

The Vote is Cast: The Effect of Corporate Governance on Shareholder Value

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Why should we care about corporate governance?

- An old question: Costs entailed by the separation of ownership and control
 - “Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company”
Adam Smith, *The Wealth of Nations* Book V
- A current concern
 - "I think boards of directors did not do a good job, [...] I think shareholders did not do a good job in terms of discipline and compensation practices."
Treasury Secretary Tim Geithner on the 2008 financial crisis, June 10th 2009

Corporate Governance: What affects agency costs?

- Internal:

- Board of Directors
- Managerial incentives
- Bylaw and charter provisions
- Capital structure

} Governance provisions

- External:

- Takeovers
- Product market competition
- Capital markets
- Regulation

} Anti-takeover provisions

Evidence on Governance Provisions

- Governance provisions:
 - Gompers, Ishii and Metrick (2003):
 - Focus on anti-takeover provisions (G-Index)
 - 8.5% annual excess return
 - Correlation with accounting variables, firm valuation
 - Core et al (2006): no systematic effect on excess returns
- State takeover laws (eg. Bertrand and Mullainathan, 2003; Garvey and Hanka, 1999; and Giroud and Mueller, *forthcoming*)
- Large literature (see Shleifer and Vishny, 1997; Becht, Bolton and Röell, 2005)

Estimating the effect of governance

- Problem 1: Endogeneity of adoption

Plus, when estimating the effect on stock prices:

- Problem 2: Markets should incorporate governance effects into prices, we should observe no excess return

Estimating the value of corporate governance provisions

Our Approach:

A Regression Discontinuity Design (RD)

- Shareholder Votes in Annual Meeting: Propose to vote on governance provisions
 - Eg: Poison pills, separate chairman and CEO, golden parachutes...
 - Vote share (% in favor), threshold (50%)
- Large vote margins: expected, high probability
- Around the majority threshold: unexpected, random

Summary of Results

Effect on Shareholders' Value:

- Passing of governance proposals yields 1.3% excess return on the day of the vote
- This is mostly driven by removal of anti-takeover provisions, (effect of G-index provisions is 1.6%)

Real Effects:

- Reduction in acquisitions and capital expenditures
- Moderate increases in long-run performance (Q, BM, profits)

Outline of Talk

1. Data description: the annual meeting
2. Shareholder votes and excess returns
3. Empirical model: regression discontinuity in shareholder votes
4. Evidence on election votes as a quasi-experiment
5. Results
 - Shareholder returns
 - “Decisions”
 - Long-term performance
6. Conclusion

The annual meeting

- Shareholder can propose provisions
 - Own at least 1% or \$1,000 in market value, held for a 1 year.
- Types of provisions: Anti-takeover provisions (G-index), Board of directors, Compensation, Voting
- Appear in proxy materials
- Some are binding or partially binding, most are not binding
- Multiple votes in one day

Example: Caterpillar 2008

Part Three – Proposals to be Voted on at the 2008 Annual Meeting

Company Proposals

- ✓ Proposal 1 – Election of Directors
- ✓ Proposal 2 – Ratification of Independent Registered Public Accounting Firm

Stockholder Proposals

- ✓ Proposal 3 – Annual Election of Directors
Caterpillar Response
- ✓ Proposal 4 – Director Election Majority Vote Standard
Caterpillar Response
- ✓ Proposal 5 – Foreign Military Sales
Caterpillar Response



PROPOSAL 3 – Annual Election of Directors

Pursuant to Rule 14a-8(l)(1) of the Securities Exchange Act of 1934, we will provide the name, address and number of company securities held by the proponent of this stockholder proposal upon receipt of a written or oral request.

This proposal requires an affirmative vote of the majority of shares present at the meeting to pass. Abstentions and broker non-votes have the effect of a vote against this proposal.

Resolution Proposed by Stockholder

RESOLVED, that the shareowners of Caterpillar Inc. (CAT) ask that the Company take the steps necessary to reorganize the Board of Directors into one class subject to election each year.

Supporting Statement of Stockholder

This proposal seeks to reorganize the Board of Directors of the Company so that each director stands before the shareowners for re-election each year. We hope to eliminate the Company's so-called "classified board", whereby the directors are divided into three classes, each serving a three-year term. Under the current structure, shareowners can only vote on one-third of the Board at any given time.

We believe that corporate governance procedures and practices, and the level of accountability they impose, are closely related to financial performance. It is intuitive that when directors are accountable for their actions, they perform better. We also believe that shareowners are willing to pay a premium for corporations with excellent corporate governance. If the Company were to take the steps necessary to declassify its Board, it would be a strong statement that this Company is committed to good corporate governance and its long-term financial performance.

We seek to improve that performance and ensure the Company's continued viability through this structural reorganization of the Board. If passed, shareowners would have the opportunity to register their views at each annual meeting – on performance of the Board as a whole and of each director as an individual.

We urge you to join us in urging the Company to take the steps necessary to declassify the election of directors, as a powerful tool for management incentive and accountability. We urge your support FOR this proposal.

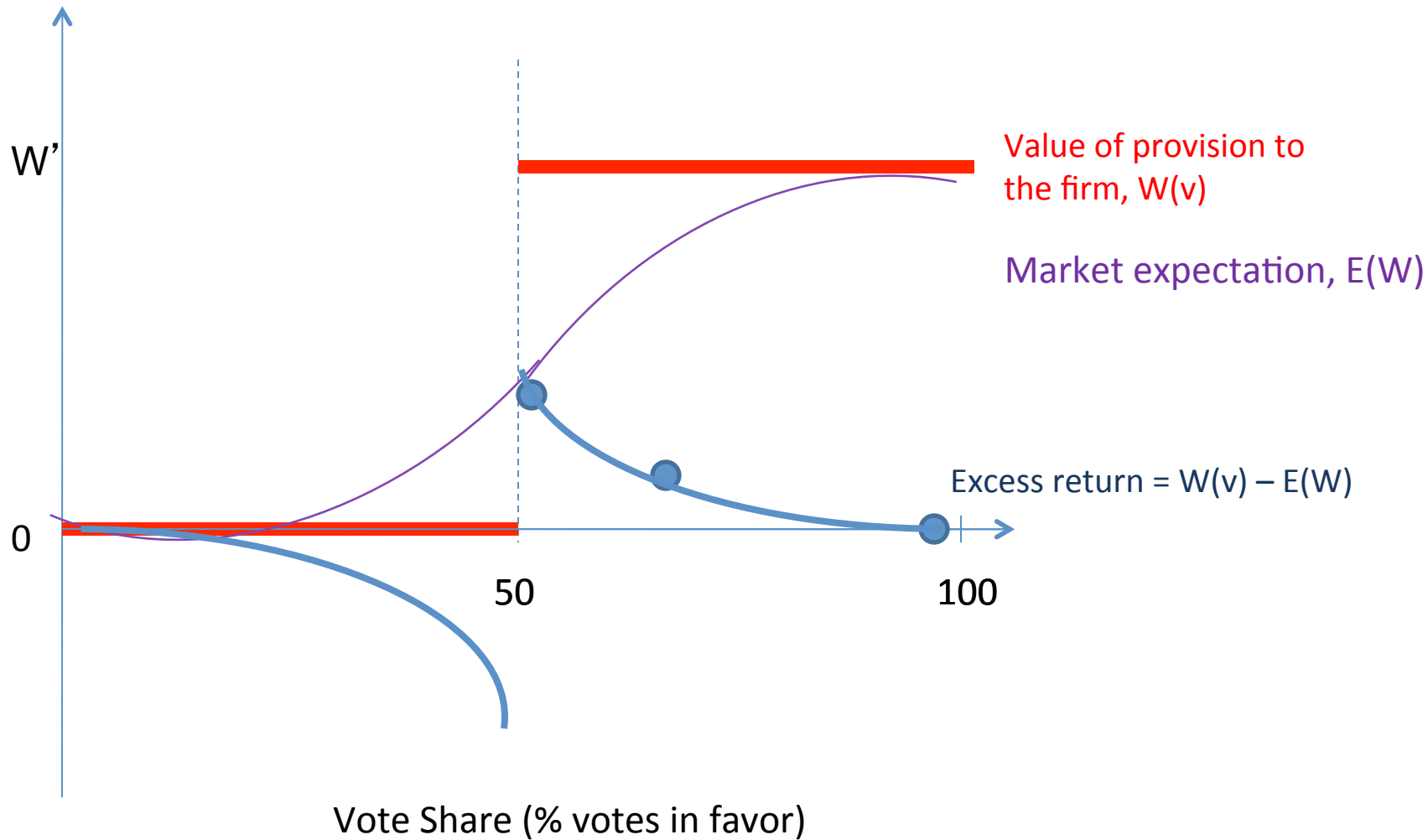
Data: Riskmetrics shareholder proposals database

- All shareholder proposals by S&P 1500 (+500 widely held) companies in 1997-2007
- 3,984 votes, in 2,377 firm/meetings.
- Vote share: % votes in favor normalize to zero the passing threshold.
 - Different rules accounted for: cast v.s./ outstanding
 - Correct for supermajority rules

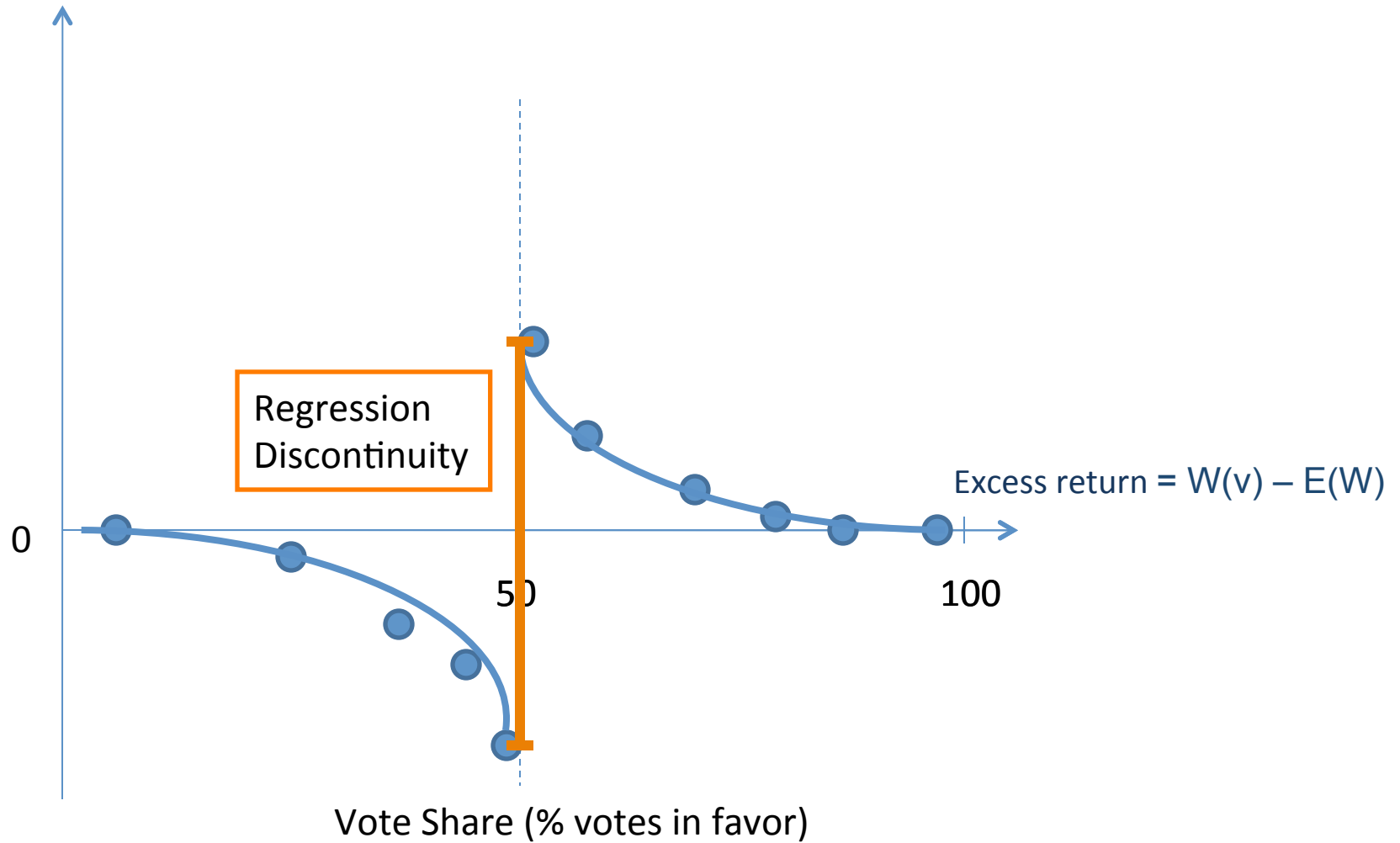
Shareholder Governance Proposals

Proposal Type	Proposals	Mean Vote in Favor	Percentage Approved
Auditors	68	22.70%	4.40%
Board	1061	22%	8.80%
Compensation	520	23.00%	4.20%
G-Index	1558	51%	53%
Voting	421	14%	3.30%
Other	356	33.90%	21.00%
Total	3984		

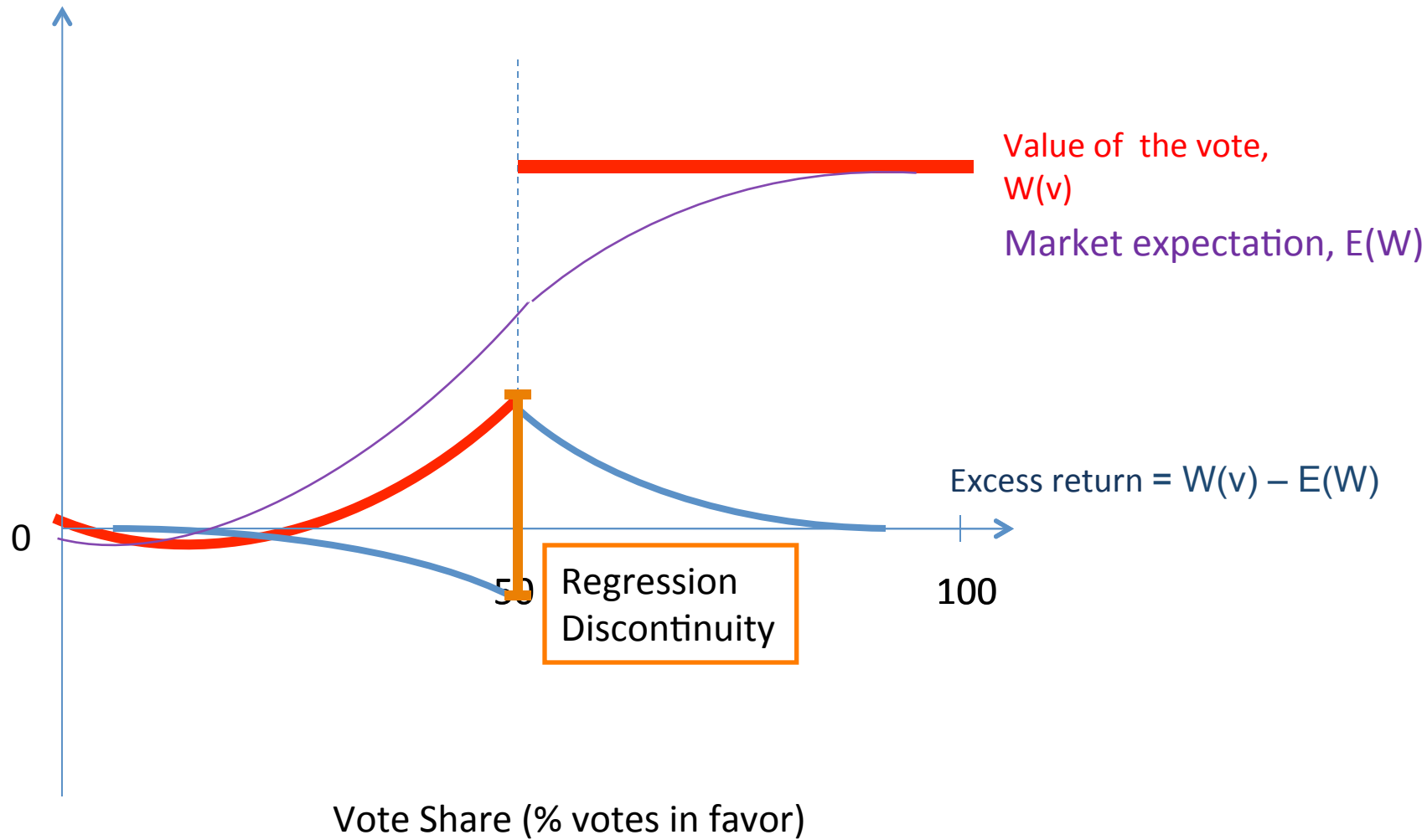
Shareholder Votes and Excess Returns



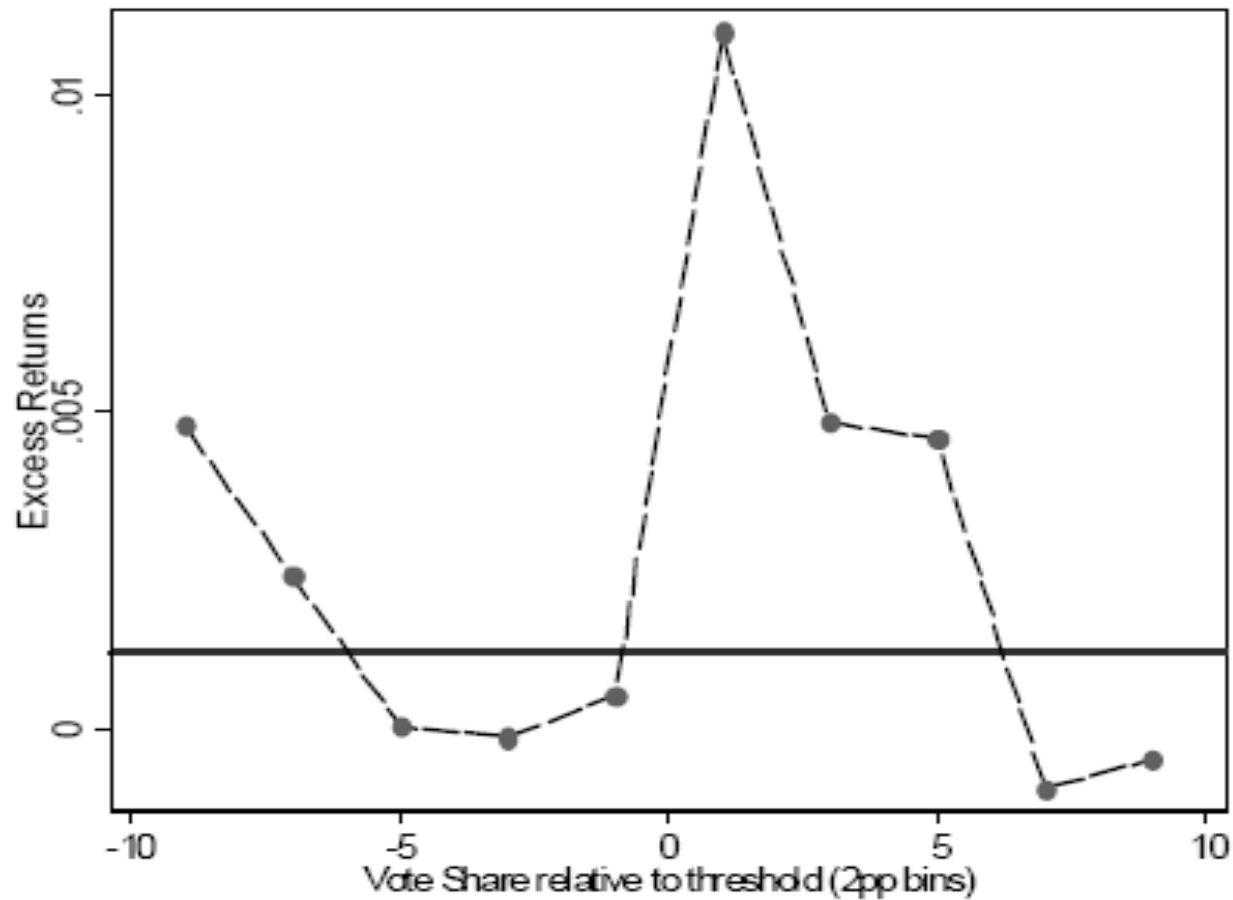
Percentage Votes and Excess Returns



Shareholder Votes and Excess Returns



Excess Returns by Vote Share, On the Day of the Vote



Excess Returns around the Threshold

A. All Shareholders Proposals

	All votes	-10;+10	-5;+5	-2;+2	-1;+1	Full Model
Pass	0.000922 (0.000924)	0.00230 (0.00163)	0.00761*** (0.00256)	0.0105** (0.00502)	0.0139* (0.00756)	0.0131*** (0.00494)
Observations	3904	909	450	183	91	3904
R-squared	0.000	0.002	0.024	0.032	0.039	0.014

Excess Returns around the Threshold

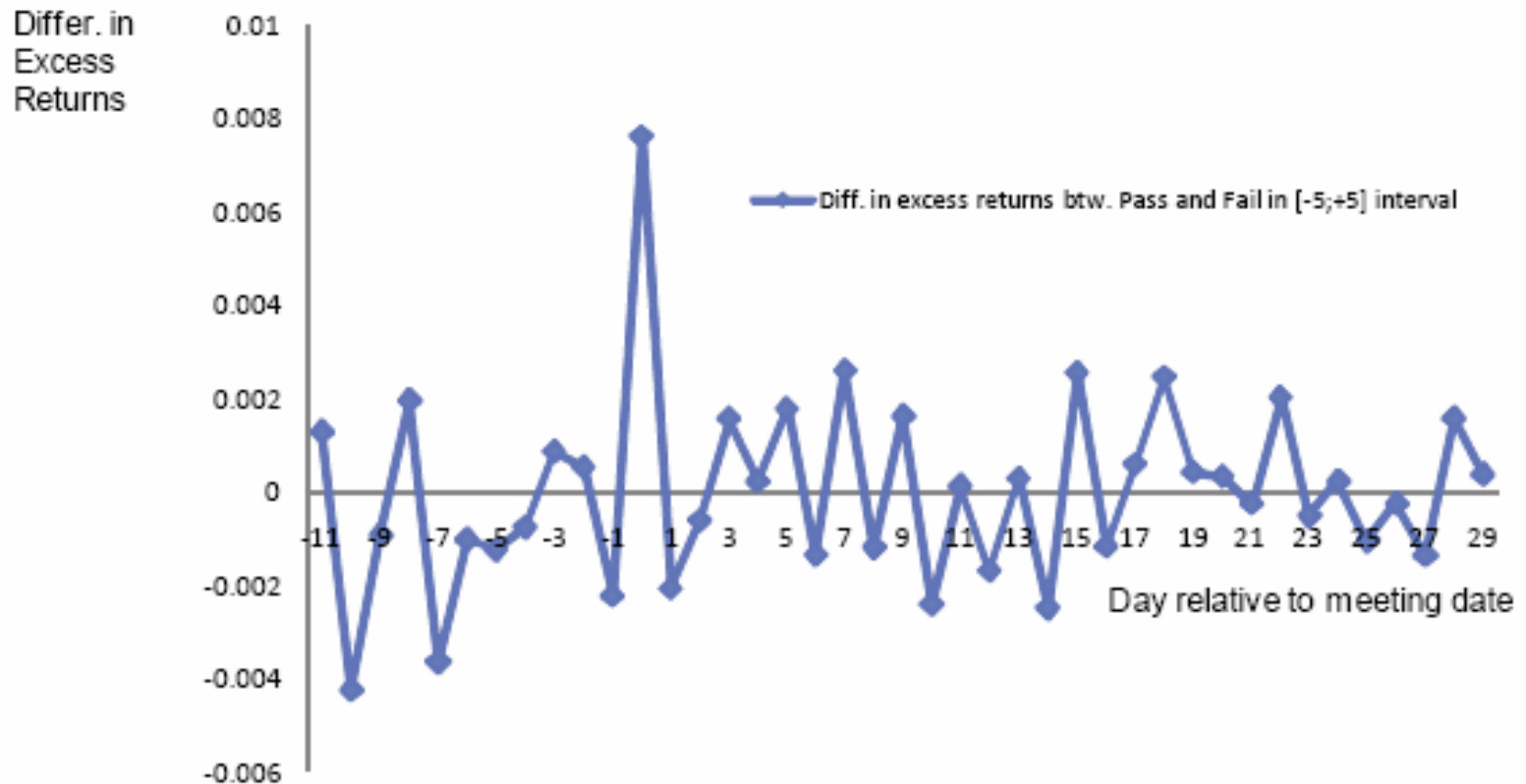
B. Anti-Takeover Proposals (In G-Index)

	All votes	-10;+10	-5;+5	-2;+2	-1;+1	Full Model
Pass	-9.51e-05 (0.00126)	0.00207 (0.00224)	0.00940*** (0.00355)	0.0162** (0.00719)	0.0221** (0.0102)	0.0169** (0.00656)
Observations	1531	523	264	114	61	1531
R-squared	0.000	0.002	0.027	0.053	0.070	0.033

C. Shareholder Proposals Excluding Anti-Takeover Proposals

	All votes	-10;+10	-5;+5	-2;+2	-1;+1	Full Model
Pass	0.00202 (0.00190)	0.00149 (0.00183)	0.00399* (0.00237)	0.00112 (0.00430)	-0.00511 (0.00494)	0.00529 (0.00474)
Observations	2373	386	186	69	30	2373
R-squared	0.001	0.002	0.014	0.001	0.035	0.016

Excess Returns of “Pass” by Day Relative to Vote



EMPIRICAL MODEL: Regression Discontinuity

- Vote share v_{ft} .
- Indicator for “pass” $D_{ft} = 1(v_{ft} \geq v^*)$.
- Target $y_{ft} = \kappa + D_{ft}\theta + u_{ft}$ (1)
problem: $E(D_{ft}, u_{ft}) \neq 0$
- Random probability of pass in small interval around v^*
$$y_{ft} = D_{ft}\theta + P_r(v_{ft}, \gamma^r) + P_l(v_{ft}, \gamma^l) + u_{ft}$$

Dynamics and Multiple Votes

Pass today (t) has an effect on multiple periods ($t+\tau$) and these are correlated. (Cellini, Ferreira and Rothstein, 2009)

$$y_{f,t+\tau} = D_{ft}\theta^\tau + P_r(v_{ft}, \gamma_\tau^r) + P_l(v_{ft}, \gamma_\tau^l) + \alpha_\tau + \eta_t + \lambda_{ft} + e_{ft\tau}$$

Multiple Votes in one Meeting

- There are 72 different kind of proposals...

Imagine there were just 2, A and B:

$$y_{ft} = D_{ft}^A \theta^A + D_{ft}^B \theta^B + P_r^A(v_{ft}^A, \gamma^{A,r}) + P_r^B(v_{ft}^B, \gamma^{B,r}) + P_l^A(v_{ft}^A, \gamma^{A,l}) + P_l^B(v_{ft}^B, \gamma^{B,l}) + u_{ft}$$

Assume: $\theta^A = \theta^B = \theta$; $P_r^A = P_r^B = P_r$ $P_l^A = P_l^B = P_l$

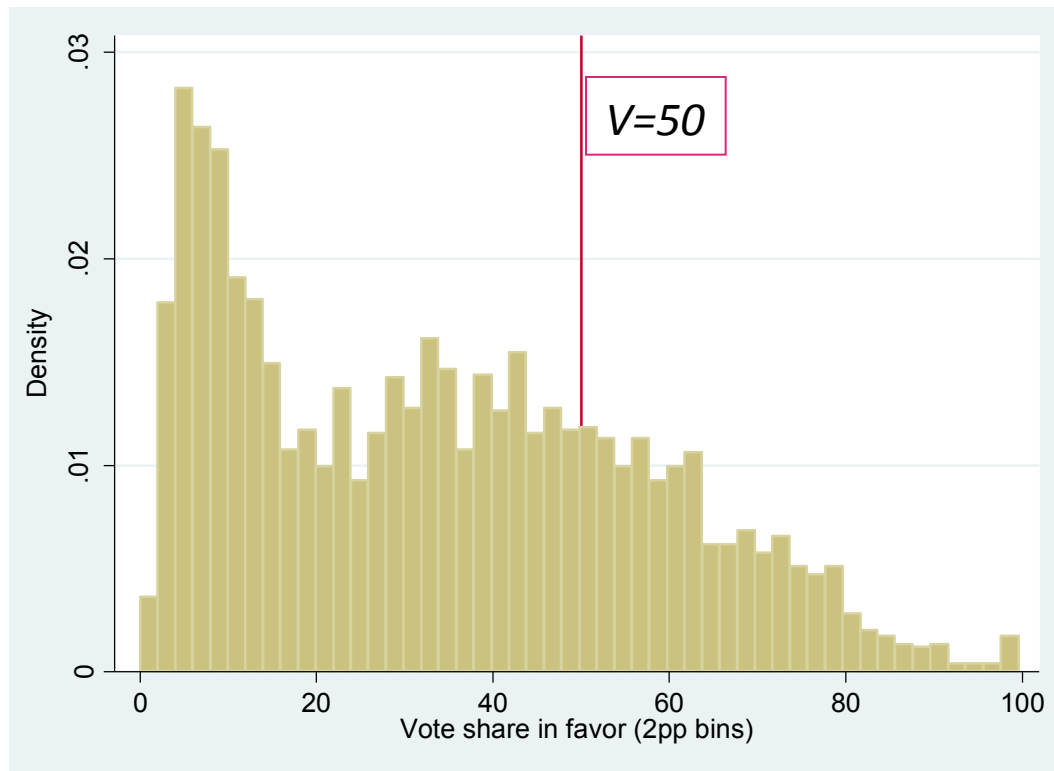
$$y_f = \theta \sum_{K=1}^N D_{ft}^K + [P_r(\sum_{K=1}^N v_{ft}^K, \gamma^{K,r}) + P_l(\sum_{K=1}^N v_{ft}^K, \gamma^{K,l})] + u_{ft}$$

Estimating equation

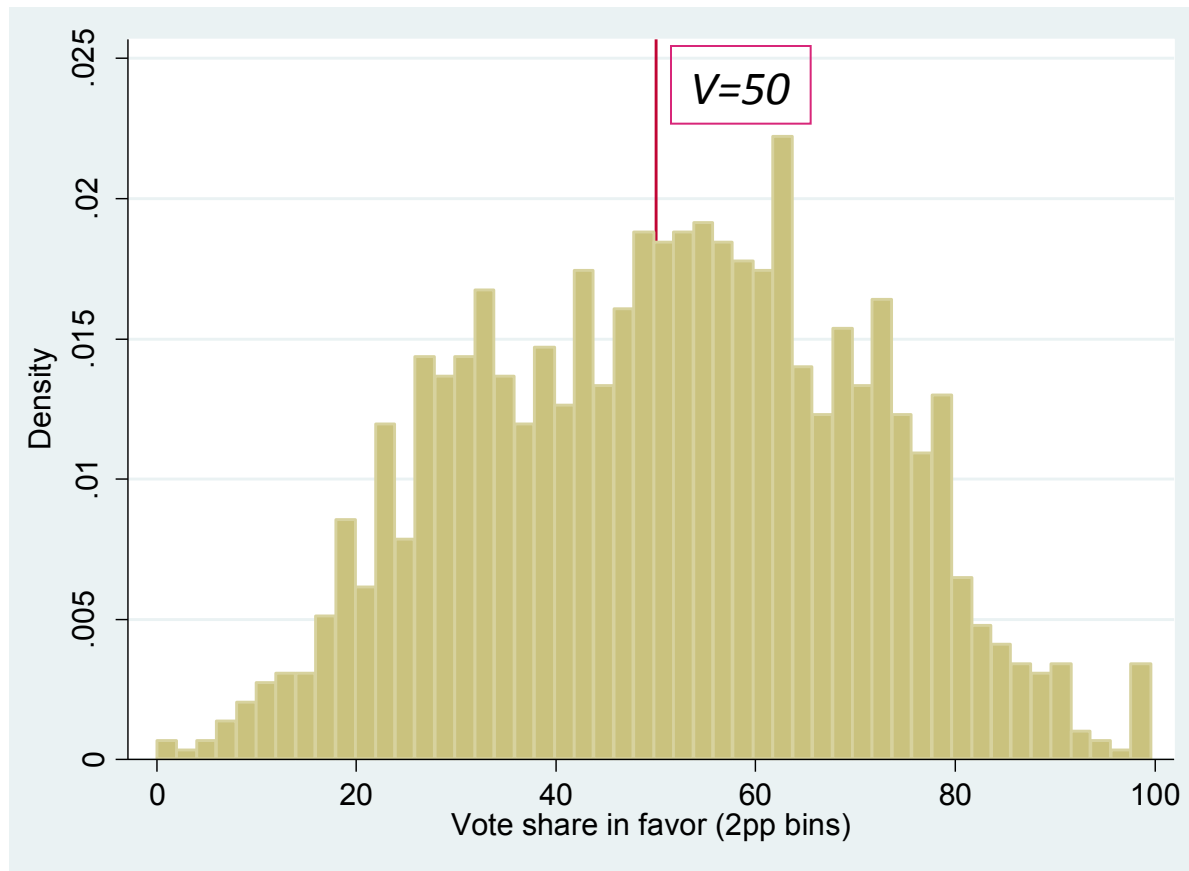
$$y_{f,t+\tau} = \theta^\tau \sum_{K=1}^N D_{ft} + [P_r(\sum_{K=1}^N v_{ft}^K, \gamma_\tau^{K,r}) + P_l(\sum_{K=1}^N v_{ft}^K, \gamma_\tau^{K,l})] + \alpha_\tau + \eta_t + \lambda_{ft} + e_{ft\tau}$$

- All regressions include time relative to vote fixed effects, year dummies, meeting*firm fixed effects.
- Standard errors are clustered by firm throughout

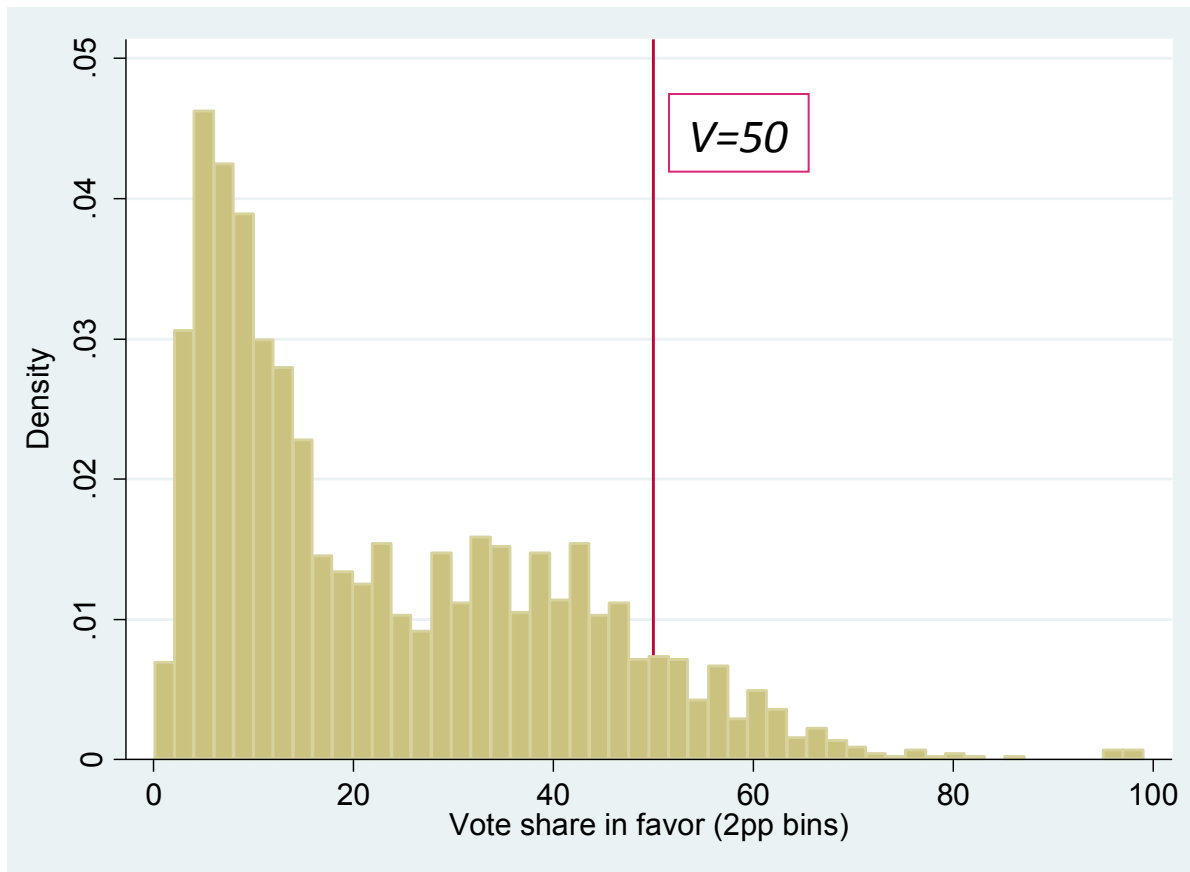
Distribution of Vote Shares for All Shareholder Proposals



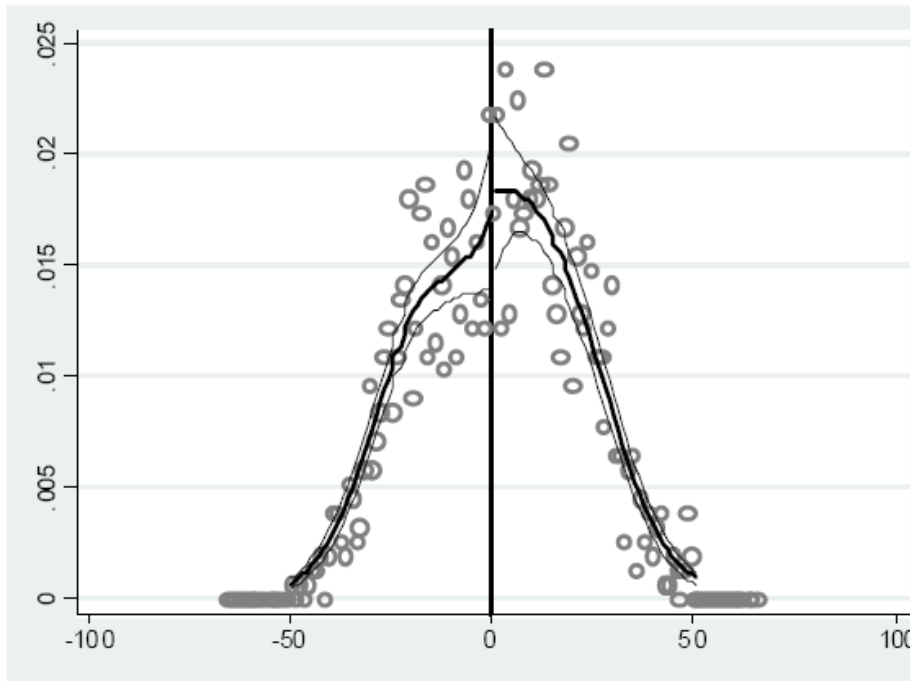
Distribution of Vote Shares Shareholder Proposals to Remove Anti-Takeover Provisions (in G-index)



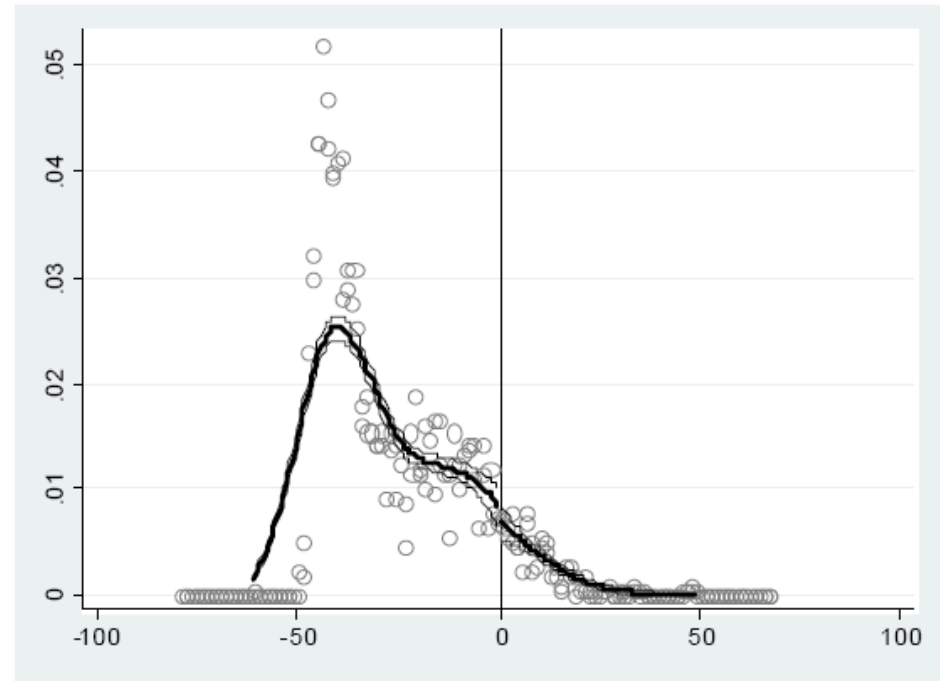
Distribution of Vote Shares for Other Shareholder Governance Proposals



McCrary (2008) tests of smoothness



G-Index Proposals



Other proposals

Absence of pre-existing differences

	Before meeting (t-1)		Change, from (t-2) to (t-1)	
	(1)	(2)	(3)	(4)
<i>A.</i>				
Excess Return one day before Meeting, Car (-1,-1)	-0.00002 (0.001)	-0.004 (0.003)	0.001 (0.003)	-0.001 (0.012)
<i>B.</i>				
Tobin Q	-0.010 (0.068)	0.254 (0.191)	0.014 (0.029)	0.041 (0.101)
Capital Expenses/Assets	-0.001 (0.003)	-3.88E-06 (0.006)	-0.002 (0.001)	0.003 (0.003)
Return on Equity	1.65 (1.63)	-0.83 (1.2)	1.63 (1.68)	-0.69 (1.21)
R&D/Assets	0.003 (0.002)	-0.002 (0.006)	-0.00002 (0.001)	0.002 (0.001)
Polynomial in the vote share	no	yes	no	yes

Absence of pre-existing differences

	Before meeting (t-1)		Change, from (t-2) to (t-1)	
	(1)	(2)	(3)	(4)
C.				
Acquisitions Ratio	0.007 (0.010)	-0.04 (0.041)	-0.023 (0.010)	-0.021 (0.073)
Acquisitions Count	-0.124* (0.070)	0.193 (0.21)	-0.067 (0.064)	0.305 (0.267)
D.				
Percentage Ownership by Top 5 Shareholders	3.121*** (0.616)	-0.856 (1.255)	0.092 (0.217)	0.849 (0.83)
Institutional Shareholders than own at least 5%	0.319*** (0.072)	-0.24 (0.199)	0.018 (0.049)	0.29 (0.204)
E.				
G-index	1.242*** (0.180)	-0.514 (0.391)	-0.078 (0.051)	-0.101 (0.173)
Polynomial in the vote share	no	yes	no	yes

Excess returns after the meeting

		Excess Returns		
		FFM	MM	FFM
		(1)	(2)	(3)
Day of vote, t		0.013** (0.005)	0.014*** (0.005)	
One day later, t+1		0.002 (0.004)	0.004 (0.004)	0.002 (0.004)
Days t+2 to t+7		0.010 (0.006)	0.007 (0.007)	0.010 (0.006)
Day of vote, t				
	1 vote passed			0.013** (0.005)
	2 votes passed			0.022** (0.010)
	3 votes passed			0.046*** (0.017)
	4 votes passed			0.046** (0.022)
	5 votes passed			0.071** (0.030)
	6 votes passed			0.115*** (0.031)
Observations		11884	11884	11884
R-squared		0.002	0.005	0.002
Number of jt		2377	2377	2377

Abnormal returns after the meeting: G-index proposals vs. other

	Excess Returns		Excess Returns	
	FFM		FFM	MM
	(1)		(4)	(5)
Day of vote, t	0.013** (0.005)		G-Index 0.014** (0.007)	0.013* (0.007)
One day later, t+1	0.002 (0.004)		G-Index -0.001 (0.006)	0.000 (0.006)
Days t+2 to t+7	0.010 (0.006)		G-Index 0.011 (0.009)	0.010 (0.009)
Day of vote, t			Other 0.009 (0.006)	0.012** (0.006)
One day later, t+1			Other 0.007 (0.005)	0.011* (0.005)
Days t+2 to t+7			Other 0.004 (0.008)	-0.000 (0.010)
Observations	11884		11884	11884
R-squared	0.002		0.005	0.007
Number of jt	2377		2377	2377

Heterogeneous effect across firms

- Effect is larger in
 - Firms with institutional ownership concentration
 - High G-index (many anti-takeover provisions in place)
 - High R&D expenditures

Abnormal Returns and Firm Heterogeneity

		G-index versus Other				Proponents	
		High Ownership Concentration (1)	Active Sharehold. (2)	High G-Index (3)	High R&D (4)		Activist Proponent (5)
Day of vote, t	G-index	0.021** (0.010)	0.025** (0.010)	0.019** (0.009)	0.018* (0.010)	Institutional	0.021** (0.008)
One day later, $t+1$	G-index	0.002 (0.008)	0.004 (0.007)	0.001 (0.007)	0.005 (0.010)	Institutional	0.007 (0.006)
Days $t+2$ to $t+7$	G-index	0.019* (0.010)	0.010 (0.011)	0.023** (0.011)	0.005 (0.013)	Institutional	0.015** (0.008)
Day of vote, t	Other	0.009 (0.008)	0.012 (0.009)	0.010 (0.010)	0.008 (0.009)	Individuals	0.008 (0.007)
One day later, $t+1$	Other	0.012* (0.007)	0.015* (0.008)	0.008 (0.011)	0.012 (0.008)	Individuals	-0.001 (0.006)
Days $t+2$ to $t+7$	Other	0.004 (0.011)	-0.008 (0.012)	0.008 (0.015)	-0.006 (0.012)	Individuals	0.005 (0.010)
Observations		5,919	2,579	5,704	4,320		11,819
R^2		0.016	0.046	0.012	0.017		0.005
Number of firm-meetings		1,184	516	1,141	864		2,364

A back of the envelope calculation for the total effect of the provisions

RD estimate = Z

$$Z = p^I \bar{W}_f + \sum_{i=1}^{\infty} \delta^i p^I p_{t+i}^p \bar{W}_f$$

Z = 1.3%

p^I = Prob(Implementation) = 20.7% [Ertimur et al., forthcoming]

p_{t+i}^p = Prob(pass at future date)

$$\bar{W}_f = \frac{Z}{p^I (1 + \sum_{i=1}^{\infty} \delta^i p_{t+i}^p)}$$

Effect of Passing a Proposal on G-Index

	G-Index	
	(1)	(2)
Year of vote, t	-0.313*** (0.102)	
Two years later, t+2	-0.329** (0.150)	-0.329** (0.149)
Four years later, t+4	-0.503** (0.229)	-0.505** (0.228)
Six years later, t+6	-0.508 (0.389)	-0.511 (0.389)
Year of vote, t		
1 vote passed		-0.336*** (0.108)
2 votes passed		-0.581*** (0.217)
3 votes passed		-0.744** (0.318)
4 votes passed		-1.828*** (0.589)
5 votes passed		-2.393*** (0.562)
Observations	9386	9386
R-squared	0.044	0.045
	2198	2198

A back of the envelope calculation for the total effect of the provisions

RD estimate = Z

$$Z = p^I \bar{W}_f + \sum_{i=1}^{\infty} \delta^i p^I p_{t+i}^p \bar{W}_f$$

Z = 1.3%

p^I = Prob(Implementation) = 20.7% [Ertimur et al., forthcoming]
= 30% [G Index]

p_{t+i}^p = Prob(pass at future date)

$$\bar{W}_f = \frac{Z}{p^I (1 + \sum_{i=1}^{\infty} \delta^i p_{t+i}^p)} = \mathbf{2.7\% \text{ to } 2.8\%}$$

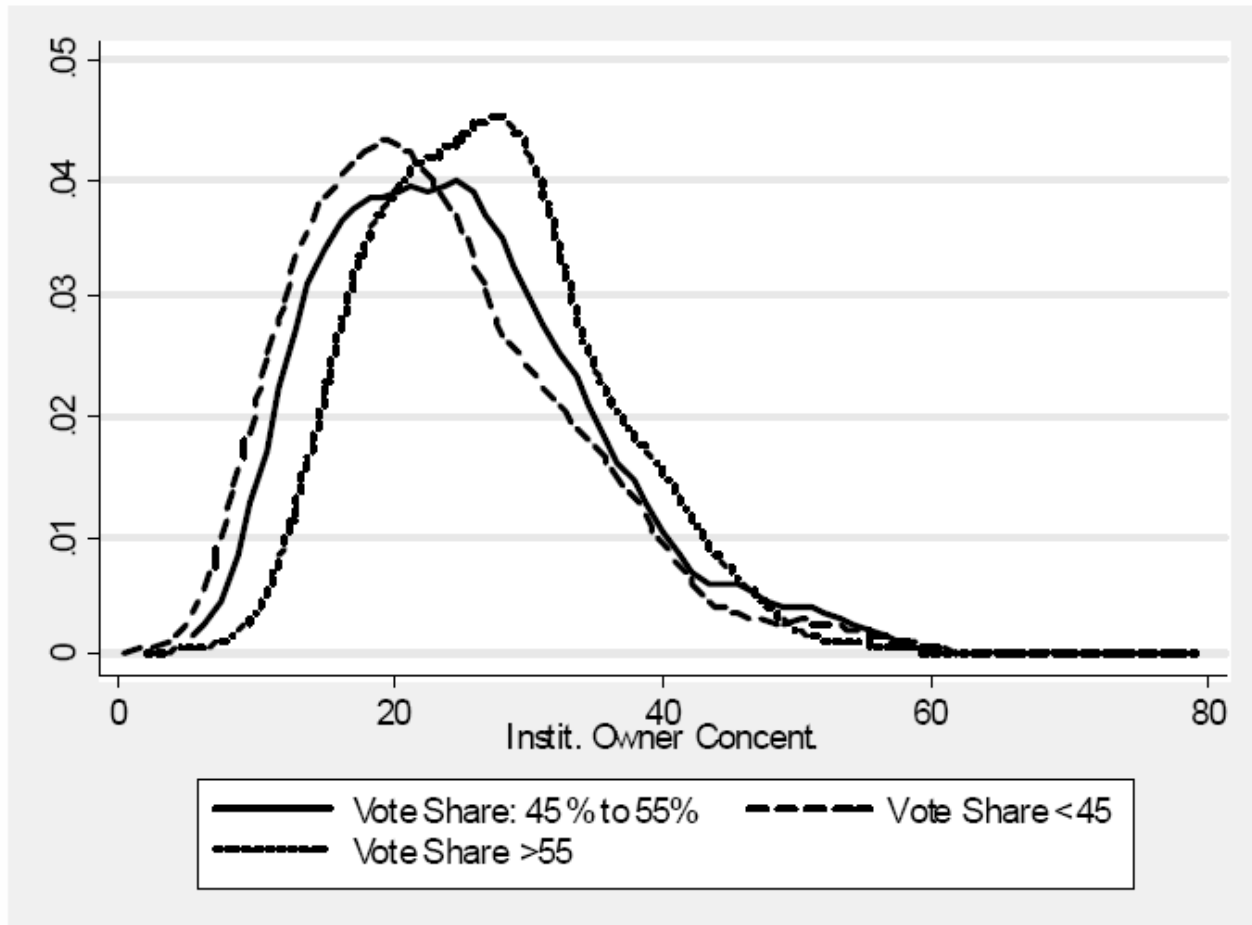
What changes after governance improvements?

- So far evidence of positive abnormal returns on the day of the vote.
- Could reflect better governance, lower expected takeover premia, higher expectation of a takeover.
- Can we observe real long term changes in strategies and performance due to better corporate governance?

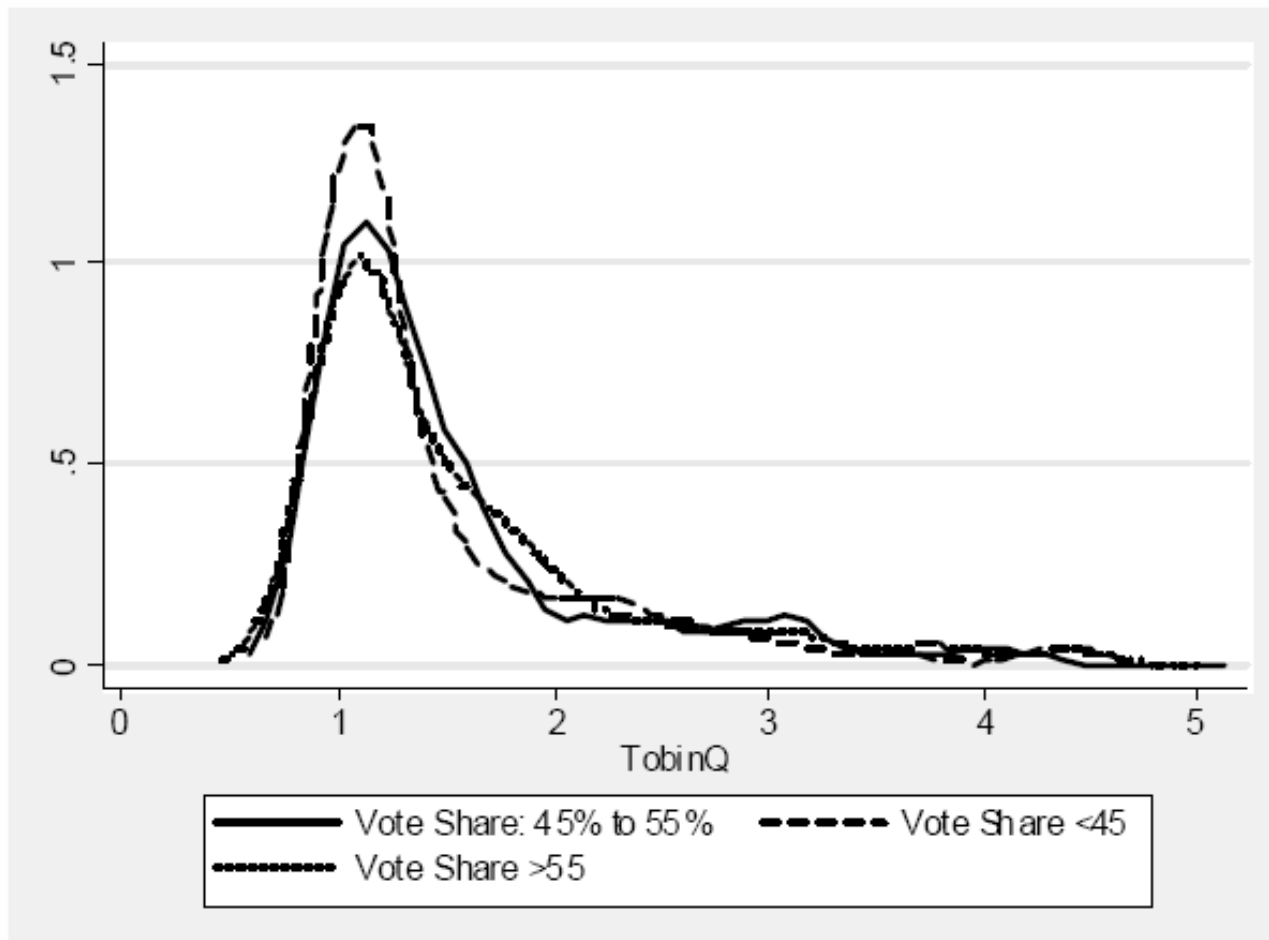
Effects on Acquisitions and Capital Expenditures

		Acquisitions Count (1)	Capex Growth (2)	Book-to-Market (3)
Year of meeting, t	G-index	-0.00102 (0.120)	-0.0797 (0.0541)	-0.0172 (0.0270)
One year later, $t+1$	G-index	-0.0305 (0.102)	-0.117** (0.0577)	-0.0255 (0.0337)
Two years later, $t+2$	G-index	-0.166 (0.109)	-0.0411 (0.0664)	-0.0648* (0.0342)
Three years later, $t+3$	G-index	-0.180* (0.108)	-0.00382 (0.0671)	-0.0970*** (0.0362)
Four years later, $t+4$	G-index	0.166 (0.134)	-0.0922 (0.0648)	-0.0941** (0.0419)
Year of meeting, t	Other	0.0384 (0.122)	0.114 (0.0832)	-0.0607** (0.0254)
One year later, $t+1$	Other	0.135 (0.132)	0.0161 (0.106)	-0.107** (0.0436)
Two years later, $t+2$	Other	0.316 (0.223)	0.157 (0.103)	0.00972 (0.0724)
Three years later, $t+3$	Other	0.248 (0.214)	0.464*** (0.144)	-0.0266 (0.0447)
Four years later, $t+4$	Other	0.500** (0.253)	0.664** (0.257)	0.0444 (0.101)
Observations		11,384	6,501	9,120
R^2		0.022	0.027	0.024
Number of firm-meetings	1,797	1,524	1,817	

Distribution of Institutional Ownership by Outcome of Shareholder Vote — G-index



Distribution of Tobin's Q by Outcome of Shareholder Vote — G-index



Conclusion

- Causal evidence that governance matters
 - Solve endogeneity problem
 - Solve ‘market expectations’ problem of previous literature
- Excess returns of 1.3%
- Reflects an impact of each proposal of 2.8%
- Evidence of “real” effects, economic consequences beyond stock prices
 - Behavior: reduces firm “expansion”
 - Profitability