtain the float-adjusted market cap as provided by Russell. *t*-statistics are reported in parentheses. **p* < .1; ***p* < .05; ****p* < .01.

hand, financial blocks involve another layer of separation, and it seems reasonable to assume a higher marginal cost of monitoring resulting in higher equilibrium agency conflicts. As a result, financial blocks with higher agency conflicts and higher coordination costs may be more likely to govern through trading.

Next, to capture heterogeneity in the investment horizon of financial blockholders, we define the investment horizon for all 13D filings as the length of time until the investor's holding drops below the 5% threshold. We then calculate the average horizon for an investor across all investments to classify each blockholder. We define short-term (long-term) investors as those with an average investment horizon below (above) the median.¹¹

Our results show that heterogeneity exists within the financial blocks based on their investment horizon: long-term financial blocks shift in the direction of nonfinancial blocks (relative to short-term financial blocks). However,

¹¹ For investors that own at least 5% at the end of the sample, we list 1/1/2019 as the end of the investment horizon. In unreported analysis we drop all blocks that have not been sold yet and obtain similar results.

Table 8
Market response to block entries depending on the type of block and firm
A. Unconditional results

	Nonfinancial	Financial	Individual	Other private	Hedge funds	Institutional	Short term	Long term
Mean abnormal return	0.012*** (0.002)	0.013** (0.002)	0.015*** (0.024)	0.007*** (0.002)	0.015*** (0.002)	0.014*** (0.003)	0.013*** (0.002)	0.013*** (0.003)
N	7,880	3,877	3,082	3,895	3,944	836	2,103	1,546

B. Results by volatility

Characteristic	Nonfinancial	Financial	Individual	Other private	Hedge funds	Institutional	Short term	Long term
High volatility	0.017*** (0.003)	0.015*** (0.004)	0.023*** (0.004)	0.009*** (0.003)	0.022*** (0.005)	0.011 (0.009)	0.016*** (0.005)	0.013** (0.006)
Low volatility	0.003* (0.002)	0.011*** (0.002)	0.004 (0.003)	0.002 (0.003)	0.010*** (0.002)	0.012*** (0.004)	0.010*** (0.002)	0.011*** (0.003)
Difference high - low	0.014*** (0.004)	0.004 (0.004)	0.019*** (0.005)	0.007*** (0.005)	0.012*** (0.006)	-0.001 (0.009)	0.006 (0.005)	0.003** (0.006)
N	5,155	2,287	2,055	2,568	2,322	497	1,231	915

C. Results by size

Characteristic	Nonfinancial	Financial	Individual	Other private	Hedge funds	Institutional	Short term	Long term
Large	-0.001 (0.002)	0.013*** (0.002)	0.004 (0.004)	-0.002 (0.003)	0.010*** (0.002)	0.013*** (0.004)	0.013*** (0.002)	0.012*** (0.003)
Small	0.017*** (0.002)	0.018*** (0.004)	0.022*** (0.004)	0.011*** (0.003)	0.022*** (0.003)	0.016 (0.010)	0.016*** (0.005)	0.020*** (0.006)
Difference large - small	-0.018*** (0.003)	-0.005 (0.004)	-0.017 (0.006)***	-0.013 (0.005)	-0.012 (0.004)***	-0.003 (0.011)	-0.003 (0.005)	-0.008 (0.007)
N	5,295	2,249	2,187	2,520	2,317	520	1,183	954

This table reports DGTW-adjusted abnormal returns during the [0, 5] window around 13D filings. The results are broken down by the block type that entered (as indicated in the top row), unconditionally, and by one additional firm characteristic: volatility, firm size, or (as indicated in the first column). Definitions for variables are reported in [Appendix A](#). *Nonfinancial* blocks are held by blockholders that do not file a 13F form, *Financial* blocks are held by blockholders that do file a 13F form, *Individual* blocks are held by individuals, *Hedge fund* blocks are held by hedge funds, *Other private* blocks are held by a non13F filer block that is not an individual or a hedge fund block (e.g., a private company or a public company), and *Institutional* blocks are held by a financial institution who does not fall into the remaining categories. The final two columns classify *Financial* blockholders into short-term and long-term investors based on the mean investment horizon for a blockholder across all blocks requiring form 13D during the sample period. Short-term (long-term) investors are defined as those with mean investment horizon below (above) the median value in the sample. Standard errors are reported in parentheses. * $p < .1$; ** $p < .05$; *** $p < .01$.

compared to the difference observed for long-term financial blocks versus short-term financial-blocks, substantially larger differences are observed for financial versus nonfinancial blocks. This is evident, for example, with respect to the frequency 13D filings are filed: [Table 2](#) shows that of all the 13D and 13G filings filed by short-term financial blocks, 16.2% of the filings

Table 9
Structural model estimates of the components of announcement returns

A. Nonfinancial blockholders' 13D filings

13D filings	All firms (N=4,736)		Small (N=3,574)		Large (N=1,162)		Low volatility (N=1,633)		High volatility (N=3,103)	
	(1) Mean	(2) SD	(3) Mean	(4) SD	(5) Mean	(6) SD	(7) Mean	(8) SD	(9) Mean	(10) S.D.
Mean return (%)	6.42	4.93	6.67	4.35	4.45	4.36	1.78	3.31	6.77	4.83
Stock picking (%)	1.41	3.59	1.11	4.01	0.74	3.00	1.06	2.26	1.23	4.10
Activism (%)	5.01	3.31	5.56	1.93	3.71	3.23	0.72	2.32	5.54	2.52
Selection (%)	0.75	0.54	1.38	0.48	2.52	0.98	3.35	1.35	1.64	0.54

B. Financial blockholders' 13D filings

13D filings	All Firms (N=3,967)		Small (N=2,451)		Large (N=1,516)		Low Volatility (N=1,877)		High Volatility (N=2,090)	
	Mean	S.D.	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mean return (%)	4.72	4.19	5.49	5.09	1.52	4.09	1.90	5.31	5.09	5.75
Stock picking (%)	0.53	3.32	1.14	9.85	0.20	3.69	0.20	10.61	0.23	7.99
Activism (%)	4.19	6.75	4.35	12.16	1.33	5.70	1.70	14.41	4.86	10.68
Selection (%)	0.79	0.47	1.60	0.88	0.71	0.45	3.77	2.28	1.19	0.63

C. Nonfinancial blockholders' 13G filings

13G filings	All firms (N=8,617)		Small (N=5,684)		Large (N=2,933)		Low volatility (N=3,139)		High volatility (N=5,478)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mean return (%)	-6.16	20.62	1.81	20.79	-17.38	37.65	-9.46	16.93	1.33	30.66
Stock picking (%)	2.21	3.72	2.31	4.28	0.56	2.77	1.03	2.18	2.14	4.32
Selection (%)	0.29	0.16	0.65	0.33	0.23	0.19	0.13	0.09	0.70	0.37

D. Financial blockholders' 13G filings

13G filings	All firms (N=52,617)		Small (N=23,244)		Large (N=29,373)		Low volatility (N=28,294)		High volatility (N=24,323)	
	Mean	SD	Mean	SD	Mean	Mean	SD	Mean	SD	Mean
Mean return (%)	-0.64	6.72	-3.43	11.32	-3.50	4.88	-16.30	18.76	-1.55	8.42
Stock picking (%)	0.52	3.37	0.83	4.38	0.39	2.60	0.66	2.34	0.48	4.49
Selection (%)	0.03	0.05	0.08	0.11	0.01	0.03	0.02	0.03	0.07	0.10

This table summarizes estimates of the expected returns from filing Schedule 13D, or a Schedule 13G, as well as the three components of the announcement returns. The total returns for each announcement i , conditional on a 13D filing, include a stock picking effect, a treatment effect from activism, and a selection effect. For 13G filings, expected returns are decomposed into stock picking and selection effects. These effects are estimated for each announcement in the sample, taking as given the target and blockholder characteristics, using the estimates of the structural model presented in Table D.1 in Appendix D. Estimation of the components follows table 6 in Albuquerque, Fos, and Schroth (2022). Our estimates of the model are performed separately for nonfinancial blocks (panels A and B) and financial blocks (panels C and D). Panels A and C report results for 13D filings, while panels B and D report results for 13G filings.

were 13D filings compared to roughly half that amount (8.5%) for long-term financial blocks. However, larger differences exist with respect to financial versus nonfinancial blocks. Of all the 13D and 13G filings filed by financial

blocks, 7.1% are 13D filings compared to 45.4% for nonfinancial blocks. Thus, nonfinancial blocks are six times more likely than financial blocks to file 13D filings.

Bushee (1998, 2001) demonstrates how financial institutions' different investment horizons affect the companies in which each institution chooses to invest. While those studies focus on firms that file form 13F, we consider the full spectrum of blockholder types, that is, not only financial blocks. As we show in Table 2, while the frequency of short-term versus long-term financial blocks filing 13Ds varies (16.2% vs. 5.8%, respectively), the variation is larger for financial versus nonfinancial blocks (7.1% vs. 45.4%, respectively).

Finally, in the last two columns of Table 2 we further classify nonfinancial blockholders as insiders or outsiders. We identify insiders as those filing SEC form 3, 4, or 5 (in a given company), and outsiders as those that do not. We find that nonfinancial insiders file form 13D 57.7% of the time compared to 35.1% for outsiders. Perhaps not surprisingly, nonfinancial insiders are 1.6 times as likely to self-identify as an activist. Thus, we observe substantially smaller differences (in terms of the magnitude) between nonfinancial insiders versus nonfinancial outsiders relative to the differences observed between nonfinancial versus financial blocks.

2. How Do Blockholders State They Will Govern?

To test whether and how different types of blocks view their governance roles differently, we conduct a textual analysis of regulatory filings where blockholders are required to describe how they intend to govern. These statements provide clear, self-reported insight on how different types of blocks view their governance role and how they intend to govern.

Our analysis is based on firms submitting form 13D where they are required to discuss the "Purpose of Transaction" (item 4). This is arguably the most important feature of a 13D filing and distinguishes it from a 13G filing, which does not include a "Purpose of Transaction" item. To conduct our analysis, we first assign filings into categories based on the general stated goals in item 4. We measure the most common one-, two-, three-, and four-word phrases. After discarding a standard dictionary of "stopwords" and boilerplate phrases, we identify a set of topics related to valuation, capital structure, strategy, and governance.¹² We then search through the text of item 4 in the full set of 13D filings using the set of key words for each topic. For example, the topic "maximize shareholder value" includes all variations of those words (e.g., "maximizing shareholder value," "increasing shareholder value," or "maximize the value to shareholders,"). After classifying filings

¹² Stopwords are the most common words used in English (e.g., "the," "and," or "of") that are typically removed before performing a textual analysis.

into topics, we read through several random filings that fall under each topic to cross-check the accuracy of our classification. (Appendix B provides details on how we identify each topic.)

In Table 3, we report the types of phrases each blockholder category uses in item 4 of their 13D filings. Only 4% of nonfinancial blockholders use the terms “maximizing shareholder value” or “undervalued.” In stark contrast, financial blockholders use these terms in 25.6% of their 13D filings, that is, 6.4 (25.6%/4%) times as frequently. Results are similar for the terms “maximizing shareholder value” and “undervalued” separately. Financial blocks are also more likely to discuss capital structure (2% versus 16.5%, respectively), repurchase activity (2.1% versus 3.8%, respectively) and restructuring (1.5% vs. 10.1%, respectively). These differences are all statistically significant at the 1% level. A recurring theme in these results is that financial blocks appear to be more focused on objective financial metrics.

Our results also reveal that nonfinancial blockholders are more likely to be directly engaged in managerial choices. For example, 34.3% of the nonfinancial blocks discuss dividends, while only 26.1% of the financial blocks do so. Nonfinancial blocks are also more focused on appointing directors — they use the words elect, nominate, or vacancy (words primarily used when discussing the appointment of directors to the board) in 32.8% of the filings, while financial blocks do so in only 19.8% of the filings.

In our next set of tests, we dig deeper into the subcategories of blockholder types. Again, we observe large differences in the governance practices of firms with individual blocks, versus those with an institutional block. For example, institutional blockholders are 4 times more likely to mention “maximizing shareholder value” or “undervalued” than are individuals. In addition, institutions are almost 4 times as likely as individuals to discuss the firm’s capital structure in Item 4. Individual blockholders are also the most likely (in more than a third of their filings) to use the words “elect”, “nominate”, or “vacancy”, which are typically used to discuss the appointment of board members.

The differences we document between hedge funds and individuals are particularly large. For example, hedge funds are 9 times more likely to mention “maximizing shareholder value” or “undervalued,” and 13 times more likely to discuss restructuring. These results are consistent with those of Brav et al. (2008), who show the activist role some hedge funds take and their involvement in capital structure changes, and Clifford and Lindsey (2016), who show that firms with active hedge fund blocks are more likely use performance-based compensation. The subsample analysis of short-term and long-term financial blockholders in the final set of columns indicates that financial investors with longer horizons use language that looks closer to Nonfinancial blockholders than short-term investors.

If nonfinancial blocks are particularly active shareholders, as their frequent 13D filings imply, then item 4 should be more specific about the actions they

intend to take. To test this hypothesis, we construct a measure of the specific language tone used in item 4. We calculate a measure of specificity that captures whether boilerplate language is used (low specificity), or alternatively, whether the text alludes to specific places, people, organizations, dates, times, and quantities (high specificity). We use the Stanford Named Entity Recognizer (NER) to count the number of occurrences of these entities. Specificity is defined as the total number of named entities in item 4 divided by the total number of words in item 4.¹³ Additionally, we calculate word counts using a set of word lists from the Loughran and McDonald (2011) dictionary to capture the language tone in financial disclosures. We count words from the positive, negative, weak modal, strong modal, and uncertainty word lists and divide by the total number of words in item 4.

Table 4 presents our results. The first two columns present differences in the language used in item 4 of the 13D filings of nonfinancial versus financial blockholders. The differences are all statistically significant at the 1% level. Consistent with our hypothesis, as the variable *Specificity* indicates, nonfinancial blockholders use more specific language and tend to include more references to people, organizations, places, quantities, and dates. In other words, nonfinancial blocks appear to be clearer and more specific about their plans, while financial blockholders include more boilerplate and vague language. While an average of 4.1% used by financial blocks describe specific people, organizations, places, quantities, and dates, such words represent in 5.2% of nonfinancial blocks' disclosures, that is, 26.8% more specific words.

As an example of a nonfinancial block's filing with a high specificity score (equal to 23.8%), consider the 13D filing by Arturo "Jake" Sanchez, when revealing the purchase of a block in Medina International Holding in 2015 (presented in Appendix C). The filing describes in great detail how Mr. Sanchez plans to alter board seats, retire debt, issue shares, change the company name, conduct a reverse split, and handle the disposition of a specific asset (e.g., a boat). In contrast, panel B of Appendix C describes an example of a filing by a financial block with a low specificity score. The filing by KLS Diversified Asset Management revealing a block purchase in Penn Virginia Corporation contains no details or specific actions at all. It frequently includes vague boilerplate language and, correspondingly, has a low specificity score (0.88%).

In addition to being more specific about their plans, nonfinancial blockholders also use more *Strong modal* words (e.g., will, must, can) and fewer *Weak modal* words (e.g., "hedge words" like may, might, or could). Once again, these results indicate that nonfinancial blockholders make a stronger commitment in their statements, while financial blocks prefer to be more

¹³ A few recent papers use this measure of specificity. Hope, Hu, and Lu (2016) find that more specific disclosures are associated with a larger market responses and improve the ability of analysts to assess fundamental risk. Cazier, McMullin, and Treu (2018) find that less specific (i.e., more boilerplate) risk factor disclosures limit liabilities in shareholder lawsuits and lead to less scrutiny by the SEC.

cautious. This conclusion is further strengthened by the finding that, relative to nonfinancial blocks, financial blocks are significantly more likely to use more cautious language. Additionally, financial blockholders tend to use more *Positive* words and fewer *Negative* words than nonfinancial blockholders, perhaps attempting to portray themselves in a positive light. The final set of results present differences in word usage across short- versus long- financial blockholders. While there are statistically significant differences in each category, these differences are all smaller than those documented for financial versus nonfinancial blocks.

Taken together, our results suggest that nonfinancial blocks' filing language emphasizes more specific and active corporate governance while financial blocks discuss vague goals like general financial performance. Financial blocks tend to use positive, standard, vague, and cautious language in their filings. Put differently, financial blocks tend to use the filings as an opportunity to cautiously portray themselves in a positive light, without stating specifics about the actions they intend to take. Combined with our findings that nonfinancial blockholders hold a single large block in a smaller and more local company, our textual analysis supports the argument that nonfinancial blocks tend to prefer hands-on tailored monitoring, while financial blocks focus on generic short-term measures that are aimed at "maximizing shareholder value." This is, of course, not to say that nonfinancial blocks don't want to maximize shareholder value. We assume all shareholders want to maximize wealth but may have heterogeneous beliefs about how to do so. What drives financial blocks to use this specific term so frequently could come simply from its somewhat vague and passive association with short-term stock price improvement.

We have posted a data set on WRDS summarizing the fields discussed above for each 13D and 13G filing.

3. The Governance Mechanisms of Financial and Nonfinancial Blocks

In this section, we explore the relationship between different blockholder types and the distinct corporate governance mechanisms they employ. Specifically, we expect that firms with nonfinancial blockholders exert tighter control over the companies they hold and rely less on formal monitoring mechanisms compared to firms with financial blockholders. To test this, we run regressions that describe correlation between ownership structure and corporate governance practices. While these correlations cannot definitively identify whether certain blockholders choose to invest in a company due to existing governance practices or if they introduce new practices themselves, they provide descriptive insights into the governance by different blockholders, as suggested by [Edmans and Holderness \(2017\)](#).

In [Table 5](#), we present regression results that include dummy variables to indicate the presence of a financial and/or a nonfinancial block relative to the

baseline category of no block ownership. All regressions control for size (log market capitalization), ROA, Tobin's q (market-to-book), and return volatility (log standard deviation of daily returns), and include year and industry fixed effects. We use the most recent independent variables available prior to the date of the dependent variable. All variables discussed in this section are defined in [Appendix A](#). Standard errors are double clustered by year and firm.

We begin our analysis in [Table 5](#) by investigating how the probability for a *Shark attack*, that is, that the company is targeted by an activist (in the prior year) is correlated with whether the firm is held by a financial block or a nonfinancial block. The results in [Table 5](#), column 1, show that companies with a nonfinancial block are 14% ($-0.007/0.05$) less likely to be targeted by a *Shark attack* (0.05 is the mean frequency of a *Shark attack*, as indicated in the last row of [Table 5](#)). [Table 5](#), column 2, shows that companies with a nonfinancial block are 19.1% ($-0.026/0.136$) less likely to receive a shareholder-initiated proposal (*Shareholder proposal*). Thus, results in columns 1 and 2 suggest that when a nonfinancial block is present, companies are less likely to be targeted by an external activist that attempts to govern the company.

Our next set of findings are also consistent with this interpretation. The fraction of votes cast in support of management on *Say-on-pay* proposals ([Table 5](#), column 3) increases when a nonfinancial block is present. We find similar (unreported) results for other management proposals that represent forms of external monitoring like appointing directors. These findings further suggest that firms with a nonfinancial block are more immune from external monitoring.

Firms with a nonfinancial block are less likely to have takeover defenses: They are 7.1% less likely to have a *Poison pill* ([Table 5](#), column 4). In addition, companies with nonfinancial block are likely to have longer *CEO tenure* ([Table 5](#), column 5), which prior studies have argued indicates entrenchment (e.g., [Hermalin and Weisbach 1991](#); [Berger, Ofek and Yermack 1997](#)). In similar spirit, nonfinancial companies have fewer outsiders ([Table 5](#), column 6), which may allow nonfinancial blocks to maintain tighter control. Finally, [Malenko \(2014\)](#) stresses that board meetings that exclude CEOs and insiders (*Nonexecutive meetings*) are important for maintaining healthy governance for the firm. However, we find that firms with a nonfinancial blockholder are much less likely to hold *Nonexecutive meetings* ([Table 5](#), column 7).

The recurring theme in these regressions is that nonfinancial firms have distinct and different governance practices. Overall, it appears that firms with nonfinancial blockholders employ fewer formal mechanisms for external monitoring which likely reflect a greater alignment between shareholders and managers resulting in lower agency costs. On the surface, firms with nonfinancial blockholders do not appear to follow what are often considered to be “best practices” for corporate governance. In unreported results, we

repeat our analysis for the four blockholder categories described above: individuals, hedge funds, other private blocks, and institutional blocks. The results show that firms with individual blocks typically have opposite governance patterns relative to firms with institutional blocks.

Broadly, our results support the hypothesis that different blockholders, with different exposure to agency conflicts, are likely to govern differently. Firms with a financial block are more likely to have formal governance practices that offer shareholders explicit rights. Firms with a nonfinancial block do not appear to rely on formal generic governance. Of course, our results for nonfinancial blockholders could reflect greater agency problems if the lower use of external governance mechanisms reflects successful pressure to avoid monitoring in order to consume perquisites and other rent seeking behavior. However, in unreported analysis, we find no differences in operating performance or long-run stock market performance between portfolios with firms that have financial versus nonfinancial blockholders. If there are persistent difference in agency costs between blockholder types, they seem to be incorporated in the stock price.

4. Identification Problems Using the Russell Discontinuity

In the previous section, we find that nonfinancial blockholders exhibit long-term and stable ownership positions. These blocks are of particular interest to many capital market participants because they are often considered to be illiquid. Because they are closely held, these shares are unlikely to be available for trading, at least in the short run. Consequently, many index providers construct “float-adjusted” market capitalization measures by excluding shares owned by insiders, family members, and other nonfinancial blockholders. This is particularly evident in the construction of Russell indices, where index weights are determined by market capitalization, but only after removing positions held by directors, senior executives, managers, and the nonfinancial blockholders we analyze.

These float adjustments to the Russell index portfolio weights are strongly correlated with governance. For example, consider the Walmart corporation where large blocks are not available for trading because approximately 40% of the shares have consistently been held by the Walton family since Walmart has become public. A straight market capitalization number might give a false sense of how many shares are actively liquid. However, a number of studies use discontinuities in ownership patterns around Russell indexes to study the effect of ownership on corporate governance (e.g., [Boone and White 2015](#); [Appel, Gormley, and Keim 2016, 2018](#); [Crane, Michenaud, and Weston 2016](#)).

In this section, we describe how our data are specifically informative in revealing a basic problem with this quasi-experimental setting. As we show, the results of past studies that rely on plausibly exogenous variation in passive

ownership around the Russell threshold disappear once we account for non-financial block ownership.

The research design using Russell index thresholds is seemingly simple. At the end of June each year, Russell ranks all firms based on their total market capitalization. The largest 1,000 firms are assigned to the Russell 1000 index while the next 2,000 firms (firms ranked 1,001 to 3000) are assigned to the Russell 2000. After this assignment, Russell determines (as of July 30th) the portfolio weights within each index after float-adjusting the market capitalization. The float adjustment essentially excludes all nonfinancial blocks (Russell 2023).¹⁴ Russell then ranks the firms within each index based on the float-adjusted market capitalization and assigns each stock portfolio weights relative on the company's float-adjusted market capitalization.

Many mid-cap institutional owners benchmark to the Russell indexes, creating trading pressure for stocks at the top of the Russell indexes, because they have larger portfolio weights in the index, while having very little demand for stocks at the bottom of the Russell indexes. Because there is little difference in firm size very near the Russell 1000-2000 cutoff, this quasi-experimental setting that compares firms at the bottom of Russell 1000 to those at the top of Russell 2000 could create “as good as random” variation in institutional ownership, supposedly based on a mechanical index construction rule (the weights of each stock within the index around the cutoff). Prior studies (e.g., Chang, Hong, and Liskovich 2014; Appel, Gormley, and Keim 2016; Crane, Michenaud, and Weston 2016) have shown passive/institutional ownership is larger at the top of the Russell 2000 than at the bottom of the Russell 1000. Since the trading pressure around the Russell 1000-2000 cutoff comes from passive indexes/institutional shareholders, prior studies have interpreted variation in governance practices around this cutoff as a causal effect of passive/institutional ownership.

We find that the float adjustment of nonfinancial blocks is large. Consider Figure 1, panel A, which presents a plot of the total proportion of shares held by nonfinancial blockholders against the Russell index ranking based on Russell's actual index ranks. The effect is visually obvious. Firms just to the left of the cutoff have a large fraction of shares held by nonfinancial blockholders while firms at the top of the Russell 2000 (just to the right) have very little. The discontinuity is roughly 30% of the shares outstanding. Importantly, the float adjustment pushes firms with large, nonfinancial block ownership to the bottom of the Russell 1000 and pushes firms with very little nonfinancial block ownership to the top of the Russell 2000. Thus, distance to

¹⁴ As described in Russell (2023), here are some examples of stocks excluded in the float adjustment calculation: shares directly owned by municipal and local governments, shares held by directors, senior executives and managers of the company, by companies with which the latter are affiliated with, shares held within employee share plans, shares held by public companies or by nonlisted subsidiaries of public companies, and shares held by an investor or an investment company/ fund for strategic reasons. We note that detailed description of the float adjustment can also be found in Appel et al. (2016) and Crane, Michenaud, and Weston (2016).

the threshold is not as good as random but is instead a direct function of nonfinancial block ownership.¹⁵

Panel B of [Figure 1](#) plots index funds ownership against Russell's float-adjusted ranks. The difference in nonfinancial blocks (panel A) dwarfs the difference in index fund ownership (panel B). As panel B of [Figure 1](#) demonstrates, the discontinuity of index funds is only around 2% of the firm's shares, less than a tenth of the 30% discontinuity for nonfinancial blocks. Thus, different governance patterns documented in prior studies on either side of the Russell cutoff could be driven not only by index funds (as prior studies have argued) but also by nonfinancial blocks.

Panels A–C of [Figure 2](#) show that the discontinuity in nonfinancial blocks exists for individuals, hedge funds and other private blocks separately. Notably, we do not find a discontinuity for institutional block ownership around the Russell cutoff.¹⁶ These figures further highlight that the largest discontinuity around the Russell index cutoff is nonfinancial block ownership.

Panel A of [Table 6](#) presents the descriptive statistics corresponding to [Figures 1](#) and [2](#). This table presents the ranking of firms based on Russell's index weights and reports the ownership by different types of shareholders for the 250 and 100 firms ranked at the bottom of the Russell 1000 index. As reported in column 1 (4), the 250 (100) firms with the smallest weights in the Russell 1000 have 5.74% (4.66%) of the outstanding shares held by index funds. Column 2 (5) reports that for the firms in the top of the Russell 2000 index, 7.41% (7.81%) are held by index funds. Similar patterns are reported in panel A of [Table 6](#) for the total fraction of shares held by financial institutions. These large differences are obviously the underlying motivation for the use of the Russell setting.

However, our analysis reveals a confounding and substantially larger difference in nonfinancial block ownership. As column 1 (4) of panel A of [Table 6](#) reports, the 250 (100) firms with the smallest weights in the Russell 2000 have 8.9% (18.2%) of their shares held by a nonfinancial block, while the corresponding figure for firms at the bottom of the Russell 1000 is only 3.96 (2.81%), as reported in in column 2 (5).¹⁷ Thus, as [Table 6](#), column 6, reports, when comparing the 100 companies on each side of the Russell 1000-2000 cutoff, in absolute terms, the discontinuity for index funds is

¹⁵ Some studies acknowledge that the float adjustment may contaminate identification, and therefore also report analysis by sorting the firms using unadjusted market capitalization, as opposed to the Russell weights. However, our analysis presented in panel B of [Table 6](#), shows little variation in the holdings of index funds around the Russell cutoff when firms are ranked based on the CRSP market capitalization (6.11% versus 6.77% for the 250 firms at the bottom of the Russell 1000 compared to the 250 firms at the top of the Russell 2000). Nonetheless, when firms are ranked by the unadjusted market capitalization the largest difference observed around the Russell cutoff is for nonfinancial blocks.

¹⁶ In unreported analysis we do find a discontinuity in the total fraction of shares held by financial institutions, consistent with [Boone and White \(2015\)](#) and [Crane, Michenaud, and Weston \(2016\)](#).

¹⁷ To provide a comprehensive picture, [Table 6](#) also reports figures for the total fraction of shares held by financial institutions who each hold a 5% block, financial institutions, and mutual funds.

3.15%, while for nonfinancial blocks it is 15.43%, that is, almost 5 times as large.

The difference in ownership patterns is economically large and alters the interpretation of the findings of prior studies. Consider, as an example, the results in Appel, Gormley, and Keim (2016), who argue that passive investors monitor actively. Specifically, they find that firms in the top of the Russell 2000 are more likely to be governed via publicly observable means. However, as we show, firms in the bottom of the Russell 1000 index have substantially larger nonfinancial block ownership. Because of the latter finding, it is no longer clear whether passive index funds take a more active role (as Appel, Gormley, and Keim [2016] argue), or whether nonfinancial blockholders are less likely to engage in external monitoring because they monitor quietly behind the scenes. The large wedge in nonfinancial block ownership confounds the interpretation of result that have been previously attributed to a substantially smaller wedge in index/ institutional ownership.

Dividend payments are another example. Crane, Michenaud, and Weston (2016) argue that institutions cause firms to disgorge more cash. However, given the large discontinuity in nonfinancial block ownership around the Russell cutoff, their findings may also be interpreted as evidence that nonfinancial blockholders pay less dividends because the marginal value of external monitoring is smaller for closely held firms. Either way, agency costs drive dividend payments, but the mechanism at play is different. Similarly, Boone and White (2015) find that firms with higher institutional ownership disclose more information, but their findings could also be interpreted as evidence that firms with nonfinancial blockholders disclose less information.

We test whether the block ownership patterns we uncover alter the results of past Russell studies. To this end, we replicate the analysis of Appel, Gormley, and Keim (2016), henceforth “AGK.” It is important to note that if there is no clear identification in this setting, there is no way to “control” for the endogeneity of nonfinancial and/or financial/index ownership without adding some additional source of identification that is exogenous to both nonfinancial and financial/index ownership. Our analysis in this section is intended to describe how robust the results of prior studies are to relaxing the assumption of local continuity around the Russell threshold. We start by following AGK in estimating a first-stage regression as in:

$$Passive\%_{it} = \eta + \lambda R2000_{it} + \sum_{n=1}^N \chi_n [\ln(Mktcap_{it})]^n + \sigma \ln(Float)_{it} + \delta_t + u_{it}, \quad (1)$$

where $Passive\%_{it}$ is a measure of passive index ownership in year t for firm i . $R2000_{it}$ is a dummy variable equal to one if the firm is in the Russell 2000. $Mktcap_{it}$ is the total market capitalization based on the relevant share price times total shares outstanding on the CRSP database. N is equal to 3, and thus

our specification includes a third-order polynomial expansion of log market capitalization (as in AGK). *Float* is our estimate of the float-adjusted shares outstanding. Our estimate is the same as that used in AGK. We also include year dummies δ_t . Standard errors are clustered at the firm-year level.¹⁸ We include a bandwidth of 250 companies on each side of the Russell 1000-2000 cutoff.

The results of the first stage are reported in Table 7 column 1, and are similar to those reported in AGK (in their Table 2, column 2, as we specify in the bottom of Table 7). We too find strong evidence in the first-stage estimation that Russell inclusion is a relevant variable to predict passive ownership. In the next step, we estimate a second stage where we measure the effect of instrumented passive ownership on an outcome variable, Y_{it} . We focus on three main variables analyzed by AGK: whether there was an activist event, whether the company has dual class shares, and the proportion of outside directors.

$$Y_{it} = \alpha + \beta \widehat{Passive\%}_{it} + \sum_{n=1}^N \theta_n [\ln(Mktcap_{it})]^n + \gamma \ln(Float)_{it} + \delta_t + \varepsilon_{it}. \quad (2)$$

Our second-stage estimates show that instrumented passive ownership has a positive and statistically significant effect on all three governance measures (Table 7, columns 2, 4, and 6). Overall, our results are similar to those presented in the AGK. They show that firms with larger passive ownership are less likely to experience an activist event (Table 7, column 2), less likely to have dual class (Table 7, column 4) and more likely to have outside directors (Table 7, column 6).

To test whether the presence of nonfinancial block ownership confounds the latter analysis, we present an alternative specification for our second-stage estimates. In our alternative setting, we augment the second-stage regressions to incorporate the proportion of block ownership in the firm as in:

$$Y_{it} = \alpha + \beta \widehat{Passive\%}_{it} + \pi_1 NonFinBlock_{it} + \pi_2 NonFinBlock_{it} R2000 + \sum_{n=1}^N \theta_n [\ln(Mktcap_{it})]^n + \gamma \ln(Float)_{it} + \delta_t + \varepsilon_{it}. \quad (3)$$

NonFinBlock is the total fraction of nonfinancial blocks. By including non-financial block ownership only in the second stage, we are testing whether the variation in instrumented passive ownership is correlated enough with non-financial block ownership to change the magnitude of the results presented in the baseline estimation.

¹⁸ The AGK analysis was conducted for the years 1998–2006. Unfortunately, Russell is not sharing the Russell weights freely. We were able to obtain the Russell weights for the 2009–2013 period, and thus our replication is for the 2009–2013 period, but our results are very similar to those of AGK.

We note that we cannot simply include block ownership in the two-stage-least-squares estimation in both stages as an additional control variable. The reason is that block ownership may be endogenously determined along with passive ownership and governance. To the extent that is true, neither passive ownership nor block ownership is an exogenous variable that can be identified in this setting. If there is another endogenous regressor, we would need another source of exogenous variation. As a result, our alternative specification is meant to be descriptive and only speak to the magnitude of the correlation between instrumented passive ownership and block ownership around the threshold.

It is important to note that our alternative regression specification includes an interaction term between the total nonfinancial block ownership and the dummy variable for Russell 2000 index inclusion. As demonstrated in [Figure 1](#), panel A, the Russell float adjustment particularly affects the largest firms at the top of Russell 2000. As a result, we expect total nonfinancial block ownership to correlate with instrumented passive ownership for firms that are heavily float adjusted with large index weights, that is, the top Russell 2000 companies. These firms are all naturally companies on one side of the discontinuity. By including the interaction of the Russell 2000 index dummy variable with the proportion of total nonfinancial block ownership, we can identify the extent to which nonfinancial block ownership may confound the estimation of any causal impact of passive ownership.

Columns 3, 5, and 7 in [Table 7](#) present the results of our alternative augmented second-stage regression. In the case of an activist event, we find that including block ownership (column 3) has roughly the same economic effect as that reported in AKG (column 2), but with weaker statistical significance. Importantly, for both dual class structure (columns 4 and 5) and the proportion of outside directors (columns 6 and 7), we find that the magnitude of the coefficient on instrumented passive ownership is attenuated, and the results are no longer statistically significant. For example, in column 3, which replicates the second stage of AGK ([Equation \(2\)](#) above), similar to AGK, we find that *Index fund total* has a coefficient of -5.87, significant at the 1% level. In contrast, in column 4 which reports the alternative model ([Equation \(3\)](#) above), *Index fund total* is insignificant (with a coefficient of -2.32) indicating that the results of AKG disappear once the ownership of nonfinancial blocks is accounted for.

The correlation between passive ownership and nonfinancial blocks appears to be large enough to confound any causal effect of passive ownership governance. We find that forming bandwidths around the Russell inclusion threshold inevitably sorts on block ownership in a way that puts firms with large nonfinancial block ownership just above the Russell 1000-Russell 2000 cutoff, and small block ownership just below this cutoff. Since block ownership is strongly related to measures of corporate governance, the assumption of local continuity is clearly violated in this setting.

5. Market Response to Blockholder Entry

If nonfinancial blocks actively monitor and engage with management, while financial blocks tend to monitor more passively by focusing on standard observable measures and outcomes, the market should respond more positively when nonfinancial blocks enter firms in which close monitoring may be especially valuable. In this section, we test this hypothesis using the disclosures of block ownership in our sample.

5.1. Event study returns

[Table 8](#) presents the results of an event study and reports cumulative abnormal returns around all 13D filings for a 6-day window from filing day t to $t+5$, $[0, +5]$. Panel A presents average abnormal returns and standard errors for the different types of blockholders. For all categories, mean abnormal returns around the filing data are positive and statistically significant – ranging from about 0.7% to 1.5%. As expected, the market typically interprets the entrance of a 13D blockholder as good news for shareholders.

The market response around the entrance of nonfinancial and financial blocks is almost identical. It is 1.2% and 1.3%, respectively, and the difference is not statistically significant. In untabulated results, the market response around the entrance of nonfinancial insiders and nonfinancial outsiders is 1.2% and 1.0%, respectively. Both of these figures are statistically significant at the 1% level but are not statistically significantly different from each other, indicating that the market responds similarly to the entrance of nonfinancial insiders and nonfinancial outsiders.

In our next set of tests, we dig deeper into the cross-sectional variation in market responses to block entry. [Demsetz and Lehn \(1985\)](#) hypothesize that the benefits of monitoring are elevated in high-risk environments. If nonfinancial blockholders monitor more closely, there should be a positive announcement return upon the entry of nonfinancial blocks because nonfinancial blocks may be particularly suitable for firms that require close monitoring. We hypothesize that nonfinancial blocks that provide stability because they tend to stay for the long term (as reported in [Table 1](#)) will be beneficial because they provide stability in uncertain and unstable environments, that is, when high volatility prevails. Accordingly, in panel B we split our sample based on return volatility (defined in [Appendix A](#)). Indeed, we find that the announcement of entry by nonfinancial blocks results in a strong positive abnormal return. Results are significantly larger for firms with high return volatility. When a nonfinancial block enters a firm with an above-median volatility, the abnormal return is 1.7% (significant at the 1% level).¹⁹ When a nonfinancial block enters a firm with a below-median volatility, abnormal

¹⁹ Abnormal returns are defined using the [Daniel et al. \(1997\)](#) characteristic-based adjustment during the $[0, 5]$ window after the 13D filing announcement date.

return is equal to 0.03% (significant at the 10% level), and the difference is equal to 1.4% (significant at the 1% level). Thus, the market responds particularly positively to nonfinancial blockholders entering volatile firms.

By contrast, we find a small (0.4%) and statistically insignificant difference in market reaction to the entry of financial blockholders across low- versus high-volatility firms. The difference between high- versus low-volatility firms for nonfinancial blocks (1.4%) versus that of financial blocks (0.4%) is significant at the 10% level, further indicating that particularly nonfinancial blocks are beneficial for volatile firms.

In addition to firm risk, asymmetric information is likely to drive differences in the marginal costs and benefits of active monitoring by blockholders. Less public information is available for small firms; therefore, the marginal cost of close monitoring may be higher in small firms (Helwege, Pirinsky, and Stulz 2007). Additionally, Grossman and Hart (1980) argue that disperse ownership in large firms may raise agency conflicts that drive down the benefits of monitoring on the margin. Thus, nonfinancial blocks may have more incentive to monitor smaller firms where monitoring is particularly valuable.

In panel C of Table 8, we report the market reactions to nonfinancial block entry split by median firm size. The CARs for large-small firms around the entrance of nonfinancial blocks is 1.8% (significant at the 1% level), while for financial blocks this figure is equal 0.5% (insignificant). The difference between these two figures is significant at the 1% level. Thus, consistent with our hypothesis, particularly nonfinancial block ownership is valued by the market in small firms where the marginal value of active monitoring via active monitoring is expected to be high.²⁰

In sum, in this section we document that different types of blocks are beneficial in different types of companies. We find that the market particularly values nonfinancial blocks when they enter small or risky firms where we expect the marginal value of active, close, and nonfinancial monitoring to be particularly high.

5.2. Structural model estimates

Our analysis in Section 6.1 shows that the market responds positively to the announcement of blockholder entry. However, such entry is potentially endogenous. Some investors may choose stocks they deem undervalued, leading to a “stock picking” component of the announcement return that is unrelated to the causal effect of their “activism.” Similarly, investors strategically choose to be active or passive, and some of the announcement returns may be driven by endogenous matching leading to sample “selection bias.” In recent work, Albuquerque, Fos, and Schroth (2022) develop a structural

²⁰ In addition to firm size and return volatility, we also estimated similar sample splits based on stock market volatility and found similar results.

model to decompose announcement returns into each of these three separate components (activism, stock picking, and selection).

The model in [Albuquerque, Fos, and Schroth \(2022\)](#), henceforth “AFS,” focuses on an investor’s choice to self-identify as an active block (by filing a 13D) or as a passive one (by filing a 13G). When the expected return to being an activist exceeds the cost of activism, investors file a 13D. This implies that the distribution of the observed announcement returns for a filing is censored by the choice of the other type of filing. Specifically, when expected returns to activism are large enough, we observe the filing of a 13D, which censors the right tail of announcement returns from 13G filings because blockholders will choose to file a 13D as opposed to a 13G when they expect the returns on activism to be sufficiently large. Conversely, when the expected returns to activism are too low, investors file a 13G, censoring the left tail of returns from filing at 13D. Taking account of both the decision over which form to file along with the expected returns to filing each form, the model yields a joint distribution of filing choices and announcement returns.

To estimate the parameters of this joint distribution, the model relies on cross sectional variation in expected returns to drive the variation in the choice to become active or remain passive. This approach is somewhat like a [Heckman \(1979\)](#) selection model where the first stage models a choice to be in the sample and the second-stage estimates an outcome effect that adjusts for the sample selection. In the classic example, workers decide whether to enter the labor force based on their expected income and only then might we observe the wage for those employed. To test the effect of, say, education on income, we need to correct the selection bias identified in the first stage. In our setting, by analyzing the return data and filing choices jointly, the estimation of the parameters of the joint distribution can determine unseen values like expected returns to each filing type as well as the unobserved cost of activism. However, there is also an important difference with a reduced-form two-step selection model. In the AFS model, the structural approach makes a more general assumption about the sample selection correction. Because both distributions are censored by the other type of filing, the equivalent of the inverse Mills ratio is itself a function of the expected return, which can be estimated from the joint distribution.

The model yields a maximum likelihood function that characterizes the joint distribution of expected returns. In addition to the means and variances for the distribution of 13G and 13D announcement returns, the model also includes a parameter for the cost of activism (assumed to be constant) and two additional parameters that describe the variance of due diligence costs for each filing type. These additional variance parameters allow the separation of the selection effect from the expected return as they represent a form of a signal-to-noise ratio in the filing choice decision.

To model expected returns, we follow AFS and rely on a large set of firm-specific characteristics including leverage, book-to-market, size, age, sales

growth, controls for past filings of 13D or 13G, asset pricing risk factors, and a battery of firm-specific characteristics. The full set of variables is reported in [Appendix D](#).

Our estimation of the parameters of the maximum likelihood function follows AFS precisely.²¹ However, we further split the sample based on whether the blockholder was a financial or a nonfinancial block. In addition, consistent with the analysis reported in [Table 8](#), in [Table 9](#) we provide further sample splits for large versus small firms and for firms with low versus high stock return volatility. Estimation is performed for each subsample separately.

In the [appendix](#), both panels of [Table D.1](#) provide estimates of the model's structural parameters along with a discussion of the differences in model parameter estimates between the nonfinancial (columns 1 and 2) and financial blockholder (columns 3 and 4) subsamples. Overall, firm-level variables, such as book-to-market and illiquidity, look similar across filing-type for a given blockholder type and vary somewhat across investor type. By contrast, sensitivity of expected filing return to investor specific variables varies quite a bit across financial and nonfinancial blockholders. For example, returns from filing a 13D are expected to be higher by about 1% when investor is a large (financial) activist hedge fund while there is no significant impact for non-financial activist hedge funds. Additionally, the coefficients on the number of previous filings (13D Experience and 13G Experience) indicate that experience leads to much larger announcement returns when nonfinancial blockholders file a 13D than when the filer is a financial blockholder. This differential impact from an additional past filing is about 10 times as large for nonfinancial blockholders. The presence of a recent activist at the target firm (Prior 13D filing) seems to complement value creation by new activists to a similar magnitude by about 1%. This result is only significant for 13Ds filed by financial blockholders.

Expected returns to filings by financial blockholders appear more sensitive to capital market variables like Market, HML, SMB factors suggesting factor loadings changed around the announcement. In both filing choices, nonfinancial blockholders show lower signal-to-noise ratios and less variation in expected returns. Again, these results are consistent with nonfinancial blockholders focusing on only one or two block positions in smaller and more volatile firms. Our estimates of the model parameters appear to be consistent with past studies and seem to make reasonable economic sense.

Construction of the different components of announcement returns follows straight from the structural model estimates. The *Stock picking* effect can be estimated as the conditional average announcement return from filing a 13G. The *Selection* bias component is then a transformation of the model parameters as a function of the inverse Mills ratio, but also depends on the expected

²¹ We are deeply thankful to AFS for sharing their data and code with us. We are able to fully replicate their results and our estimation and results follow closely with their published tables.

return estimates. The treatment effect of *Activism* is then estimated as the difference in the expected announcement return from filing a 13D versus 13G based on the model parameters (see AFS for a more detailed description).

Table 9 presents our decomposition of the announcement returns based on the structural estimates. Our main object of interest in this exercise is calibrating how much of the announcement return is attributable to the treatment effect of activism and how that magnitude differs between financial and non-financial blockholders. In Table 9, we repeat the analysis of Table 6 of AFS based on blockholder type, and as in AFS, we report separate results for 13D versus 13G filings (panels A–B and C–D, respectively), but we further break down the blocks by whether they are nonfinancial (panels A and C) versus financial blocks (panels B and D).

As the first column of Table 9, panel A, reports, for 13D filings filed by nonfinancial blockholders we estimate a total return of 6.42%. *Activism* has the largest component (5.01%) with selection bias and stock picking contributing much smaller amounts. As reported in panel B of Table 9, for financial blockholders filing 13D filings, we find an average total announcement return equal to 4.72% with 4.19% coming from the treatment effect of activism. Put differently, these results demonstrate that both the overall announcement return for active nonfinancial blocks is larger than that of financial blocks, and also that the treatment effect of activism of nonfinancial blocks is larger than that obtained by financial blocks.

In the subsequent columns included in panels A–D of Table 9 we examine whether activism of financial or nonfinancial blocks is particularly beneficial in certain types of companies, that is, in small versus large companies, or in low versus high volatility companies. As before, we split the sample depending by whether the company is below or above the median size and volatility, respectively. We find that the treatment effect of activism expected at the entry of a new blockholder is higher if entry is by a nonfinancial blockholder. In the small firms we find an activism announcement effect of 5.56% (Table 9, panel A, column 3) while for financial blockholders, we document a lower effect of 4.35% (Table 9, panel B, column 3).²² Consistent with the results in the previous section, activism in firms with higher return volatility is particularly valued by the market for nonfinancial blocks: the activist component of announcement returns is equal to 5.54% for nonfinancial blocks (Table 9, panel A, column 9) and only 4.86% for financial blocks (Table 9, panel B, column 9).

Finally, we point out that our results suggest that activism creates value: in every single column in panels A and B the mean return for 13D filings is larger than that reported in the corresponding column in panels C and D, respectively, with respect to 13G filings. For example, panel B, column 1, reports that the mean return after a 13D filing of a financial block is equal to

²² Stocks are placed into two groups based on yearly in-sample median size or volatility.

4.72%, while panel D reports a substantially smaller figure for 13G filings of financial institutions (-0.64%). Additionally, in panels A and B, in all specifications *activism* has a positive value further highlighting that blockholders are expected to create positive returns from activism.

Overall, the results in this section are largely consistent with our regression-based models discussed in section 6.1. The results in this section further reinforce the conclusion that nonfinancial blocks are particularly beneficial in small companies and in high-volatility companies. We interpret these results as being consistent with the hypothesis that the market expects the entry of nonfinancial blocks in small and volatile companies to drive more value through active corporate governance.²³

6. Governance Evolution, Firm Age, and Type of Blockholder

To further address endogenous matching concerns, we focus in this section on the evolution of block ownership and governance practices over the lifecycle of the firms in our sample. Our motivation for this analysis stems from the pre-determined nature of firm maturity. As we show, the presence of nonfinancial blockholders is largely predetermined by initial conditions at a firm's founding. This inherent aspect of business creation differs from the emergence of a financial blockholder, which typically occurs as firms mature. Thus, in young companies, the endogenous matching between block-type and company-type may be less severe because the founder(s) is (are) typically present in the blockholder base. Additionally, if we can establish that the governance patterns of firms with a nonfinancial block consistently differ from those of firms with a financial block that are in the same phase in the firm's lifecycle, this would provide further evidence that governance patterns consistently vary by block type.

Prior studies have shown that as a public firm matures, insiders tend to sell their shares (Helwege, Pirinsky, and Stulz 2007) and block ownership declines (Edmans and Holderness 2017). Given that Johnson, Karpoff, and Yi (2022) document a life cycle pattern in corporate governance, it may be that the patterns in ownership and governance are closely related. Following these studies, we report in Figure 3 the total fraction of shares held by non-financial and financial blocks, depending on the firm age (measured as the number of years the firm has been listed on Compustat/CRSP). Figure 3 shows a clear block ownership life cycle: companies are less likely to have a nonfinancial block, and more likely to have a financial block as they age.

We use this time-series variation in block ownership to study the effect on corporate governance. In each of the three panels included in Table 10 we repeat our analysis above and estimate results separately for three age terciles:

²³ In an additional set of tests, we separated our sample of blockholders into four subgroups including Hedge Funds, Individuals, 13F filers, and Other. We find that the highest announcement returns to activism come from the Hedge Funds and Others categories. These results are presented, along with a more detailed discussion in Table D.2 in Appendix D.

Table 10
Block type and governance over the firm's life cycle

A. Stated objectives by investor type

	Firm age tercile						Mature					
	Young			Mid-age								
	Nonfin.	Fin.	Diff.	t-stat	Nonfin.	Fin.	Diff.	t-stat	Nonfin.	Fin.	Diff.	t-stat
Maximize shareholder value	0.25	1.37	-1.12	-2.29**	0.90	2.55	-1.65	-2.88***	1.23	3.34	-2.12	-3.25***
Undervalued	0.78	7.88	-7.10	-6.29***	1.85	15.08	-13.23	-10.58***	5.71	23.52	-17.81	-11.76***
Economic/market/industry	15.86	15.75	0.11	0.06	7.66	13.81	-6.15	-4.73***	7.58	11.93	-4.35	-3.50***
Capital structure	1.97	11.82	-9.85	-7.21***	2.07	15.20	-13.13	-10.44***	3.15	15.72	-12.57	-9.82***
Dividend	28.89	28.25	0.64	0.31	26.76	21.58	5.19	3.10***	24.93	19.18	5.76	3.49***
Repurchase	1.07	2.23	-1.16	-1.80*	2.45	2.90	-0.45	-0.68	2.30	2.12	0.18	0.30
Restructuring	1.27	7.02	-5.75	-5.32***	2.02	9.28	-7.26	-7.04***	2.46	9.48	-7.02	-6.74***
Elect/nominate/vacancy	28.52	19.01	9.52	5.11***	26.16	14.73	11.43	7.55***	25.20	13.94	11.26	7.36***
Elect/nominate	9.34	7.36	1.98	1.61*	11.66	7.54	4.12	3.68***	11.27	9.03	2.24	1.86*
Vacancy	21.43	13.53	7.91	4.82***	17.60	8.70	8.90	7.16***	16.55	5.57	10.98	9.54***
Operations	14.96	33.22	-18.26	-8.79***	11.40	32.83	-21.43	-12.39***	16.55	39.58	-23.03	-12.48***

B. Language measures

	Firm age tercile						Mature					
	Young			Mid-age								
	Com.	Fin.	Diff.	t-stat	Com.	Fin.	Diff.	t-stat	Com.	Fin.	Diff.	t-stat
Specificity (%)	5.80	4.43	1.37	5.59***	7.01	4.49	2.52	11.50***	7.10	4.48	2.62	11.38***
Weak modal	7.98	10.96	-2.97	-9.96***	6.93	11.32	-4.39	-11.34***	8.14	12.61	-4.46	-11.60***
Strong modal	2.70	1.98	0.72	3.88***	3.52	2.11	1.41	8.15***	3.15	1.64	1.50	8.89***

Weak minus strong modal	5.22	8.97	-3.69	-7.62***	3.41	9.21	-5.80	-12.92***	4.99	10.96	-5.97	-13.14***
Uncertainty	9.23	12.77	-3.54	-7.49***	8.19	13.29	-5.10	-11.97***	9.68	14.65	-4.97	-12.12***
Negative	8.67	7.27	1.40	4.54***	9.11	7.68	1.43	4.97***	9.50	7.44	2.06	6.55***
Positive	3.94	4.74	-0.80	-2.60***	4.21	5.46	-1.25	-3.68***	5.50	6.22	-0.72	-2.36**
Negative minus positive	4.73	2.52	2.20	4.86***	4.90	2.21	2.68	5.78***	4.00	1.21	2.79	6.03***

Panel A tabulates frequencies of stated objectives, which are identified based on the most common one-, two-, three-, and four-word phrases used in item 4 of Form 13D in which blockholders state the purpose of their transaction (standard “stopwords” and boilerplate phrases are discarded). Panel B reports the language measures for the stated objectives, and includes a *Specificity* measure which is defined as the number of specific places, people, organizations, dates, times, and quantities used in item 4, based on the Stanford Named Entity Recognizer (NER) as a percentage of all words. Additionally, Panel B reports the wordcount (per thousand words) using a set of word lists from the Loughran and McDonald (2011) dictionary to capture the language tone. The variables, Weak Modal, Strong Modal, Negative, Positive and Uncertainty measures, are defined as the number of words in item 4 from the corresponding word list divided by the total number of words in item 4. Panel C examines the prevalence of different corporate governance practices (which are defined in Appendix A). All three panels report figures broken down by firm age tercile using the following categories: young companies (0–4 years), mid-age companies (larger than 4 years to 12 years), and mature firms (larger than 12 years). Firm age is defined as the number of years the firm has been listed on Compustat with a nonmissing end-of-fiscal-year stock price as of the observation year. Panels A and B further break down the figures depending on whether the filing is filed by a nonfinancial block (i.e., a blockholder that does not file a 13F form), or a financial block (i.e., a blockholder that files a 13F form). The SEC Filings included in panels A and B cover the period 1998–2018. Panel C includes the 2001–2014 period. All variables are defined in Appendix A. *t*-statistics are reported.

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

young (0–4 years), middle-aged (4+ to 12 years), and mature firms (older than 12 years). Panel A of [Table 10](#) reports our tests using textual analysis in 13D filings, and panel B focuses on the item 4 stated objectives. For each age tercile, we report separate figures for nonfinancial blocks and financial blocks.

Two main patterns emerge from our analysis. First, our results point toward a strong life-cycle component in the joint dynamics of ownership and corporate governance. As firms mature, they tend to adopt more external governance mechanisms that coincide with the shift in block ownership from nonfinancial to financial block ownership. This evolution drives the introduction of external monitoring practices that are suited for financial institutions that may have a higher marginal cost of delegated monitoring and a greater potential for agency costs within firms. For example, panel A shows that as companies mature, both financial and nonfinancial shareholders are more likely to state that they will govern by striving to “maximize shareholder value.” On the other hand, as firms mature, both nonfinancial and financial blocks are less likely to govern by “Elect/Nominate/Vacancy,” that is, being involved in appointing directors.

However, we are particularly interested in the second point which is demonstrated in panels of [Table 10](#) for both age terciles: consistent differences prevail in the governance practices of firms with nonfinancial blocks versus those with financial blocks. As will be detailed, we find that financial blocks consistently focus more strongly on practices that focus on financial performance, while nonfinancial blocks focus more strongly on active monitoring.

Specifically, in both panel A and panel B of [Table 10](#) all the differences between nonfinancial and financial blocks are in the expected direction for all variables and for all age terciles (i.e., consistent with the patterns documented above in [Tables 3](#) and [4](#), respectively), and most differences are statistically significant. For example, as panel A of [Table 10](#) indicates, in young firms, nonfinancial blocks use the word “undervalued” in 0.78% of 13D filings, while financial blocks are likely to use this word in 7.88% of the filings of young firms, that is, approximately 10 times more frequently, and the difference is statistically significant. Taken together, we view these figures as providing further support for the conclusion that differences in governance practices are not driven solely by natural governance evolution over a firm’s life cycle. Rather, the changes in governance practices are due, at least partially, to the types of blockholders that exist in a firm.

Naturally, some types of blockholders are attracted to certain types of firms, even within each age category. In panels A and B of [Table 10](#) we report how governance practices examined above vary depending on the age bracket and by the presence of a financial versus nonfinancial block. As the *t*-statistics reported in these tables indicate, for all firm age brackets, for all variables, the significant differences observed between firms with financial and nonfinancial blocks are in the expected direction. For example, panel A shows that in young firms, nonfinancial blockholders mention “maximize

shareholder value” 1.12% less often than financial blockholders. This difference is statistically significant at the 5% level.

The consistent differences between financial and nonfinancial blockholders across all company age brackets, particularly among young companies, help to alleviate some concerns about endogeneity. The predetermined nature of nonfinancial block owners at a company’s founding, when the founding blockholders choose their preferred governance practices, mitigates endogenous selection if we maintain the assumption that early blockholders are path dependent and initial assignment of founders is as good as random, at least with respect to corporate governance decisions. Thus, the patterns observed in young firms suggest that nonfinancial blocks design corporate governance that is consistently different from financial blockholders. While governance is correlated with maturity, nonfinancial blockholders appear to govern differently from financial blocks in systematic ways.

7. Summary and Conclusions

Our analysis of a comprehensive and unique data set provides valuable insights into the governance practices of different blockholder types. We observe notable differences in governance mechanisms between financial and nonfinancial blockholders. Nonfinancial blockholders often identify as active and outline their governance strategies, focusing on direct involvement in firm management. In contrast, financial blockholders emphasize boilerplate financial performance metrics. These findings suggest that financial blockholders prioritize external, observable measures, while nonfinancial blockholders rely on active monitoring and engagement.

Our study also identifies a methodological consideration for studies using the Russell index setting for identification, suggesting that previous results may need to be reconsidered when nonfinancial blockholders are accounted for. Additionally, we find that nonfinancial blockholders are particularly valued by the market in small, volatile firms where close monitoring is crucial. This indicates that a good match between blockholder type and firm type can be positively recognized by the market, highlighting the significance of blockholder heterogeneity in governance and corporate decision-making.

Overall, our work points to the distinct governance roles of financial versus nonfinancial blockholders and their influence on corporate strategies. By examining 13D filings, we provide a textual analysis showing differences in the language used by these blockholders. Our results suggest the importance of considering the diverse nature of blockholders in understanding corporate governance dynamics and encourage further exploration in this area.

Code Availability

Data sets made publicly available on WRDS: Blockholder classification.

Appendix A

Table A1
Variable definitions

Variable name	Definition	Sources
<i>Abnormal return</i>	The firm's stock return minus the return of its characteristic matched benchmark portfolio using the methodology in Daniel et al. (1997)	CRSP-Compustat
<i>Activist event occur?</i>	Equal to one if an activist event occurred in company <i>i</i> in year <i>t</i> , and zero if it did not.	Brav et al. 2008 ; Brav, Jiang, and Kim 2015 , who kindly shared their data
<i>Average support</i>	Average support rates directors received on say-on-pay from all shareholders	ISS voting analytics
<i>say-on-pay</i>	The CEO's tenure	GMI
<i>CEO tenure</i>	A binary variable equal to one if the company has dual class shares in year <i>t</i> , and zero if it does not.	GMI
<i>Dual class</i>	A binary variable that equals one if the blockholder does not file 13F filings.	13F filings
<i>Financial (block)</i>	A binary variable equal to one if the firm is held by at least one hedge fund or private equity fund block.	Classified manually by authors as described in paper
<i>Hedge fund (block)</i>	A binary variable equal to one if the firm is held by at least one individual blockholder	Classified manually by authors as described in paper
<i>Individual (block)</i>	<i>Insiders</i> are blockholders that file in a given company SEC form 3, 4, or 5	Assembled by authors
<i>Insiders</i>	A binary variable equal to one if the firm is held by at least one block held by a 13F filer	Classified manually by authors as described in paper
<i>Institutional (block)</i>	Liquidity measure consistent as defined in Amihud (2002) (average absolute daily return divided by daily dollar volume during the year)	CRSP
<i>Liquidity</i>	$\log(\text{prc_f}^* \text{csho}^* 1,000,000)$	CRSP-Compustat
<i>log market capitalization</i>	We first calculate the standard deviation of the residuals in a regression of the firm's daily stock return against the CRSP value-weighted return over the course of the fiscal year. The logarithm of 1 plus the resultant standard deviation of these residuals is the risk measure. This variable is winsorized at the sample 1st and 99th percentiles	CRSP
<i>log sigma</i>	An indicator variable that equals one if the board holds nonexecutive meetings, that is, shareholder meetings that exclude the CEO and insiders. Variables equals 1 if $\text{bdoutsidemeets} = \text{"Yes"}$ or $\text{bdoutsidemeets} = \text{"YES"}$, and 0 if $\text{bdoutsidemeets} = \text{"NO"}$ or "No"	GMI ownership
<i>Nonexecutive meetings</i>	Estimated by authors, a binary variable that equals one if the blockholder does not file 13F filings	13F filings
<i>Nonfinancial (block)</i>	is the total fraction of nonfinancial blocks (a nonfinancial block is equal to at least 5% of the company's outstanding shares, and does not file a 13F)	FactSet
<i>NonFinBlocks</i>	Outsiders are blockholders that do not file SEC form 3, 4, or 5 in a given company	Assembled by authors
<i>Outsiders</i>	A binary variable equal to one if the firm is held by at least one block held by a non-13F filer that is not categorized as an individual or a hedge fund (e.g., a private company or a public company)	Classified manually by authors as described in paper
<i>Other private (blocks)</i>		

(continued)

Table A1
Continued

Variable name	Definition	Sources
<i>Outside directors</i>	Percent of outside directors: 1-(directorsinside/directorstotal)	GMI ownership
<i>Poison pill</i>	An indicator variable that equals one if tdpoinpill=="Yes." The latter is defined by GMI as: "Indicates if there is a plan in place to increase voting rights of shareholders if a hostile bidder acquires a threshold amount of a company's stock, which massively dilutes the bidder's holdings and makes it prohibitively expensive for the bidder to complete the acquisition"	GMI takeoverdefense
<i>ROA</i>	Income before extraordinary items/total assets	Compustat
<i>Shark attack</i>	An indicator variable that equals one if the company was targeted by an activist at least once during the year examined	SharkWatch
<i>Size</i>	Market capitalization (price * number of shares outstanding)	CRSP
<i>Tobin's q</i>	(Total assets – book common equity + market common equity)/Total assets. This variable is winsorized at the sample 1st and 99th percentiles	Compustat
<i>Total fraction of shares held by nonfinancial blockholders</i>	Estimated by authors, based on FactSet data	FactSet
<i>Total fraction of shares held by financial blockholders</i>	Estimated by authors, based on FactSet data	FactSet
<i>Volatility</i>	Daily stock return volatility over the previous year	CRSP

Appendix B. Textual Analysis of Item 4

To classify item 4 of 13D into specific topics, we carry out the following steps:

1. Remove punctuation
2. Convert all characters to lowercase
3. Remove stopwords using the Python Natural Language Toolkit (NLTK) English list of stopwords
4. Extract uni-, bi-, and trigrams from resultant text
5. For each topic, count the number of matching uni-, bi-, or trigrams from the following lists:

We specify below the list of uni-, bi-, and trigrams that must be included in item 4 of 13D to be classified under each of the categories included in the paper:

Maximize Shareholder Value: ('maximize', 'shareholder', 'value'), ('maximizing', 'shareholder', 'value'), ('maximize', 'value', 'shareholders'), ('maximizing', 'value', 'shareholders'), ('maximize', 'shareholder', 'value'), ('maximizing', 'value', 'shareholders'), ('maximizing', 'value', 'shareholder'), ('increase', 'shareholder', 'value'), ('increase', 'value', 'shareholders'), ('increasing', 'shareholder', 'value'), ('increasing', 'value', 'shareholders')

Undervalued: 'undervalued'

Economic/Market/Industry: ('economic', 'conditions'), ('general', 'economic'), ('economic', 'industry'), ('industry', 'market'), ('industry', 'conditions')

Capital Structure: ('capital', 'structure')

Dividend: 'dividend', 'dividends'

Repurchase: 'repurchase', 'repurchases', 'repurchasing'

Restructuring: 'restructuring', 'restructure'

Elect/Nominate: 'elect', 'election', 'nominate', 'nomination'

Vacancy: 'vacancy', 'vacancies'

Operations: 'operations'

Appendix C. Example of Item 4 from 13D Filing

B1. High Specificity Score

This panel reports the item 4 of the 13D filing by Arturo "Jake" Sanchez, who filed a 13D filing when revealing the purchase of a block in Medina International Holding. The specificity score of this item is equal to 23.8%. The filing was filed on April 29, 2016. The filing is available at this link: https://www.sec.gov/Archives/edgar/data/1093248/000106594916000419/medinagroup_sc13dvfinal.htm.

Item 4:

Arturo "Jake" Sanchez and Lawrence R. Litowiz are deemed beneficial owners as Officers of the Issuer. John Stol and Ramuindo Dias are deemed beneficial owners as Directors of the Issuer. Elk Health Holdings, LLC and OB Holdings, LLC are more than 5% beneficial owners. Dr. Leonard Makowka, Dr. Christopher Leggett, CMD and Derrick Orosa were deemed beneficial owners as management with MedHold.

The Reporting Persons have plans which relate to, or could result in the matters referred to in paragraphs (a) through (j), inclusive, of the instructions to Item 4 of Schedule 13D as follows:

(a) - (c) Acquisition Agreement - April 29, 2016 - Medina International Holdings, Inc. and Medical Innovation Holdings

On April 29, 2016, Medina International Holdings, Inc. (the "Company") entered into an Acquisition and Purchase Agreement with Medical Innovation Holdings, a Joint Venture ("MedHold") with an effective date of April 29, 2016, whereby all of the assets would be acquired by the Company from MedHold. In conjunction therewith, a total of approximately \$3,112,599 in debt owed by the company and its subsidiaries, will be released from the company at closing.

Acquisition and Purchase Agreement - Medina International Holdings, Inc. and Daniel Medina and Rao Mankal

The Company has entered into an Agreement and completed a disposition of assets to Madhava Rao Mankal and Daniel Medina, who agreed to purchase those certain assets known as the "boat assets" and the stock of Harbor Guard Boats, Inc., and have agreed to assume certain of the debts listed in the Agreement attached as an exhibit hereto. Madhava Rao Mankal and Daniel Medina released the notes to themselves, and provided releases of the other notes or obligations as to any liability of Medina International Holdings, Inc. The closing shall occurred simultaneously and as a condition of the closing of the Acquisition Agreement with medical Innovation Holdings, Joint Venture. The company is relieved, through this divestiture, of the large debt of over \$1,140,311 carried on its books, and any assets associated therewith, which have all been written off at this time. The agreement further provided that certain common shares of the company be surrendered, owned by Albert Mardikian, MGS Gran Sports, Daniel Medina, and Madhava Rao Mankal, totaling 35 million shares, which shall be cancelled and retired to treasury.

Settlement Agreement and Release - Medina International Holdings, Inc. and Chenji Srinivasan Seshadri

In conjunction with the Acquisition and Purchase Agreement discussed in the preceding section, Medina International Holdings, Inc. (the "Company") entered into a Settlement Agreement and Release with Chenji Srinivasan Seshadri ("Debtholder") and Harbor Guard Boats, Inc., a California Corporation ("Harbor Guard").

The Agreement compromises, settles and otherwise resolves all claims for common shares, subscriptions, or Notes, or debts, relating to the Company and Debtholder as to any and all claims or causes of action whatsoever against the Company by Debtholder for any matter, action, or representation as the Company, any debt or Note, the subscription, by the subscriber, and other potential claims and causes of action arising from any relationship, agreement, subscription, debt, or Note, or actions of the Company or its management which may be claimed by Debtholder up to the date hereof.

Settlement Agreement and Release - Medina International Holdings, Inc., Daniel Medina, and Harbor Guard Boats, Inc.

In conjunction with the Acquisition and Purchase Agreement discussed in the preceding section, Medina International Holdings, Inc. (the "Company") entered into a Settlement Agreement and Release with Daniel Medina ("Debtholder") and Harbor Guard Boats, Inc., a California Corporation ("Harbor Guard").

Harbor Guard assumed and agreed to pay the debt that Debtholder hold of Medina International and that is released from the Company. Such debt is \$567,660.30 including all interest and accrued payroll.

Settlement Agreement and Release - Medina International Holdings, Inc., Madhava Rao Mankal, and Harbor Guard Boats, Inc.

In conjunction with the Acquisition and Purchase Agreement discussed in the preceding section, Medina International Holdings, Inc. (the "Company") entered into a Settlement Agreement and Release with Madhava Rao Mankal ("Debtholder") and Harbor Guard Boats, Inc., a California Corporation ("Harbor Guard").

Harbor Guard assumed and agreed to pay the debt that Debtholder hold of Medina International and that is released from the Company. Such debt is \$572,651.30 including all interest and accrued payroll.

Settlement Agreement and Release - Medina International Holdings, Inc., Srikrishna Mankal, and Harbor Guard Boats, Inc.

In conjunction with the Acquisition and Purchase Agreement discussed in the preceding section, Medina International Holdings, Inc. (the "Company") entered into a Settlement Agreement and Release with Srikrishna Mankal ("Debtholder") and Harbor Guard Boats, Inc., a California Corporation ("Harbor Guard").

Harbor Guard assumed and agreed to pay the debt that Debtholder hold of Medina International and that is released from the Company. Such debt is \$57,000 including all accrued interest.

Completion of Acquisition

On April 29, 2016, Medina International Holdings, Inc. (the "Company") entered into an Acquisition Agreement ("Acquisition") with Medical Innovation Holdings, a Joint Venture ("MedHold") with an effective date of April 29, 2016, whereby all of the assets of Medhold would be acquired by the Company from MedHold. Pursuant to the Asset Acquisition Agreement, the closing of the Acquisition was effective April 29, 2016.

Per the Acquisition Agreement, the following items occurred:

1. The Company approved the issuance of 351,000,000 shares of the Company's restricted common stock to MedHold's designees;
2. 30 shares of Series "A" Convertible Preferred Stock, representing all the Preferred issued and outstanding of Medina International Holdings, Inc. from Madhava Rao Mankal and Daniel Medina shall be conveyed for \$100 to MedHold;
3. A total of 35,000,000 common shares owned by Madhava Rao Mankal, Daniel Medina and Albert Mardikian, and MGS Grand Sports, Inc. shall be conveyed under separate Share Purchase Agreements to retire to treasury for \$100 each;
4. The outstanding notes for legal fees for a total of \$256,000, approximately, plus accrued interest thereon, were assumed and agreed to be paid in accordance with the terms thereof, without defenses or disagreements thereto at the time of closing. The outstanding balances due to the auditor (approximately \$18,000, including current quarter review fees) and transfer agent (approximately \$1,500) shall be paid as the earnest money; and
5. Assignments of the Assets were issued in the form of a Bill of Sale duly executed.

Disposition of assets: The Company has completed a disposition of assets to Madhava Rao Mankal and Daniel Medina, who agreed to purchase those certain assets known as the "boat assets" and the stock of Harbor Guard Boats, Inc., and have agreed to assume certain of the debts listed in the Agreement attached as an exhibit hereto. Madhava Rao Mankal and Daniel Medina released the notes to themselves, and provided releases of the other notes or obligations as to any liability of Medina International Holdings, Inc. The closing shall occurred simultaneously and as a condition of the closing of the Acquisition Agreement with Medical Innovation Holdings, Joint Venture. The Company is relieved, through this divestiture, of the large debt of over \$1,140,311 carried on its books, and any assets associated therewith, which have all been written off at this time. The agreement further provided that certain common shares of the Company be surrendered, owned by Albert Mardikian, MGS Gran Sports, Daniel Medina, and Madhava Rao Mankal, totaling 35 million shares, which shall be cancelled and retired to treasury.

- (d) In connection with the closing of the Acquisition and Purchase Agreement on April 29, 2016, and effective ten days after mailing of a Notice pursuant to Section 14(f) of the Securities Exchange Act of 1934, John Erich Lewis and Michael J. Gallo resigned as Officers and Directors of the Company. Daniel Medina and Madhava Rao Mankal resigned as Officers and Directors upon filing of the Form 10K and Form 10Q filings on May 13, 2016. John Stol and Raimundo Dias are appointed as Directors concurrent with the transactions herein described, and Arturo Sanchez and Lawrence Litowitz are appointed effective ten days after the mailing of the Section 14(f) Notice to Shareholders.
- (e) None.
- (f) None.
- (g) New Management and the Company intends to change the Company's name and reverse split of the Company's stock.
- (h) None.
- (i) None.
- (j) None.

B2. Low Specificity Score

Here, we report the item 4 of the 13D filing by KLS Diversified Asset Management LP, who filed a 13D filing when revealing the purchase of a block in Penn Virginia Corporation. The specificity score of this item is equal to 0.88%. The filing was filed on January 18, 2018. The filing is available at this link: <https://www.sec.gov/Archives/edgar/data/77159/000119312518023752/d503125dsc13d.htm>

Item 4:

The Reporting Person acquired beneficial ownership of the Common Stock for investment purposes. The Reporting Person intends to review Diversified's investment in the Issuer on a continuing basis. Representatives of the Reporting Person may have discussions from time to time with the Issuer, other stockholders and third parties relating to the Issuer, strategic alternatives that may be available to the Issuer and the Issuer's business, operations, assets, capitalization, financial condition, governance, management and future plans, including in respect of one or more of the actions described in subsections (a) through (j) of Item 4 of Schedule 13D. There can be no assurance as to the outcome of any of the discussions referred to in this Schedule 13D.

Depending on various factors, including the Issuer's financial position and strategic direction, the outcome of the discussions referenced above, actions taken by the board of directors of the Issuer (the "Board"), price levels of the securities of the Issuer, other investment opportunities, the availability and cost of debt financing, the availability of potential business combination and other strategic transactions, conditions in the capital markets and general economic and industry conditions, the Reporting Person may in the future take such actions with respect to Diversified's investment in the Issuer as it deems appropriate, including acquiring or disposing of securities of the Issuer, entering into financial instruments or other agreements which increase or decrease Diversified's economic exposure with respect to its investment in the Issuer, engaging in any hedging or similar transactions with respect to such holding and/or otherwise changing its intention with respect to any and all matters referred to in Item 4 of Schedule 13D.

Appendix D. Structural Model Estimation Details and Additional Results

In this appendix, we present the full estimation of the structural model parameters presented in Albuquerque, Fos, and Schroth (2022), but importantly, reports separate results for financial versus nonfinancial blocks. Table D.1 below, follows AFS (Table 3, panels A and B, specifications 1 and 4 in both panels) whereas Table D.1 below reports separate results for financial versus nonfinancial blocks. We also report the calibration of the announcement return magnitudes based

on the structural estimates and provide an additional set of results in which we estimate separate results for each of the four block-type categories: hedge funds, individuals, institutional, and other private, based on an alternative classification of blockholder types, see [Table D.2](#) below, which follows AFS, [Table 6](#).

We begin by defining all the structural model components in the paper

β_D, β_G	Sensitivities of returns to determinants X
C	Cost of activism
$\sigma_{\Delta_D} \sigma_{\Delta_G}$	Volatility of returns
$\sigma_{S_D} \sigma_{S_G}$	Volatility of the due diligence signals

In [Table D.1](#) we present the estimates of the costs of activism, C, the volatilities of returns for 13D and 13G filing, σ_{Δ_D} and σ_{Δ_G} , respectively, the volatilities of the due diligence signals, σ_{S_G} and σ_{S_D} , for each of these filings, respectively, and the sensitivities of expected returns, β_D and β_G to their respective determinants, for both financial (columns 1 and 2 in panels A and B) and nonfinancial blockholders (columns 3 and 4 in panels A and B), respectively. The parameters are estimated by maximum likelihood, targeting the model-implied joint distribution of filing choices (13D vs. 13G) and conditional abnormal announcement returns.

A comparison between columns 2 and 4 of [Table D.1](#) in the full specification, which report results for Nonfinancial and Financial blocks, respectively, reveals roughly similar determinants of expected returns between the sample of nonfinancial and financial blockholders. However, there are some differences of note. Sales growth is negative and significant for nonfinancial blocks but insignificant for financial blocks, while book-to-market is significant for financial blocks, but not for nonfinancials. The largest effect comes from the prior average stock returns which is highly significant across all specifications and is roughly similar between financials and nonfinancials. Many of the investor specific variables like the prior filing of a 13G are significant only for the financial blocks. This is consistent with nonfinancial blockholders typically holding very few blocks for a long period of time. Financial blockholders appear more sensitive to capital market variables like Market, HML, SMB factors and analyst coverage.

In panel B of [Table D.1](#), we present the other model parameters. Overall, parameters of the model are estimated with a high degree of precision. The magnitudes are comparable to those presented in [table 3](#) of [Albuquerque, Fos, and Schroth \(2022\)](#). However, there are some notable small differences between financial and nonfinancial blocks. For example, while the cost of activism is similar between the two groups (as indicated by the coefficients for the variable C), σ_{Δ_G} , that is, the volatilities of returns for 13G filings is notable higher for 13G filings which suggests that the volatility of the announcement returns is higher for nonfinancial blockholders. Conversely, the estimates of the due diligence volatility parameters are lower for nonfinancial blockholders. In both filing choices, the signal-to-noise ratio is lower for nonfinancial blockholders. These results are consistent with nonfinancial blockholders focusing on one or two block positions in smaller and more volatile firms. Our estimates of the model parameters appear to be consistent with past studies and seem to make reasonable economic sense.

[Table D.2](#) summarizes the estimates of the expected returns from filing a Schedule 13D, or a Schedule 13G, as well as the three components of the announcement returns. The total returns for each announcement i , conditional on a 13D filing, include a stock picking effect, a treatment effect from activism, and a selection effect. For 13G filings, expected returns are decomposed into stock picking and selection effects. These effects are estimated for each announcement in the sample, taking as given the target and blockholder characteristics, using the estimates of the structural model presented in [Table D.1](#). Estimation of the components follows [table 6](#) in [Albuquerque, Fos, and Schroth \(2022\)](#). The table reports separate estimations for hedge fund,

Table D.1
Structural model estimates

A. Estimates of the model's structural parameters

	Nonfinancial				Financial			
	(1)		(2)		(3)		(4)	
	β_D	β_G	β_D	β_G	β_D	β_G	β_D	β_G
Constant	-0.033 (0.000)	0.011 (0.007)	-0.003 (0.010)	0.017** (0.008)	-0.205*** (0.000)	-0.005 (0.003)	0.020*** (0.005)	-0.003 (0.003)
Market cap	-0.006** (0.001)	0.001 (0.002)	-0.003 (0.002)	0.000 (0.002)	-0.011** (0.000)	0.002* (0.001)	0.001 (0.001)	0.002*** (0.001)
Amihud liquidity	0.018*** (0.005)	0.012*** (0.005)	0.015*** (0.005)	0.014*** (0.005)	0.046*** (0.004)	0.023*** (0.003)	0.024*** (0.003)	0.023*** (0.003)
Analyst coverage	0.007 (0.004)	0.006 (0.004)	0.008* (0.004)	0.006 (0.004)	-0.005* (0.002)	0.004*** (0.001)	0.004*** (0.001)	0.004*** (0.001)
Book-to-market	0.002 (0.004)	0.000 (0.003)	0.002 (0.004)	0.000 (0.003)	0.011 (0.002)	0.016*** (0.001)	0.014*** (0.001)	0.013*** (0.001)
Firm age	-0.003 (0.002)	-0.002 (0.002)	-0.001 (0.002)	-0.002 (0.002)	0.001 (0.001)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Sales growth	-0.007*** (0.002)	-0.006*** (0.002)	-0.007*** (0.002)	-0.006*** (0.002)	0.001 (0.002)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
HHI of Sic3	-0.006 (0.016)	-0.011 (0.015)	-0.006 (0.015)	-0.011 (0.015)	-0.005 (0.009)	-0.009* (0.005)	-0.009* (0.005)	-0.009* (0.005)
Institutional own.	-0.009 (0.008)	0.008 (0.008)	-0.002 (0.009)	0.005 (0.008)	-0.007 (0.005)	0 (0.003)	-0.003 (0.003)	-0.002 (0.003)
Idiosyncratic vol.	0.004 (0.008)	0.008 (0.007)	0.006 (0.007)	0.008 (0.007)	-0.036*** (0.004)	0.003 (0.003)	-0.004 (0.003)	-0.002 (0.003)
Leverage	0.009 (0.007)	-0.014* (0.008)	0.003 (0.008)	-0.01 (0.008)	0.030*** (0.004)	0.002 (0.003)	0.003 (0.003)	0.001 (0.003)
ROA	0.014* (0.007)	-0.009 (0.008)	0.003 (0.009)	-0.006 (0.008)	-0.035*** (0.006)	0.002 (0.004)	-0.002 (0.004)	-0.001 (0.004)
Avg. stock return	-0.563*** (0.040)	-0.574*** (0.036)	-0.579*** (0.036)	-0.573*** (0.035)	-0.554*** (0.030)	-0.521*** (0.016)	-0.532*** (0.019)	-0.530*** (0.018)
13D experience			1.913*** (0.249)	-0.022 (0.205)			0.196*** (0.035)	-0.340*** (0.039)
13G experience			-1.708*** (0.179)	0.001 (0.007)			-0.053*** (0.002)	0.000 (0.001)
Activist HF			0.009 (0.008)	-0.002 (0.007)			0.010*** (0.003)	0.005* (0.003)
Prior 13D filing			0.005 (0.005)	-0.005 (0.005)			0.011*** (0.002)	0.008*** (0.002)
Prior 13G filing			0.002 (0.004)	0.003 (0.004)			0.002 (0.002)	0.002 (0.002)
Market premium			0.000 (0.000)	0.000 (0.000)			0.000*** (0.000)	0.000* (0.000)
SMB factor			0.001* (0.001)	0.001** (0.001)			0.002*** (0.000)	0.002*** (0.000)
HML factor			0.001* (0.001)	0.001** (0.001)			-0.001*** (0.000)	-0.001*** (0.000)
PseudoR ²	.030	.028	.043	.03	.062	.035	.044	.042

B. Estimates of activism costs and volatilities

	Financial				Nonfinancial			
	(1)		(2)		(3)		(4)	
	Parameter estimate	Standard error	Parameter estimate	Standard error	Parameter estimate	Standard error	Parameter estimate	Standard error
C	0.052***	(0.000)	0.035***	(0.000)	0.039***	(0.000)	0.038***	(0.004)

(continued)

Table D.1
Continued

B. Estimates of activism costs and volatilities

	Financial				Nonfinancial			
	(1)		(2)		(3)		(4)	
	Parameter estimate	Standard error	Parameter estimate	Standard error	Parameter estimate	Standard error	Parameter estimate	Standard error
$\sigma_{\Delta D}$	0.245***	(0.000)	0.239***	(0.003)	0.232***	(0.000)	0.197***	(0.002)
$\sigma_{\Delta G}$	0.213***	(0.00)	0.212***	(0.001)	0.161***	(0.000)	0.160***	(0.000)
σ_{SD}	0.697***	(0.000)	1.311***	(0.738)	0.319***	(0.000)	4.762***	(0.265)
σ_{SG}	4.450	(0.000)	2.742**	(1.253)	0.767	(0.826)	4.354***	(1.780)

This table replicates the structural model parameters estimated in table 3 of Albuquerque, Fos, and Schroth (2022), for our sample splits between financial and nonfinancial blockholders. See Albuquerque, Fos, and Schroth (2022) for more detailed discussion of the estimation procedure and variable and parameter definitions. We present the estimates of the costs of activism, C , the volatilities of returns for 13D and 13G filing, $\sigma_{\Delta D}$ and $\sigma_{\Delta G}$, respectively, the volatilities of the due diligence signals, σ_{SD} and σ_{SG} , for each of these filings, respectively, and the sensitivities of expected returns, β_D and β_G to their respective determinants for both financial (columns 1 and 2 in panels A and B) and nonfinancial blockholders (columns 3 and 4 in panels A and B). The parameters are estimated by maximum likelihood, targeting the model-implied joint distribution of filing choices (13D vs. 13G) and conditional abnormal announcement returns. Standard errors are presented under each estimate. The pseudo R^2 statistic is the proportion of the total variation of abnormal returns from explained by the model. * $p < .1$; ** $p < .05$; *** $p < .01$.

Table D.2
Structural model estimates for an alternative categorization of blockholder types

A. 13D filings

13D filings	Hedge funds (N = 3,884)		Individuals (N = 1,625)		Institutional (N = 939)		Other private (N = 2,255)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mean return (%)	4.36	4.12	4.10	5.33	3.23	7.67	5.63	4.20
Stock picking (%)	-0.55	5.35	1.65	4.52	0.85	4.03	1.32	3.83
Activism (%)	4.91	7.21	2.45	2.49	2.38	6.37	4.31	1.74
Selection (%)	0.88	0.52	1.95	0.78	14.71	4.62	2.63	0.93

B. 13G filings

13G filings	Hedge funds (N = 34,511)		Individuals (N = 2,056)		Institutional (N = 21,049)		Other private (N = 3,618)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mean return (%)	-3.02	9.81	0.84	7.60	-40.21	41.11	3.17	6.19
Stock picking (%)	0.25	2.82	3.05	4.90	1.00	4.21	2.11	4.05
Selection (%)	0.04	0.06	1.04	0.51	0.01	0.02	0.71	0.33

This table summarizes the estimates of the expected returns from filing a Schedule 13D, or a Schedule 13G, as well as the three components of the announcement returns. The total returns for each announcement i , conditional on a 13D filing, include a stock picking effect, a treatment effect from activism, and a selection effect. For 13G filings, expected returns are decomposed into stock picking and selection effects. These effects are estimated for each announcement in the sample, taking as given the target and blockholder characteristics, using the estimates of the structural model presented in Table D.1 in Appendix D. Estimation of the components follows table 6 in Albuquerque, Fos, and Schroth (2022). Our estimates of the model are performed separately for hedge fund, individual, institutional, and other private blocks (as defined in Section 2). Panel A is confined to 13D filings, while panel B is confined to 13G filings.

individual, institutional, and other private blocks (as defined in Section 2). Panel A is confined to 13D filings, while panel B is confined to 13G filings. As panel A demonstrates, *Activism* is particularly valuable in when it is done by hedge funds (with a coefficient of 4.91) and other private blocks (with a coefficient of 4.31).

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