Online Internet Appendix to
Institutional Investor Cliques and Governance

This online Internet Appendix presents results from additional analysis discussed in the paper as well as robustness tables for an alternative measure of coordinated ownership. Section IA-1 presents additional results discussed by not tabulated in the paper. Section IA-2 provides a description of an alternative measure of institutional coordination, the cluster coefficient. Section IA-3 presents results using the alternative measure. Finally, Section IA-4 presents results using clique ownership calculated exclusive of block positions.

IA-1. Additional Results Discussed in Draft

1. Table IA-1.1 presents the variation in institutional characteristics across all institutions and across institutions within the same clique.

2. Table IA-1.2 presents first stage regression from the IV estimate in Table 5.

3. Table IA-1.3 presents estimates of the probability of shareholder proposals and proxy fights on measures of clique ownership.

4. Table IA-1.4 replicates results in Crane and Koch (2018), examining differences in ownership structure caused by a loss of a coordination mechanism. We present cross-sectional differences in this response as a function *Clique Onwership*.

Table IA-1.1 Similarity of Institutional Characteristics within Cliques

This table presents cross-sectional standard deviations of institutional characteristics for the full cross-section and within each clique. Data are institution-year observations from 1980-2013. All variables are constructed using calendar year-end holdings of each institution reported by Thomson Reuters. Assets under management is the total market value of the institution's holdings in millions in 2013 dollars. Average holding size is the percent of the firm's market value owned by the institution averaged over all positions in the institution's portfolio. Dedicated and Transient are indicator variables defined by Bushee (1998).

	Across All Institutions	Within Each Clique
Assets Under Management	55357	47509
Number of Positions	1840	1781
Average Holdings Size	0.024	0.024
Investment Company	0.471	0.404
Bank	0.336	0.278
Insurance Company	0.208	0.161
Corporate Pensions	0.152	0.087
Public Pensions	0.104	0.046
Endowments	0.097	0.034
Miscellaneous	0.170	0.105

Table IA-1.2 Clique Ownership and Shareholder Voting: Exogenous Network Shocks First Stage
This table presents first stage estimates from Table 5. Treatment firms are those owned to a high degree by institutions whose network was affected by the mutual fund late trading scandal in 2003. Panel A presents the estimate of the main effect from the first stage where the instrument is an indicator for scandal exposed firms (*Treatment*) interacted with the period after the scandal (*Post*). Panel B presents the estimate of for the interaction of clique ownership and ISS using the interaction of *Treatment* × *Post* with ISS. Numbers of blockholders, institutional owners, and stocks in the owners portfolio are reported per 1,000 for ease of interpretation. All regressions include year and firm effects. Standard errors are clustered by firm with standard errors reported in parenthesis and significance represented according to: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Panel A: Main Effect

	(1) Clique Own.	(2) Clique Own.	(3) Clique Own.
Treatment × Post	-1.918***	-2.016***	-2.016***
	(0.41)	(0.47)	(0.47)
Treatment× Post× ISS against Mgmt	-0.036	-1.269**	-1.269**
	(0.42)	(0.61)	(0.61)
Treatment × ISS against Mgmt	0.171	0.920**	0.920**
	(0.23)	(0.43)	(0.43)
Post × ISS against Mgmt	0.003	0.014***	0.014***
	(0.00)	(0.00)	(0.00)
ISS against Mgmt	-0.003**	-0.008**	-0.008**
	(0.00)	(0.00)	(0.00)
Scandal Fund IO	0.130***	0.182***	0.182***
	(0.03)	(0.04)	(0.04)
Institutional Ownership$_{t-1}$	0.805***	0.779***	0.779***
	(0.02)	(0.02)	(0.02)
Dedicated$_{t-1}$	0.093***	0.099***	0.099***
	(0.03)	(0.03)	(0.03)
Transient$_{t-1}$	-0.110***	-0.122***	-0.122***
	(0.02)	(0.03)	(0.03)
Num. of Stocks in Owners' Portfolio$_{t-1}$	0.024***	0.027**	0.027**
	(0.01)	(0.01)	(0.01)
Number of Inst. Owners$_{t-1}$	-0.137***	-0.119***	-0.119***
	(0.03)	(0.03)	(0.03)
Own. of Top 5 $_{t-1}$	0.133***	0.172***	0.172***
	(0.02)	(0.03)	(0.03)
Num. of Blockholder$_{t-1}$	0.005***	0.005***	0.005***
	(0.00)	(0.00)	(0.00)
Market to Book (bps) $_{t-1}$	-0.005***	-0.005***	-0.005***
	(0.00)	(0.00)	(0.00)
Ln(Size)$_{t-1}$	0.003	0.004	0.004
	(0.00)	(0.00)	(0.00)
Stock Return over Previous Year	-0.003*	-0.004*	-0.004*
	(0.00)	(0.00)	(0.00)
Assets of Owners $_{t-1}$	-0.235***	-0.304***	-0.304***
	(0.07)	(0.08)	(0.08)

Panel B: Interaction Effect

	(1)	(2)	(3)
	Clique Own.×ISS	Clique Own.×ISS	Clique Own.×ISS
Treatment × Post	1.223***	0.820	0.820
	(0.38)	(0.58)	(0.58)
Treatment× Post× ISS against Mgmt	-5.590***	-6.465	-6.465
	(1.84)	(7.63)	(7.63)
Treatment × ISS against Mgmt	65.329***	58.258***	58.258***
	(1.80)	(7.09)	(7.09)
Post × ISS against Mgmt	0.089***	0.099*	0.099*
	(0.01)	(0.05)	(0.05)
ISS against Mgmt	0.002	0.056	0.056
	(0.01)	(0.05)	(0.05)
Scandal Fund IO	0.004	0.040	0.040
	(0.03)	(0.05)	(0.05)
Institutional Ownership$_{t-1}$	0.121***	0.061**	0.061**
	(0.02)	(0.02)	(0.02)
Dedicated$_{t-1}$	0.015	0.077**	0.077**
	(0.03)	(0.04)	(0.04)
Transient$_{t-1}$	0.000	0.023	0.023
	(0.02)	(0.03)	(0.03)
Num. of Stocks in Owners' Portfolio$_{t-1}$	0.009	0.022**	0.022**
	(0.01)	(0.01)	(0.01)
Number of Inst. Owners$_{t-1}$	0.049**	0.035	0.035
	(0.02)	(0.03)	(0.03)
Own. of Top 5 $_{t-1}$	0.096***	0.074**	0.074**
	(0.02)	(0.04)	(0.04)
Num. of Blockholder$_{t-1}$	0.000	-0.003*	-0.003*
	(0.00)	(0.00)	(0.00)
Market to Book (bps) $_{t-1}$	-0.000	-0.000	-0.000
	(0.00)	(0.00)	(0.00)
Ln(Size)$_{t-1}$	-0.001	-0.003	-0.003
	(0.00)	(0.00)	(0.00)
Stock Return over Previous Year	-0.002	0.001	0.001
	(0.00)	(0.00)	(0.00)
Assets of Owners $_{t-1}$	-0.159**	-0.199**	-0.199**
	(0.07)	(0.10)	(0.10)

Table IA-1.3 Clique Ownership, Shareholder Proposals, and Activism

This table presents conditional logit estimates of the shareholder proposals and activism on coordinated ownership. The dependent variable in columns 1-3 is an indicator equal to one if there is shareholder initiated proposal for that firm in that year, and zero otherwise. The dependent variable in columns 4-6 is an indicator equal to one if there is shareholder filing indicating activism (as in Norli et al., 2015). The measure of coordinated ownership is *Clique Ownership* in columns 1 and 4, *Clique Herfindahl* in columns 2 and 5, and *Clique Own. Top 1* in columns 3 and 6. The variables are defined in Appendix Table A. . Ownership variables are measured as of December of the year prior to the year of the shareholder meeting. Market-to-book is measured at the most recent fiscal year end prior to the meeting. Stock returns and firm size are measured at the month prior to the meeting. Numbers of blockholders, institutional owners, and stocks in the owners portfolio are reported per 1,000 for ease of interpretation. All regressions include year and firm effects. Standard errors are clustered by firm with standard errors reported in parenthesis and significance represented according to: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

	Pr(Shareholder Proposal)			Pr(Shareholder Activism)		
	(1)	(2)	(3)	(4)	(5)	(6)
Clique Ownership$_{t-1}$	0.673 (3.05)			1.530 (14.47)		3.291 (7.95)
Clique Herfindahl$_{t-1}$		3.359* (1.78)			0.833 (16.59)	
Cliques Own. - Top 1$_{t-1}$			2.326** (0.99)			
Institutional Ownership$_{t-1}$	0.126 (2.99)	-0.172 (1.34)	-0.224 (1.34)	-12.775 (13.63)	-11.659* (7.09)	-12.626* (6.87)
Dedicated$_{t-1}$	-1.482 (1.44)	-1.191 (1.44)	-1.086 (1.48)	-62.629*** (18.06)	-62.603*** (18.26)	-62.960*** (17.86)
Transient$_{t-1}$	-3.359** (1.49)	-2.943** (1.45)	-2.904** (1.44)	-10.602 (8.45)	-10.515 (7.61)	-9.111 (8.28)
Num. of Stocks in Owners' Portfolio$_{t-1}$	-0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.007 (0.00)	-0.006 (0.00)	-0.006 (0.00)
Number of Inst. Owners$_{t-1}$	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.013 (0.01)	0.013 (0.01)	0.013 (0.01)
Own. of Top 5$_{t-1}$	3.894** (1.66)	3.151* (1.70)	2.955* (1.70)	-5.496 (8.27)	-5.134 (9.11)	-4.094 (9.81)
Num. of Blockholder$_{t-1}$	-0.012 (0.07)	-0.013 (0.07)	-0.012 (0.08)	-0.487 (0.68)	-0.491 (0.56)	-0.619 (0.53)
Market to Book$_{t-1}$	0.001 (0.00)	0.001 (0.00)	0.001 (0.00)	-0.534* (0.28)	-0.536* (0.28)	-0.497* (0.26)
Ln(Size)$_{t-1}$	0.341* (0.18)	0.309* (0.18)	0.297* (0.18)	-0.381 (1.72)	-0.395 (1.72)	-0.346 (1.87)
Assets of Owners (Mil.) $_{t-1}$	-0.000 (0.00)	-0.000 (0.00)	-0.000 (0.00)	0.000* (0.00)	0.000** (0.00)	0.000** (0.00)
Observations	2663	2663	2663	111	111	111
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes

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Table IA-1.4 Coordination in Cliques: Evidence from the loss of a Coordination Mechanism

This table presents a difference in difference estimation of the effect of the 1999 Ninth Circuit Court of Appeals decision on ownership structure. Measures of ownership structure include *Institutional Ownership*, *Ownership Concentration*, and the *Number of Large Positions* as defined in Crane and Koch (2018). *High Clique Ownership* is equal to one if the clique ownership in the firm is above the median that year. Standard control variables include Dividend Payer$_{t-1}$, ln(Market Equity)$_{t-1}$, ln(Market to Book)$_{t-1}$, ROA$_{t-1}$, Annual returns$_{t-1}$, State Net Tax Revenue$_{t-1}$, State GDP per Capita$_{t-1}$, State Unemployment$_{t-1}$, and State Population$_{t-1}$ (state-level variables not included in Panel B). Standard errors are clustered by firm with *t*-statistics reported in parenthesis and significance represented according to: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Panel A: State and Year Effects

	Inst. Ownership	Ownership Concentration	Number of Large Positions
Treatment	7.70***	0.41***	1.31***
	(1.77)	(0.13)	(0.28)
Treatment × High Clique Own.	-8.74**	-0.83***	-2.35***
	(4.20)	(0.29)	(0.73)
Post1999 × High Clique Own.	-7.17***	-1.00***	-0.63**
	(1.81)	(0.13)	(0.29)
Ln(Market Equity)$_{t-1}$	8.28***	0.35***	0.84***
	(0.34)	(0.02)	(0.05)
Ln(Market to Book)$_{t-1}$	-3.65***	-0.18***	-0.43***
	(0.51)	(0.03)	(0.08)
Dividend Payer$_{t-1}$	-2.32***	-0.07**	-0.24**
	(0.58)	(0.04)	(0.09)
ROA$_{t-1}$	3.73***	0.35***	0.76***
	(1.35)	(0.09)	(0.20)
Annual Return$_{t-1}$	0.23*	0.01	0.05**
	(0.14)	(0.01)	(0.02)
State Net Tax Revenue$_{t-1}$	0.04	-0.00	0.01*
	(0.04)	(0.00)	(0.01)
State GDP per Capita$_{t-1}$	-0.21	-0.00	-0.02
	(0.14)	(0.01)	(0.02)
State Unemployment$_{t-1}$	-11.34	5.69	19.08
	(244.28)	(14.48)	(39.39)
Population$_{t-1}$	-0.63*	-0.00	-0.18***
	(0.34)	(0.02)	(0.05)
Observations	26825	26825	26825
Year Effects	Yes	Yes	Yes
Firm Effects	Yes	Yes	Yes
State-Year Effects	No	No	No

Panel B: State-Year Effects

	Inst. Ownership	Ownership Concentration	Number of Large Positions
Treatment × High Clique Own.	-10.21**	-0.79***	-2.51***
	(4.30)	(0.29)	(0.73)
Post1999 × High Clique Own.	-6.24***	-0.98***	-0.56*
	(1.88)	(0.13)	(0.30)
Ln(Market Equity)$_{t-1}$	8.21***	0.35***	0.83***
	(0.34)	(0.02)	(0.05)
Ln(Market to Book)$_{t-1}$	-3.68***	-0.18***	-0.43***
	(0.52)	(0.03)	(0.08)
Dividend Payer$_{t-1}$	-2.34***	-0.07**	-0.22**
	(0.56)	(0.03)	(0.09)
ROA$_{t-1}$	4.12***	0.37***	0.83***
	(1.38)	(0.09)	(0.21)
Annual Return$_{t-1}$	0.29**	0.01*	0.06***
	(0.14)	(0.01)	(0.02)
State Net Tax Revenue$_{t-1}$	-0.12	-0.04	-0.22
	(0.61)	(0.03)	(0.20)
State GDP per Capita$_{t-1}$	-1.31	-0.03	0.57**
	(0.80)	(0.04)	(0.24)
State Unemployment$_{t-1}$	5504.03	-281.50	-5741.68
	(15518.37)	(719.52)	(5066.85)
Population$_{t-1}$	-0.56	0.08	0.55
	(2.25)	(0.10)	(0.74)
Observations	26824	26824	26824
Year Effects	No	No	No
Firm Effects	Yes	Yes	Yes
State-Year Effects	Yes	Yes	Yes

IA-2. Description of Alternative Measure

For each institution, the clustering measure for a given year, following Barrat et al. (2004), is given by:

$$Cluster_i^w = \frac{1}{(\sum_{j \in N_i} w_{ij} a_{ij})(k_i - 1)} \sum_{j,k \in N_i} \frac{w_{ij} + w_{ik}}{2} a_{ij} a_{ik} a_{jk} \qquad \text{(IA.1)}$$

where a_{ij} is equal to one if there is edge (at least one overlapping ownership position) between institutions i and j, w_{ij} is the importance weight of that connection (defined in a number of ways), N_i represents the set of institutions in the neighborhood of i (all institutions with at least one overlapping positions with institution i), and k_i is the total possible number of connections between institutions in N_i. Therefore, this measure considers not only whether a connection between an institution-pair exists, but also the strength of the connection.

The cluster coefficient, $Cluster_i^w$, is bounded $[0,1]$. Therefore we use the logit transformation to identify clustered institutions, proxying for the extent to which a given institution belongs to a clique.

$$Clustered\ institution_{i,t} = ln(\frac{Cluster_{i,t}^w}{1 - Cluster_{i,t}^w}). \qquad \text{(IA.2)}$$

We then aggregate this measure to the firm level:

$$Cluster\ Ownership_{j,t} = \sum_i^N \lambda_{i,t} Clustered\ institution_{i,t} \qquad \text{(IA.3)}$$

where $\lambda_{i,t}$ is institution i's percent holdings in firm j at time t.

IA-3. Robustness to Alternate Measure: List of Exhibits

We present the following results:

1. Table IA-3.1 presents summary statistics of institutions by quartile of *Clustered institution*.

2. Table IA-3.2 presents regressions of *Clustered institution* on institutional characteristics.

3. Table IA-3.3 presents summary statistics of firm-level observations by quartile of *Clustered Ownership*.

4. Table IA-3.4 presents regressions of voting outcomes as a function of *Cluster Ownership*. This table is analogous to Table 4 of the paper.

5. Table IA-3.5 examines the threat of exit as a function of *Cluster Ownership*. This table is analogous to Table 9 of the paper.

6. Table IA-3.6 examines the firm characteristics associated with *Cluster Ownership*. This table is analogous to Table 10 of the paper.

Table IA-3.1 Summary Statistics Institution-level: Subsample averages by quartile of *Clustered Institution*
This table presents summary statistics on institution-year observations from 1980-2013. All variables are constructed using calendar year-end holdings of each institution reported by Thomson Reuters. Assets under management is the total market value of the institution's holdings in millions in 2013 dollars. Number of large positions is the number of ownership stakes that are at least 5% of the firm. Average holding size is the percent of the firm's market value owned by the institution averaged over all positions in the institution's portfolio. Dedicated and Transient are indicator variables defined by Bushee (1998). Panel A summarizes the full sample. Panel B splits the sample into quartiles of *clustered institution* sorted by year.

	Q1	Q3	Q4	Q4
Clustered Institution	1.70	2.41	2.83	3.64
Assets Under Management (2013 $ Mil.)	55379.17	7280.82	3753.24	2879.74
Number of Positions	3216.84	723.08	357.39	175.64
Number of Large Positions	13.71	2.50	1.65	1.65
Average Holding Size	0.00	0.00	0.00	0.01
Investment Company	0.62	0.76	0.78	0.81
Insurance Company	0.06	0.04	0.03	0.04
Bank	0.21	0.13	0.09	0.04

Table IA-3.2 Characteristics of Clustered Institutions

This table presents an OLS estimation of the descriptors of connected institutions. The sample is institution-year observations from 1981-2012 and is constructed using calendar year-end holdings of each institution reported by Thomson Reuters. Column 1 estimates the characteristics of clustered ownership. Column 2 estimates the characteristics of central ownership. All independent variables are lagged. AUM is the total market value of the institution's holdings in millions. A position is determined to be a blockholding if it is at least 5% of the firm. Average percent of firm owned is the percent of the firm's market value owned by the institution averaged over all positions in the institution's portfolio. Dedicated and Transient are indicator variables defined by Bushee (1998). Year effects are included but not reported. Standard errors are clustered by firm with t-statistics reported in parenthesis and significance represented according to: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

	Cluster Ownership	Cluster Ownership	Cluster Ownership
Assets Under Management (2013 $)	6.50e-13**	6.62e-13***	6.63e-13**
	(2.49)	(2.62)	(2.55)
Number of Positions	-0.000173***	-0.000168***	-0.000167***
	(-20.31)	(-19.63)	(-19.45)
Number of Large Positions	-0.000813	-0.000893	-0.000962
	(-0.96)	(-1.09)	(-1.15)
Average Holding Size	9.451***	9.906***	9.089***
	(8.93)	(10.72)	(8.75)
Dedicated Institutions	0.117**		0.129**
	(2.19)		(2.43)
Transient Institutions	0.0180		-0.00551
	(1.20)		(-0.35)
Investment Company		0.0515	0.0557
		(1.25)	(1.35)
Insurance Company		0.0200	0.0160
		(0.35)	(0.29)
Bank		-0.103**	-0.107**
		(-2.39)	(-2.49)
Endowments		0.136*	0.128
		(1.65)	(1.55)
Miscellaneous		0.129***	0.130***
		(2.67)	(2.70)
Constant	4.033***	4.057***	4.048***
	(139.79)	(80.52)	(81.17)
Observations	51693	51693	51693
Year Effects	Yes	Yes	Yes

Table IA-3.3 Summary Statistics Firm-level: Subsample averages by quartiles of *Cluster Ownership*
This table presents summary statistics on firm-year observations from 1980-2013. Panel A summarizes the full sample. Panel B splits the sample into quartiles of *Cluster Ownership* sorted by year.

	Q1	Q3	Q4	Q4
Cluster Ownership	0.06	0.35	0.82	1.55
Assets 2013 $	1962.10	4081.29	10371.08	9628.51
Book Leverage	0.15	0.16	0.17	0.19
Ln(Market to Book)	0.44	0.36	0.44	0.52
Institutional Ownership	0.03	0.18	0.40	0.70
Number of Stocks	78.29	337.63	682.00	1026.02
Number of Blockholders	0.06	0.71	1.56	2.57
Dedicated	0.00	0.02	0.05	0.10
Quasi-Indexer	0.02	0.11	0.25	0.42
Transient	0.01	0.04	0.09	0.17
Average Assets of Owners	2.65e+09	1.44e+10	3.55e+10	5.31e+10

Table IA-3.4 Cluster Ownership and Governance by Voice: Evidence from Shareholder Votes

This table presents estimates from a conditional logit specification. In column one, the dependent variable is one if the agenda item was sponsored by a non-management owner, zero if sponsored by management. In columns two through four, the dependent variable is one if the vote outcome is opposite management's recommendation. In the last two column, the dependent variable is the percentage of votes against management's recommendation. In Panel A, the independent variable of interest is *Cluster Ownership*, which measures the extent to which the firm's ownership is clustered. In Panel B, we use an indicator variable, High Cluster Own., which equals one if *Cluster Ownership* is above the median. Ownership variables are measured as of December of the year prior to the year of the shareholder meeting. Market-to-book is measured at the most recent fiscal year end prior to the meeting. Stock returns and firm size are measured at the month prior to the meeting. All independent variables are standardized. All regressions include year and firm effects. Standard errors are clustered by firm with t-statistics reported in parenthesis and significance represented according to: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

	Owner Sponsored	Vote against Mgmt.	Vote against Mgmt.	Vote against Mgmt.	Per. Votes Against	Per. Votes Against
Cluster Ownership$_{t-1}$	1.205***	0.238	-3.932***	1.757**	-0.0152***	-0.00589
	(2.78)	(0.31)	(-3.28)	(1.99)	(-3.26)	(-1.01)
Cluster Ownership$_{t-1}$ × ISS against Mgmt					0.0523***	0.0658***
					(10.89)	(10.91)
Institutional Ownership$_{t-1}$	-2.040*	-1.334	9.159***	-5.015**	0.0536***	0.0427***
	(-1.88)	(-0.65)	(2.86)	(-2.09)	(4.28)	(2.72)
Dedicated$_{t-1}$	0.929	-0.711	-1.175	-0.433	0.0188*	0.0114
	(1.31)	(-0.78)	(-0.51)	(-0.53)	(1.75)	(0.97)
Transient$_{t-1}$	-1.772**	1.165	-0.699	1.399**	-0.0145*	0.00389
	(-2.46)	(1.43)	(-0.43)	(2.03)	(-1.87)	(0.40)
Num. of Stocks in Owners' Portfolio$_{t-1}$	0.000810***	-0.000545	-0.00205**	-0.000125	0.00000979***	0.00000565
	(3.09)	(-1.49)	(-2.39)	(-0.38)	(3.30)	(1.49)
Number of Inst. Owners$_{t-1}$	0.000295	0.00254**	0.00774**	0.000718	-0.00000242	0.0000206
	(0.98)	(2.44)	(2.25)	(0.97)	(-0.15)	(1.23)
Own. of Top 5 $_{t-1}$	0.217	-0.502	2.707	-1.818*	-0.0442***	-0.0345***
	(0.27)	(-0.45)	(1.06)	(-1.75)	(-4.39)	(-2.91)
Num. of Blockholder$_{t-1}$	0.0139	0.0562	0.0706	0.0570	0.000570	-0.000602
	(0.43)	(1.22)	(0.70)	(1.35)	(1.23)	(-1.08)
Market to Book$_{t-1}$	0.00000552***	0.00000115	-0.000537*	0.0000495	-0.000000102**	-0.000000576***
	(7.26)	(0.02)	(-1.78)	(0.13)	(-2.48)	(-23.84)
Ln(Size)$_{t-1}$	-0.00707	-0.655***	-1.568***	-0.265**	-0.00494***	-0.00717***
	(-0.09)	(-5.91)	(-7.11)	(-2.50)	(-4.06)	(-5.11)
Assets of Owners $_{t-1}$	-3.50e-12	1.41e-11***	1.56e-11***	1.31e-11***	-6.16e-14***	-2.82e-14
	(-1.56)	(4.91)	(2.61)	(4.39)	(-2.29)	(-0.78)
ISS against Mgmt					0.0701***	0.0903***
					(15.43)	(15.70)
Observations	65911	150261	17117	39890	125640	42844
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Meeting Type	All	All	All	All	All	All
Vote Type	All	All	Director	Non Director	Director	Non Director

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Table IA-3.5 Cluster Ownership and Governance by Exit: The Effect of Decimalization on Value

This table presents a difference-in-difference estimation of the effect decimalization on the relation between firm value and ownership cliques. The dependent variable is Tobin's q as defined in Appendix A. The main variable of interest is the interaction of *Decimalization* and *Cluster ownership*. This regression is estimated on years 2000 and 2002 (2001 is the year of treatment and is excluded). Firm-fixed effects are included. Standard errors are clustered by firm with t-statistics reported in parenthesis and significance represented according to: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

	q	q	q	q
Cluster Ownership $_{t-1}$	0.948**	1.092***		
	(2.29)	(2.64)		
Decimalization $\times$ Cluster Ownership $_{t-1}$	-0.297***	-0.653***		
	(-4.23)	(-6.70)		
High Coord. Own. $_{t-1}$			-0.205	-0.0759
			(-1.14)	(-0.42)
Decimalization $\times$ High Coord. Own. $_{t-1}$			-0.438***	-0.695***
			(-4.68)	(-6.12)
Ownership by Blocks$_{t-1}$	0.602	-0.872	0.677	-0.362
	(0.94)	(-1.28)	(1.08)	(-0.53)
Decimalization $\times$ Ownership by Blocks$_{t-1}$		2.010***		1.411***
		(6.45)		(5.20)
Decimalization	-0.175**	-0.166**	-0.148**	-0.195**
	(-2.16)	(-2.06)	(-1.99)	(-2.56)
Ln(Market Cap)$_{t-1}$	-0.438***	-0.421***	-0.426***	-0.424***
	(-5.21)	(-5.04)	(-5.21)	(-5.20)
Number of Block Holders$_{t-1}$	-0.0627	-0.0416	-0.0597	-0.0445
	(-1.12)	(-0.75)	(-1.07)	(-0.79)
Book Leverage$_{t-1}$	-0.0488	0.0207	-0.0619	-0.0253
	(-0.05)	(0.02)	(-0.06)	(-0.03)
Inst. Ownership$_{t-1}$	-2.481**	-2.144**	-0.416	-0.242
	(-2.45)	(-2.11)	(-0.88)	(-0.50)
Annual Stock Return$_{t-1}$	0.364***	0.355***	0.367***	0.363***
	(6.58)	(6.52)	(6.65)	(6.63)
CapEx$_{t-1}$	-0.0000951	-0.0000461	-0.0000825	-0.0000434
	(-1.34)	(-0.69)	(-1.14)	(-0.62)
Dividend Payer$_{t-1}$	0.298*	0.301*	0.295*	0.293*
	(1.73)	(1.74)	(1.71)	(1.71)
Observations	8664	8664	8664	8664
Firm Effects	Yes	Yes	Yes	Yes
r-squared	0.128	0.134	0.131	0.135

Table IA-3.6 Clustered Ownership and Managerial Myopia
This table presents a regression of the determinants of *Cluster Ownership* as a function of managerial myopia. *Vesting Equity Sensitivity* is the measure of managerial myopia as defined in Edmans et al. (2017). *CEO age* is the age of the CEO (measured per 10 years). Year-fixed effects are included. Standard errors are clustered by firm with standard errors reported in parenthesis and significance represented according to: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

	Cluster Ownership	Cluster Ownership
Vesting Equity Sensitivity$_{t-1}$	-0.103**	
	(-2.11)	
CEO Age		-0.000751
		(-1.61)
Ln(Market Cap)$_{t-1}$	0.0572***	0.0667***
	(9.77)	(16.24)
Ln(Market to Book)$_{t-1}$	0.0188**	0.0211***
	(2.21)	(3.53)
Dividend Payer$_{t-1}$	-0.0658***	-0.0544***
	(-4.86)	(-5.79)
Number of Block Holders$_{t-1}$	-0.000929	0.0217***
	(-0.09)	(3.64)
Block Ownership$_{t-1}$	1.025***	1.141***
	(7.72)	(15.12)
Annual Stock Return	0.0231***	0.0486***
	(3.85)	(7.99)
Observations	7027	27379
Year Effects	Yes	Yes
Industry Effects	Yes	Yes
r-squared	0.508	0.485

IA-4. Robustness to Sample Excluding Block Positions: List of Exhibits

This section repeats our analysis excluding block positions. That is, we only use the block positions to define cliques. We then exclude all such positions from our clique ownership variables of interest in subsequent analysis. We present the following results:

1. Table IA-4.1 presents firm-level summary statistics where clique ownership variables exclude block positions.

2. Table IA-4.2 presents regressions of voting outcomes as a function of clique ownership exclusive of blocks. This table is analogous to Table 4 of the paper.

3. Table 5 presents regression of voting outcomes as a function of instrumented clique ownership exclusive of blocks. This table is analogous to Table 5 of the paper.

4. Table IA-4.4 examines the threat of exit as a function of clique ownership exclusive of blocks. This table is analogous to Table 9 of the paper.

5. Table IA-4.5 examines the firm characteristics associated with clique ownership exclusive of blocks. This table is analogous to Table 10 of the paper.

Table IA-4.1 Summary Statistics

This table presents summary statistics on firm-year observations from 1980-2013. All variables are defined in Appendix A. .

Firm-level Sample

	Mean	Median	Std. Dev	10th	90th
Clique Ownership	0.20	0.15	0.18	0.01	0.47
Clique Herfindahl	0.02	0.01	0.04	0.00	0.05
Cliques Own. - Top 1.	0.08	0.06	0.08	0.01	0.17
IO Concentration	0.72	0.76	0.25	0.36	1.00
Institutional Ownership	0.33	0.25	0.32	0.01	0.78
Number of Stocks	535.63	318.63	612.40	15.56	1426.76
Number of Blockholders	1.23	1.00	1.53	0.00	3.00
Dedicated	0.04	0.01	0.08	0.00	0.13
Quasi-Indexer	0.20	0.14	0.21	0.01	0.49
Transient	0.08	0.04	0.11	0.00	0.22
Assets of Owners (2013 $ Mil.)	30874.75	6816.75	50439.52	140.65	106563.57
Assets (2013 $)	7255.81	319.28	66633.50	23.09	7194.84
Book Leverage	0.17	0.11	0.22	0.00	0.43
Ln(Market to Book)	0.49	0.48	1.15	-0.62	1.74
Observations	217980				

Table IA-4.2 Clique Ownership and Shareholder Voting

The dependent variable is the percentage of votes against management's recommendation. Panel A presents results using ISS recommendations as the measure for proposal quality. The measure of coordinated ownership is *Clique Ownership* in columns 1 and 2, *Clique Herfindahl* in columns 3 and 4, and *Clique Own. Top 1* in columns 5 and 6. The variables are defined in Appendix Table A. . Columns 1, 3, and 5 use the sample of director election ballot items proposed by management. The remaining columns use all other ballot items proposed by management. Panel B presents results using proposal quality as in Davis and Kim (2007). Ownership variables are measured as of December of the year prior to the year of the shareholder meeting. Market-to-book is measured at the most recent fiscal year end prior to the meeting. Stock returns and firm size are measured at the month prior to the meeting. Numbers of blockholders, institutional owners, and stocks in the owners portfolio are reported per 1,000 for ease of interpretation. All regressions include year and firm effects. Standard errors are clustered by firm with standard errors reported in parenthesis and significance represented according to: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Panel A: Proposal Quality Based on ISS Recommendations

	(1) Per. Votes Against	(2) Per. Votes Against	(3) Per. Votes Against	(4) Per. Votes Against	(5) Per. Votes Against	(6) Per. Votes Against
Clique Ownership$_{t-1}$	-0.066***	-0.025***				
	(0.01)	(0.01)				
Clique Ownership$_{t-1}$ × Bad Proposal$_{ISS}$	0.248***	0.228***				
	(0.02)	(0.02)				
Clique Herfindahl$_{t-1}$			-0.130***	-0.092***		
			(0.03)	(0.02)		
Clique Herfindahl$_{t-1}$ × Bad Proposal$_{ISS}$			0.284**	0.406***		
			(0.12)	(0.11)		
Cliques Own. - Top 1$_{t-1}$					-0.072***	-0.046***
					(0.01)	(0.01)
Cliques Own. - Top 1$_{t-1}$ × Bad Proposal$_{ISS}$					0.341***	0.233***
					(0.07)	(0.04)
ISS against Mgmt	0.038***	0.078***	0.116***	0.146***	0.083***	0.131***
	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)
Institutional Ownership$_{t-1}$	0.072***	0.048***	0.052***	0.057***	0.046***	0.055***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Dedicated$_{t-1}$	0.008	0.001	0.011	0.003	0.007	0.002
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Transient$_{t-1}$	-0.026***	-0.004	-0.024***	-0.006	-0.025***	-0.006
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Num. of Stocks in Owners' Portfolio$_{t-1}$	0.012***	0.004	0.013***	0.005	0.013***	0.005
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Inst. Owners$_{t-1}$	-0.002	0.030**	-0.005	0.029**	-0.004	0.029**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Own. of Top 5 $_{t-1}$	-0.066***	-0.032**	-0.046***	-0.033***	-0.045***	-0.031***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Num. of Blockholder$_{t-1}$	-0.002**	-0.001	-0.001	-0.001*	-0.000	-0.001
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Market to Book (bps) $_{t-1}$	-0.002	0.002***	-0.002	0.002***	-0.002	0.002***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Ln(Size)$_{t-1}$	-0.005***	-0.007***	-0.004***	-0.007***	-0.004***	-0.007***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Assets of Owners (.) $_{t-1}$	-0.058**	-0.002	-0.072***	-0.008	-0.059**	-0.006
	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)
Observations	128091	45142	128091	45142	128060	45129
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes
Meeting Type	All	All	All	All	All	All
Vote Type	Director	Non Director	Director	Non Director	Director	Non Director

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Panel B: Proposal Quality Based on Davis and Kim (2007) Classification

	(1) Per. Votes Against	(2) Per. Votes Against	(3) Per. Votes Against
Clique Ownership$_{t-1}$	0.006 (0.01)		
Clique Ownership$_{t-1}$ × Good Proposal$_{DK2007}$	-0.042*** (0.01)		
Clique Herfindahl$_{t-1}$		-0.051*** (0.02)	
Clique Herfindahl$_{t-1}$ × Good Proposal$_{DK2007}$		-0.323*** (0.05)	
Cliques Own. - Top 1$_{t-1}$			-0.020** (0.01)
Cliques Own. - Top 1$_{t-1}$ × Good Proposal$_{DK2007}$			-0.104*** (0.02)
ISS against Mgmt	0.161*** (0.00)	0.161*** (0.00)	0.161*** (0.00)
Institutional Ownership$_{t-1}$	0.043*** (0.01)	0.057*** (0.01)	0.055*** (0.01)
Dedicated$_{t-1}$	0.003 (0.01)	0.004 (0.01)	0.003 (0.01)
Transient$_{t-1}$	-0.003 (0.01)	-0.006 (0.01)	-0.006 (0.01)
Num. of Stocks in Owners' Portfolio$_{t-1}$	0.005 (0.00)	0.005 (0.00)	0.005 (0.00)
Number of Inst. Owners$_{t-1}$	0.029** (0.01)	0.028** (0.01)	0.028** (0.01)
Own. of Top 5 $_{t-1}$	-0.024* (0.01)	-0.033*** (0.01)	-0.031*** (0.01)
Num. of Blockholder$_{t-1}$	-0.000 (0.00)	-0.001* (0.00)	-0.001 (0.00)
Market to Book (bps) $_{t-1}$	0.002*** (0.00)	0.002*** (0.00)	0.002*** (0.00)
Ln(Size)$_{t-1}$	-0.007*** (0.00)	-0.007*** (0.00)	-0.007*** (0.00)
Assets of Owners (.) $_{t-1}$	-0.009 (0.03)	-0.011 (0.03)	-0.010 (0.03)
Observations	45142	45142	45129
Year Effects	Yes	Yes	Yes
Firm Effects	Yes	Yes	Yes
Meeting Type	All	All	All
Vote Type	Non Director	Non Director	Non Director

Table IA-4.3 Clique Ownership and Shareholder Voting: Exogenous Network Shocks

The dependent variable is the percentage of votes against management's recommendation. Treatment firms are those owned to a high degree by institutions whose network was affected by the mutual fund late trading scandal in 2003. The top row presents the estimate of the main effect from the first stage where the instrument is an indicator for scandal exposed firms (*Treatment*) interacted with the period after the scandal (*Post*). We also instrument for the interaction of clique ownership and ISS using the interaction of $Treatment \times Post$ with ISS. First stage estimates of the interaction term are suppressed here for space but shown in the Internet Appendix. Results from the second stage are presented below. Column 1 uses the sample of director election ballot items proposed by management. Column 2 uses all other ballot items proposed by management. Column 3 uses a measure of proposal quality from Davis and Kim (2007) and presents results for the non-director election sample. Numbers of blockholders, institutional owners, and stocks in the owners portfolio are reported per 1,000 for ease of interpretation. Control variables as in Table 4 are included but suppressed for space. All regressions include year and firm effects. Standard errors are clustered by firm with standard errors reported in parenthesis and significance represented according to: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

	(1) Clique Own.	(2) Clique Own.	(3) Clique Own.
First Stage: Main Effect			
Treatment × Post	-3.127***	-3.329***	-3.329***
	(0.91)	(0.97)	(0.97)
	Votes Against	Votes Against	Votes Against
Second Stage			
Clique Ownership$_{t-1}$	1.345***	0.779*	3.255**
	(0.38)	(0.43)	(1.66)
Clique Ownership$_{t-1}$ × Bad Proposal $_{ISS}$	0.172***	0.441***	
	(0.03)	(0.09)	
Clique Ownership$_{t-1}$ × Good Proposal $_{DK2007}$			-8.173
			(5.19)
ISS against Mgmt	-0.011	0.048	0.176***
	(0.01)	(0.03)	(0.02)
Scandal Fund IO	-0.108	-0.091	-0.773
	(0.11)	(0.12)	(0.59)
Observations	19507	4582	4582
First Stage F-stat	5.121	4.744	1.510
Controls	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes
Firm Effects	Yes	Yes	Yes
Meeting Type	All	All	All
Vote Type	Director	Non Director	Non Director

Table IA-4.4 Cliques and Governance by Exit: The Effect of Decimalization on Value

This table presents a difference-in-difference estimation of the effect decimalization on the relation between firm value and clique ownership. The dependent variable is Tobin's q as defined in Appendix A. The main variable of interest is the interaction of *Decimalization* and one of the three measures of ownership by cliques; *Clique Ownership*, *Clique Herfindahl*, and *Clique Own. - Top 1*. This regression is estimated on years 2000 and 2002 (2001 is the year of treatment and is excluded). Firm-fixed effects are included. Standard errors are clustered by firm with standard errors reported in parenthesis and significance represented according to: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

	(1) q	(2) q	(3) q	(4) q	(5) q	(6) q
Clique Ownership $_{t-1}$	1.265	2.790				
	(2.20)	(2.31)				
Decimalization × Clique Ownership $_{t-1}$	-1.661***	-2.225***				
	(0.50)	(0.54)				
Clique Herfindahl $_{t-1}$			13.995**	17.947***		
			(5.66)	(5.77)		
Decimalization × Clique Herfindahl $_{t-1}$			-4.701	-10.729***		
			(2.95)	(4.06)		
Top Cliques Own. $_{t-1}$					3.832	5.885**
					(2.39)	(2.51)
Decimalization × Top Cliques Own. $_{t-1}$					-1.874*	-5.945***
					(1.11)	(1.80)
Ownership by Blocks$_{t-1}$	-0.137	-3.481	-4.626	-7.898**	-1.027	-5.750**
	(1.99)	(2.35)	(3.06)	(3.50)	(2.17)	(2.82)
Decimalization × Ownership by Blocks$_{t-1}$		3.945***		4.890***		6.568***
		(1.09)		(1.68)		(1.70)
Decimalization	-0.067	-0.116	-0.278***	-0.352***	-0.205	-0.121
	(0.12)	(0.12)	(0.09)	(0.10)	(0.13)	(0.13)
Ln(Market Cap)$_{t-1}$	-0.454***	-0.458***	-0.439***	-0.440***	-0.457***	-0.463***
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Number of Block Holders$_{t-1}$	0.160	0.246	0.514	0.559*	0.202	0.296
	(0.22)	(0.22)	(0.32)	(0.32)	(0.24)	(0.24)
Book Leverage$_{t-1}$	0.995	0.951	0.905	0.890	1.166	1.192
	(2.05)	(2.04)	(2.05)	(2.03)	(2.10)	(2.09)
Inst. Ownership$_{t-1}$	-2.026	-2.888	-3.656***	-3.483**	-2.847**	-2.372
	(2.37)	(2.39)	(1.39)	(1.38)	(1.44)	(1.47)
Annual Stock Return$_{t-1}$	0.283***	0.280***	0.285***	0.281***	0.287***	0.282***
	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)	(0.06)
CapEx$_{t-1}$	-0.000	0.000	-0.000	-0.000	-0.000	-0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Dividend Payer$_{t-1}$	0.560*	0.591*	0.584*	0.615*	0.574*	0.600*
	(0.33)	(0.34)	(0.33)	(0.33)	(0.33)	(0.33)
Observations	4419	4419	4419	4419	4390	4390
Firm Effects	Yes	Yes	Yes	Yes	Yes	Yes
r-squared	0.108	0.112	0.106	0.111	0.104	0.110

Table IA-4.5 Clique Ownership and managers' short-term concerns

This table presents a regression of the determinants of *Clique Ownership* as a function of managers' short-term concerns. *Vesting Equity Sensitivity* is the measure of managerial myopia as defined in Edmans et al. (2017). *CEO age* is the age of the CEO (measured per 10 years). Year-fixed effects are included. Standard errors are clustered by firm with standard errors reported in parenthesis and significance represented according to: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

	(1) Clique Ownership	(2) Clique Ownership	(3) Clique Herfindahl	(4) Clique Herfindahl	(5) Top Cliques Own.	(6) Top Cliques Own.
Vesting Equity Sensitivity$_{t-1}$	-0.081*** (0.03)		-0.015** (0.01)		-0.032** (0.01)	
CEO Age		0.000 (0.00)		-0.000 (0.00)		-0.001 (0.00)
Ln(Market Cap)$_{t-1}$	0.048*** (0.00)	0.043*** (0.00)	0.009*** (0.00)	0.007*** (0.00)	0.019*** (0.00)	0.015*** (0.00)
Ln(Market to Book)$_{t-1}$	0.002 (0.00)	0.009*** (0.00)	0.000 (0.00)	0.001*** (0.00)	0.002 (0.00)	0.003*** (0.00)
Dividend Payer$_{t-1}$	-0.020*** (0.01)	-0.018*** (0.00)	-0.004** (0.00)	-0.003*** (0.00)	-0.005* (0.00)	-0.004*** (0.00)
Number of Block Holders$_{t-1}$	0.015* (0.01)	0.021*** (0.00)	-0.006 (0.01)	-0.001 (0.00)	-0.005 (0.01)	0.000 (0.00)
Block Ownership$_{t-1}$	-0.205** (0.10)	-0.232*** (0.04)	0.067 (0.08)	0.010 (0.03)	0.039 (0.09)	-0.005 (0.04)
Annual Stock Return	0.024*** (0.00)	0.037*** (0.00)	0.003*** (0.00)	0.005*** (0.00)	0.006*** (0.00)	0.011*** (0.00)
Observations	6234	21420	6234	21420	6233	21418
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
r-squared	0.502	0.413	0.379	0.328	0.435	0.372