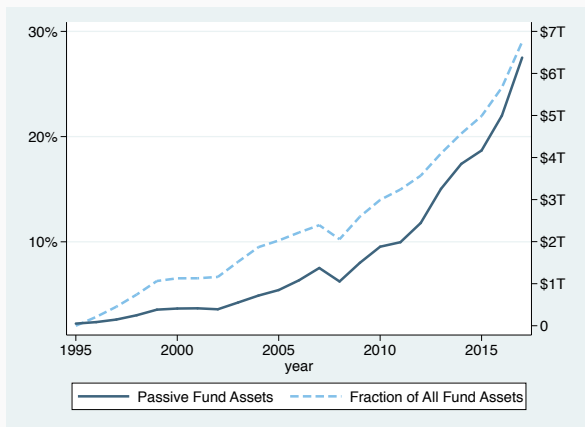# Passive Investors are Passive Monitors

Davidson Heath, Daniele Macciocchi, Roni Michaely, Matt Ringgenberg

UNC-Duke Corporate Finance Conference

April 6, 2019

The rise of passive investing

- Do index funds monitor their portfolio firms?

The rise of passive investing

- Index funds are now the largest shareholders of most U.S. public corporations

- Implications for corporate governance:
  - Long term investors with large positions have strong incentives to monitor (principal-agent 101)
  - But the economics of index investing suggests that index funds may have weak incentives to monitor

The economics of index investing

1. Index fund managers focus on tracking error, not alpha

2. If an index fund monitors $\rightarrow$ firm's value increases
   - But this does not improve the fund performance relative to:
     - The index
     - Other funds that follow the same index

3. Since monitoring is costly, an index fund that monitors will *underperform* its competitors (Bebchuk Cohen & Hirst 2017)

Debate in the empirical literature

1. Boone & White (2015), Appel, Gormley & Keim (2016), Crane, Michenaud & Weston (2016), Appel, Gormley & Keim (2019):
   - Passive ownership $\rightarrow$ better governance

2. Schmidt & Fahlenbrach (2017), Brav, Jiang & Li (WP):
   - Passive ownership $\rightarrow$ worse governance

- How do these effects occur?

This Paper

Do index funds monitor their portfolio firms?

- We directly examine fund monitoring behavior:
  - Voice
    - Voting
    - Engagement
  - Exit

- Uniformly, the evidence suggests that passive funds are passive monitors compared to active funds

1. On consensus items:
   - Index funds and active funds vote identically

2. On contentious items:
   - Index funds vote with management 55.5% of the time
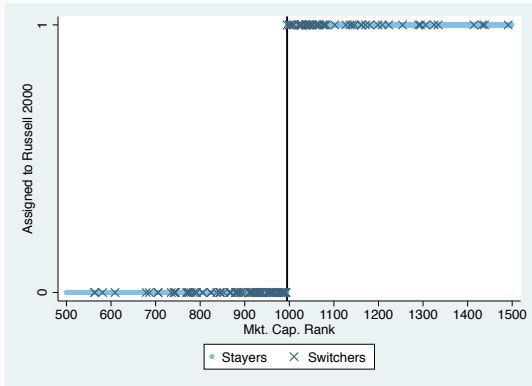   - Active funds vote with management 46.2% of the time

Vanguard index funds prospectus, 2018:

"We will give substantial weight to the recommendations of the company's board absent guidelines or other specific facts that would support a vote against management."

Summary statistics ≠ Voting differences

- Fund holdings are endogenous:
  1. Firm characteristics jointly affect ownership and governance (*omitted variables*)
  2. Different firm policies attract different types of investors (*reverse causality*)
  3. We never observe voting or exit if funds *choose* not to hold a firm (*selection bias*)

- We develop a new research design using post-2006 Russell reconstitutions

June 2006

Russell index assignment post-banding
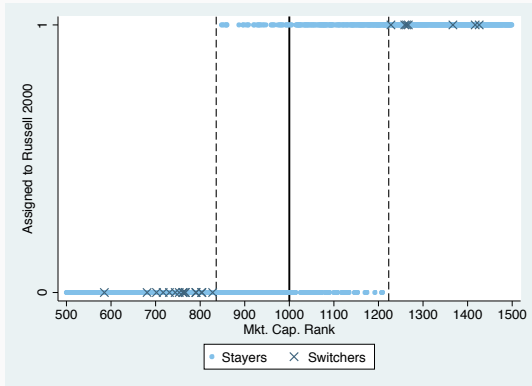
June 2007

Russell research design
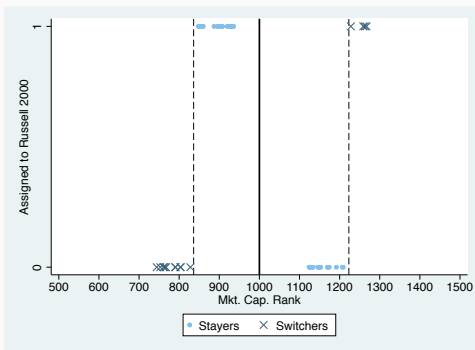
- Stocks above make up the 2007 *cohort*
  - *Panel* of firm-years from 2004–2009
  - Firm fixed effects per cohort

Why do it this way?
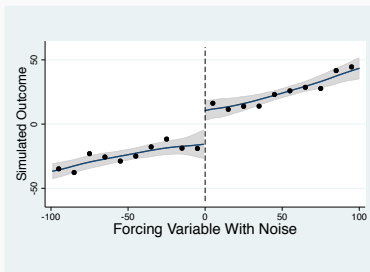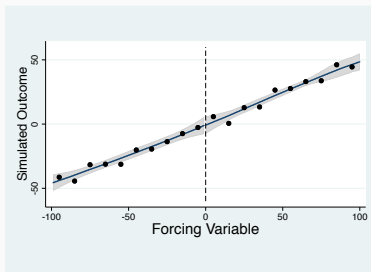
- Pei & Shen (2018): Measurement error in the forcing variable can produce *spurious* estimates
  - Fuzzy RDD (for example) does not fix this!
  - Panel + Firm fixed effects does

Passive fund ownership relative to treatment year

- Parallel trends, symmetric treatment effects

Fund Voting

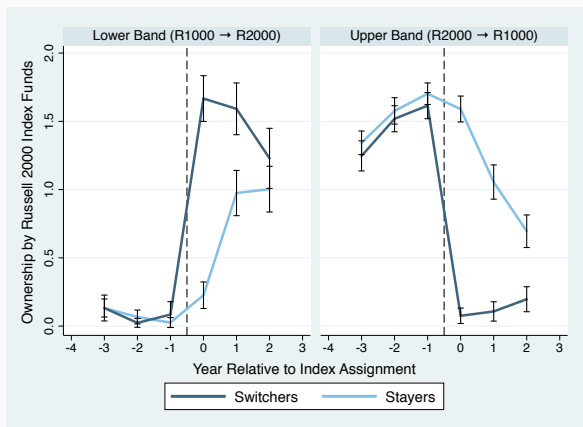|	(1) VotedWithMgmt	(2) VotedWithMgmt	(3) VotedWithMgmt	(4) VotedWithMgmt	(5) VotedWithMgmt	(6) VotedWithMgmt
$IndexFund_i$	0.125***	0.126***	0.150***	0.150***	0.084***	0.079***
	(0.025)	(0.024)	(0.030)	(0.030)	(0.032)	(0.029)
$InverseMillsRatio_{ijt}$					-0.114	-0.111
					(0.040)	(0.034)
$ExpenseRatio_{it} \times$		-0.238***		-0.209**		-0.209**
$IndexFund_i$		(0.073)		(0.085)		(0.084)
$ExpenseRatio_{it} \times$		0.021		0.071		0.071
$ActiveFund_i$		(0.046)		(0.060)		(0.060)
Model	OLS	OLS	OLS	OLS	Heckman	Heckman
Sample Firms	All	All	Russell	Russell	Russell	Russell
Observations	2,187,598	2,187,598	189,319	189,319	189,319	189,319
Adjusted R^2	0.074	0.083	0.076	0.084	0.076	0.084
Firm FE	Yes	Yes	No	No	No	No
Firm × Cohort FE	No	No	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Fund Voting

	(1) VotedWithMgmt	(2) VotedWithMgmt	(3) VotedWithMgmt	(4) VotedWithMgmt	(5) VotedWithMgmt	(6) VotedWithMgmt
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Firm FE	Yes	Yes	No	No	No	No
Firm × Cohort FE	No	No	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Index funds vote with management

- Index funds vote with management 8.4% to 15.0% more than active funds
  - Higher-fee index funds vote with management *less*

- Across different agenda item types:
  - Board of directors, compensation, disclosure, entrenchment

- On both management and shareholder proposals

- Index funds abstain less on contentious votes

- Results similar at the fund-family level

Index funds exit less

- Index funds exit 18% less than active funds
  - Though they do exit and omit firms
  - A Russell 2000 index fund voluntarily exits 67 of its 1789 positions on average per year

- Active funds, but not index funds, are more likely to exit if they previously lost a vote
  - Active funds use exit as a strategic substitute with voting
  - Index funds do not

Engagement

- A third channel: Index funds may engage with management

- Tricky: How to measure engagement?

  1. Look at funds' blockholding disclosures
     - Schedule 13D: "activist" disclosure
     - Schedule 13G: "passive" disclosure

  2. Look at number and types of proposals on firm agendas

Index funds don't engage

1. Index funds are less likely to file 13D (active), more likely to file 13G (passive)

2. When index funds enter or exit, no change in the number or type of proposals put forward

- These findings + Bebchuk & Hirst on meetings + Iliev et al on EDGAR searches are inconsistent with engagement

Passive voting hurts firm value

- So what?
  - Maybe passive voting is optimal

- Abnormal returns on the day results are announced:
  - **Index** fund **lost** the vote: +12 bp
  - **Index** fund **won** the vote: -14 bp

- By contrast,
  - **Active** fund **lost** the vote: 0 bp
  - **Active** fund **won** the vote: -2 bp

Conclusion

- Index funds cede power to firm management:

  1. Less likely to vote against management
  2. Less likely to exit
  3. Less likely to engage

- Index funds are (relatively) **passive monitors**

- The rise of index investing is shifting the balance of power from shareholders to firm managers
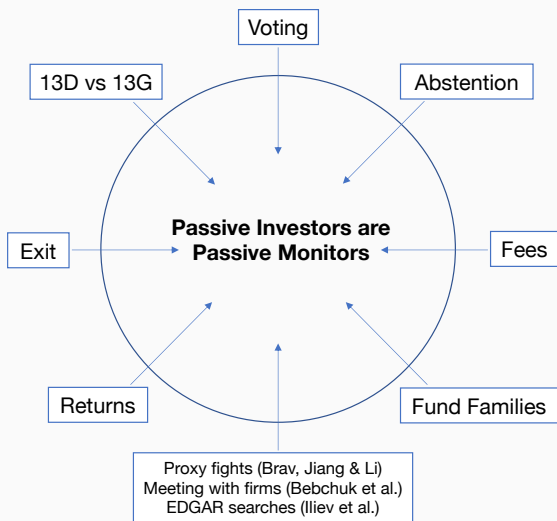
Appendix

Appendix

Stewardship numbers (Bebchuk et al)

- Personnel and number of portfolio companies
  - Vanguard: 21 people; 18,900 Companies $\implies$ 1 person per 900 firms
  - BlackRock: 33 people; 17,309 Companies $\implies$ 1 person per 525 firms
  - SSGA: 11 people; 17,337 Portfolio Companies $\implies$ 1 person per **1,576** firms

- If each Vanguard officer met with one portfolio firm each day, they would only be able to engage with 28% of their portfolio firms

Balance Tests: No pre-treatment differences in levels

(a) Pretreatment ownership by index funds

(b) Pretreatment ownership by active funds

(c) Pretreatment governance (E-Index)
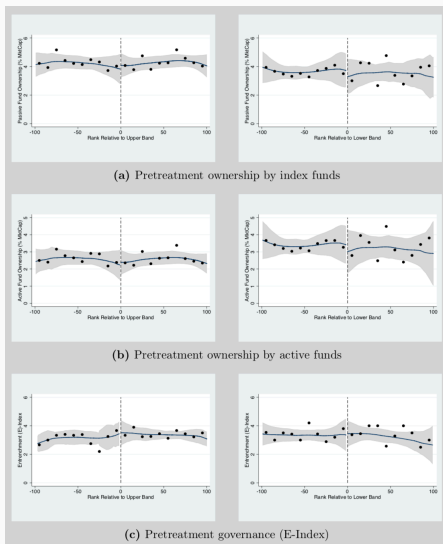
Pre-treatment levels: Fund ownership

	(1) $PassiveOwn_{jt}^{R2000}$	(2) $PassiveOwn_{jt}^{R1000}$	(3) $PassiveOwn_{jt}^{S\&P500}$	(4) $PassiveOwn_{jt}$	(5) $ActiveOwn_{jt}$	(6) $TotalFundOwn_{jt}$
$R1000 \rightarrow R2000_j \times$	-0.02	0.01	0.00	0.02	-1.23	-1.22
$PostAssignment_t$	(0.08)	(0.02)	(0.03)	(0.43)	(1.57)	(1.66)
$R2000 \rightarrow R1000_j \times$	-0.04	0.01	-0.00	-0.12	1.19	1.07
$PostAssignment_t$	(0.12)	(0.01)	(0.01)	(0.35)	(0.85)	(0.98)
Observations	732	732	732	732	732	732
Adjusted R^2	0.677	0.782	0.085	0.249	0.021	0.065
Window	100	100	100	100	100	100
Cohorts	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015
Control Fn Degree	2	2	2	2	2	
Cohort $\times$ Band FE	Yes	Yes	Yes	Yes	Yes	Yes

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Pre-treatment levels: Governance

	(1) E-Index	(2) S/H Chg Bylaws	(3) Supmaj. BusComb	(4) Supmaj. Charter	(5) Poison Pill	(6) Conf. Vote	(7) Cumul. Vote
$R1000 \to R2000_j \times$	0.34	0.05	0.04	0.14	-0.01	0.15	0.02
$PostAssignment_t$	(0.35)	(0.07)	(0.14)	(0.15)	(0.11)	(0.11)	(0.11)
$R2000 \to R1000_j \times$	-0.29	-0.07	0.02	-0.18	0.15	-0.02	-0.07
$PostAssignment_t$	(0.38)	(0.10)	(0.14)	(0.17)	(0.14)	(0.08)	(0.13)
Observations	365	365	365	365	365	365	365
Adjusted R^2	-0.002	-0.022	0.011	-0.028	0.016	0.016	-0.033
Window	100	100	100	100	100	100	100
Cohorts	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015
Control Fn Degree	2	2	2	2	2	2	2
Cohort $\times$ Band FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Pretrends: No pre-treatment differences in trends

(a) Pretreatment trends, ownership by index funds

(b) Pretreatment trends, ownership by active funds

(c) Pretreatment trends, governance (E-Index)
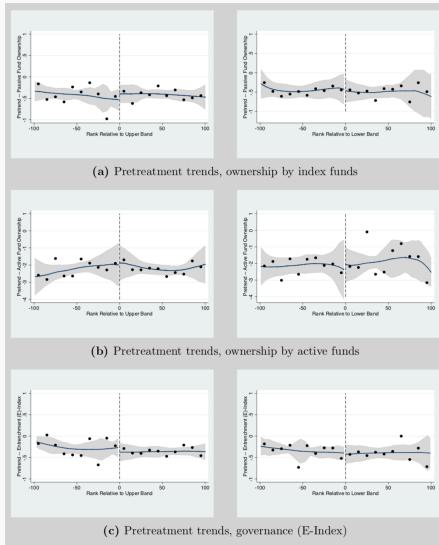
Pre-treatment trends in fund ownership

	(1) $PassiveOwn_{jt}^{R2000}$	(2) $PassiveOwn_{jt}^{R1000}$	(3) $PassiveOwn_{jt}^{S\&P500}$	(4) $PassiveOwn_{jt}$	(5) $ActiveOwn_{jt}$	(6) $TotalFundOwn_{jt}$
$R1000 \rightarrow R2000_j \times$	-0.02	0.01	-0.01	0.00	-0.38	-0.38
$PostAssignment_t$	(0.06)	(0.01)	(0.02)	(0.13)	(0.51)	(0.53)
$R2000 \rightarrow R1000_j \times$	0.00	0.00	0.00	-0.10	0.26	0.17
$PostAssignment_t$	(0.06)	(0.01)	(0.00)	(0.14)	(0.41)	(0.46)
Observations	732	732	732	732	732	732
Adjusted R^2	0.219	0.216	0.121	0.137	0.029	0.023
Window	100	100	100	100	100	100
Cohorts	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015
Control Fn Degree	2	2	2	2	2	
Cohort $\times$ Band FE	Yes	Yes	Yes	Yes	Yes	Yes

Pre-treatment trends in governance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	E-Index	S/H Chg Bylaws	Supmaj. BusComb	Supmaj. Charter	Poison Pill	Conf. Vote	Cumul. Vote
$R1000 \rightarrow R2000_j \times$	0.03	-0.03	-0.02	0.01	0.04	0.01	0.03
$PostAssignment_t$	(0.12)	(0.04)	(0.04)	(0.01)	(0.08)	(0.03)	(0.02)
$R2000 \rightarrow R1000_j \times$	-0.10	-0.01	-0.01	-0.02	0.03	0.02	-0.00
$PostAssignment_t$	(0.12)	(0.01)	(0.05)	(0.02)	(0.03)	(0.03)	(0.00)
Observations	365	365	365	365	365	365	365
Adjusted R^2	0.149	0.025	0.177	0.009	0.162	-0.005	0.082
Window	100	100	100	100	100	100	100
Cohorts	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015
Control Fn Degree	2	2	2	2	2	2	2
Cohort $\times$ Band FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Fund Voting: Summary Statistics

| Management | ISS | Index funds | | | | Active Funds | | | | Difference | |
Recommend	Recommend	Yes	No	Abstain	DNV	Yes	No	Abstain	DNV	PctYes	N
All		90.4%	6.2%	3.2%	0.2%	89.4%	7.1%	3.1%	0.4%	1.0%	23,221,799
Consensus											
Yes	Yes	95.6%	2.8%	1.4%	0.1%	96.0%	2.6%	1.1%	0.3%	-0.4%	20,669,238
No	No	4.2%	84.6%	8.8%	2.4%	5.1%	82.7%	10.7%	1.5%	-0.9%	362,447
Contentious											
Yes	No	54.3%	19.0%	24.9%	1.8%	41.9%	25.1%	30.4%	2.5%	12.4%	1,426,904
No	Yes	41.5%	53.5%	4.9%	0.1%	47.7%	46.0%	6.0%	0.3%	-6.2%	763,210

Heckman Correction

$$
\begin{aligned}
Observed_{ijt} = Probit(&\tau \, IndexFund_i \\
&+ \xi_1 R1000 \to R2000_j \times Post_t \times IndexFund_i \\
&+ \xi_2 R2000 \to R1000_j \times Post_t \times IndexFund_i \\
&+ \mu_1 R1000 \to R2000_j \times Post_t \\
&+ \mu_2 R2000 \to R1000_j \times Post_t \\
&+ \phi_j + \chi_t + \nu_{ijt})
\end{aligned}
\tag{1}
$$

$$
\begin{aligned}
Y_{ijt} = &\beta \, IndexFund_i + \alpha \, InverseMillsRatio_{ijt} \\
&+ \lambda_j + \kappa_t + \epsilon_{ijt}
\end{aligned}
\tag{2}
$$

Observation Equation

	(1)
	$Observed_{ijt}$
$IndexFund_i$	0.696***
	(0.057)
$R2000 \rightarrow R1000_j \times$	0.071***
$PostAssignment_t$	(0.021)
$R1000 \rightarrow R2000_j \times$	-0.224***
$PostAssignment_t$	(0.025)
$R2000 \rightarrow R1000_j \times$	-0.055*
$PostAssignment_t \times IndexFund_i$	(0.032)
$R1000 \rightarrow R2000_j \times$	0.067***
$PostAssignment_t \times IndexFund_i$	(0.024)
Model	Probit
Observations	6,586,669
Pseudo R^2	0.054
Firm $\times$ Cohort FE	Yes
Year FE	Yes

Index Switching and Fund Ownership

	(1) $PassiveOwn_{jt}^{R2000}$	(2) $PassiveOwn_{jt}^{R1000}$	(3) $PassiveOwn_{jt}^{S\&P500}$	(4) $PassiveOwn_{jt}$	(5) $ActiveOwn_{jt}$	(6) $TotalFundOwn_{jt}$
$R1000 \rightarrow R2000_j \times$	1.45***	-0.18***	-0.03**	1.03***	-0.06	0.97*
$PostAssignment_t$	(0.10)	(0.01)	(0.01)	(0.24)	(0.36)	(0.48)
$R2000 \rightarrow R1000_j \times$	-1.34***	0.17***	0.02***	-0.86***	-0.06	-0.93**
$PostAssignment_t$	(0.08)	(0.02)	(0.01)	(0.14)	(0.27)	(0.34)
Observations	4,392	4,392	4,392	4,392	4,392	4,392
Adjusted R^2	0.468	0.474	0.361	0.674	0.569	0.582
Years	2004-2017	2004-2017	2004-2017	2004-2017	2004-2017	2004-2017
Cohorts	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015	2007-2015
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm $\times$ Cohort FE	Yes	Yes	Yes	Yes	Yes	Yes

Fund Voting – Split on Item Type

	(1)	(2)	(3)	(4)
		Item Type		
	Board of Directors	Compensation	Disclosure	Entrenchment
	VotedwithMgmt	*VotedwithMgmt*	*VotedwithMgmt*	*VotedwithMgmt*
IndexFund$_i$	0.132***	0.127***	0.095***	0.116***
	(0.029)	(0.028)	(0.029)	(0.026)
Observations	1,173,740	44,953	106,314	77,189
Adjusted R^2	0.086	0.057	0.021	0.101
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Fund Voting on Proposals by Management vs Shareholders

	(1)	(2)	(3)	(4)	(5)	(6)
	Management Proposals			Shareholder Proposals		
	VotedYes	*VotedNo*	*Abstained*	*VotedYes*	*VotedNo*	*Abstained*
IndexFund$_i$	0.144***	-0.050***	-0.085***	-0.092***	0.103***	-0.009
	(0.031)	(0.011)	(0.020)	(0.023)	(0.022)	(0.008)
Observations	1,408,736	1,408,736	1,408,736	778,846	778,846	778,846
Adjusted R^2	0.079	0.232	0.218	0.089	0.071	0.055
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Changes in the Supply of Agenda Items

	(1) $NumItems_{jt}$	(2) $NumShrProp_{jt}$	(3) $NumMgmtProp_{jt}$	(4) $FracISSAgainst_{jt}$	(5) $FracMgmtAgainst_{jt}$	(6) $FracConsensus_{jt}$
$R1000 \rightarrow R2000_j \times$	0.02	-0.02	0.05	-0.01	0.003	0.012
$PostAssignment_t$	(0.34)	(0.07)	(0.32)	(0.02)	(0.004)	(0.017)
$R2000 \rightarrow R1000_j \times$	-0.28	0.001	-0.29	-0.00	0.004	-0.00
$PostAssignment_t$	(0.37)	(0.03)	(0.37)	(0.01)	(0.003)	(0.013)
Observations	3,726	3,726	3,726	3,726	3,726	3,726
Adjusted R^2	0.614	0.119	0.623	0.430	-0.031	0.431
Firm $\times$ Cohort FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

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Fund Exit

	(1)	(2)	(3)	(4)	(5)	(6)
	VoluntaryExit	*VoluntaryExit*	*VoluntaryExit*	*VoluntaryExit*	*VoluntaryExit*	*VoluntaryExit*
IndexFund$_i$	-0.179***	-0.138***	-0.174***	-0.136***	-0.185***	-0.141***
	(0.012)	(0.012)	(0.015)	(0.014)	(0.015)	(0.014)
InverseMillsRatio$_{ijt}$					-0.021***	-0.008**
					(0.005)	(0.004)
ActiveFund$_i$ × LostVote$_{ijt-1}$		0.009**		0.005		0.005
		(0.004)		(0.008)		(0.006)
IndexFund$_i$ × LostVote$_{ijt-1}$		-0.004		-0.007		-0.007
		(0.004)		(0.007)		(0.007)
Model	OLS	OLS	OLS	OLS	Heckman	Heckman
Sample Firms	All	All	Russell	Russell	Russell	Russell
Observations	4,192,281	2,211,016	452,902	282,738	452,902	282,738
Adjusted R^2	0.093	0.074	0.072	0.058	0.072	0.058
Firm FE	Yes	Yes	No	No	No	No
Firm × Cohort FE	No	No	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Blockholding Disclosures: Schedule 13D versus Schedule 13G

	(1) Filed 13D	(2) Filed 13D	(3) Filed 13D
$FracAUMPassive_{jt}$	-1.13**	-1.05**	-1.15**
	(0.48)	(0.46)	(0.49)
$logAUM_{jt}$		-0.052	
		(0.042)	
$numFilings_{jt}$			0.00028
			(0.00032)
Model	Probit	Probit	Probit
Observations	920	920	921
Pseudo R^2	0.018	0.018	0.018

Fund Votes and Announcement Returns

	(1) $DailyRtn_{ik}$	(2) $DailyRtn_{ik}$
$VotedYes_{ik} \times IndexFund_i$	0.0004	0.0012
	(0.0006)	(0.0015)
$VotedYes_{ik} \times IndexFund_i \times ItemPassed_k$	-0.0004	-0.0014
	(0.0007)	(0.0016)
$VotedYes_{ik} \times ActiveFund_i$	-0.0003	0.0000
	(0.0006)	(0.0012)
$VotedYes_{ik} \times ActiveFund_i \times ItemPassed_k$	0.0003	-0.0002
	(0.0007)	(0.0012)
Sample Firms	All	Russell
Observations	22,148,249	2,514,263
Adjusted R^2	0.175	0.209
Firm FE	Yes	No
Firm $\times$ Cohort FE	No	Yes
Year FE	Yes	Yes

Voting at the Fund-Family Level

	(1) *VotedwithMgmt*	(2) *VotedwithMgmt*	(3) *VotedwithMgmt*	(4) *VotedwithMgmt*	(5) *VotedwithMgmt*	(6) *VotedwithMgmt*
FractionAUMPassive$_{it}$	0.324***	0.324***	0.323***	0.340***	0.341***	0.341***
	(0.073)	(0.073)	(0.073)	(0.027)	(0.027)	(0.027)
Observations	2,137,470	2,137,305	2,136,367	185,661	185,659	185,657
Adjusted R-squared	0.117	0.162	0.202	0.124	0.163	0.201
Firm × Cohort FE	No	No	No	Yes	No	No
Firm FE	Yes	No	No	No	No	No
Year FE	Yes	No	No	Yes	No	No
Firm × Year FE	No	Yes	No	No	Yes	No
Agenda Item FE	No	No	Yes	No	No	Yes