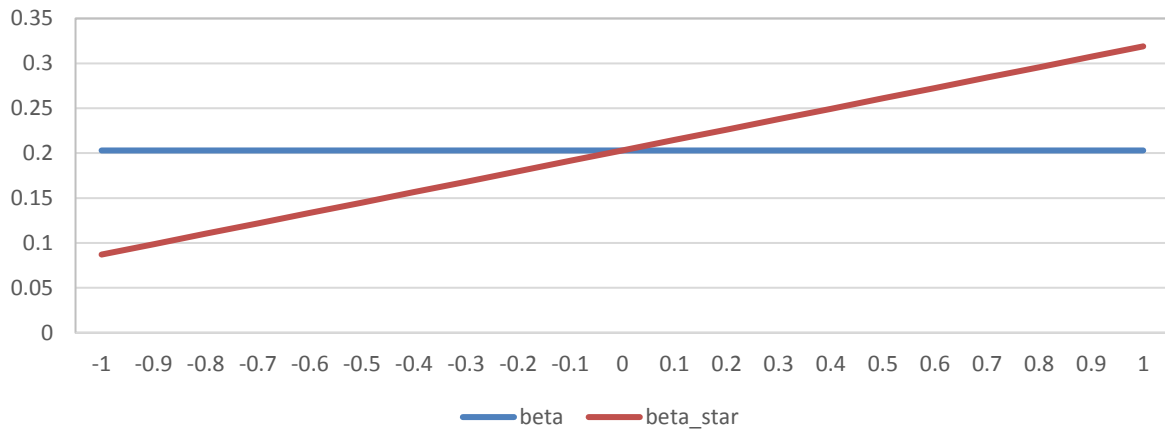


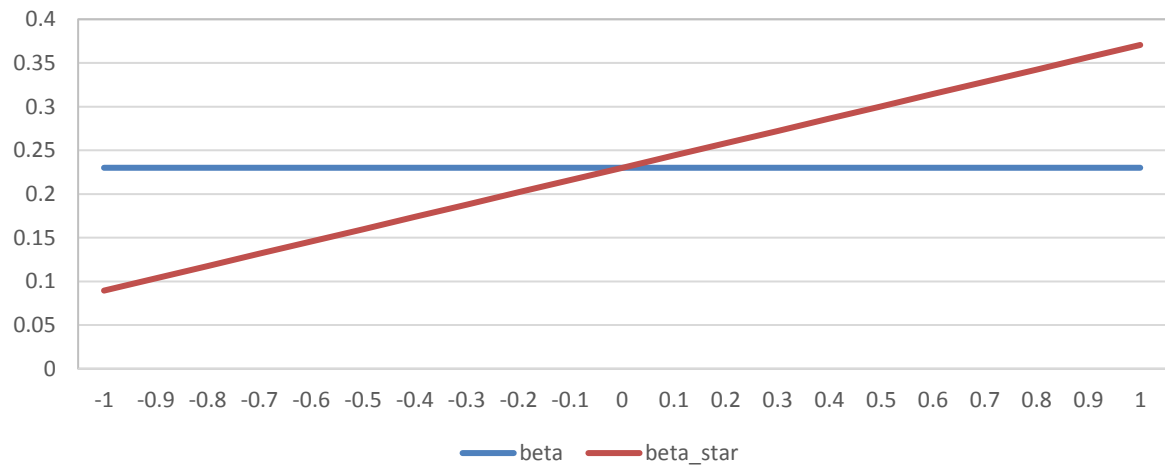
INTERNET APPENDIX FOR  
Internalizing Governance Externalities: The Role of  
Institutional Cross-ownership

(Not Intended for Publication)

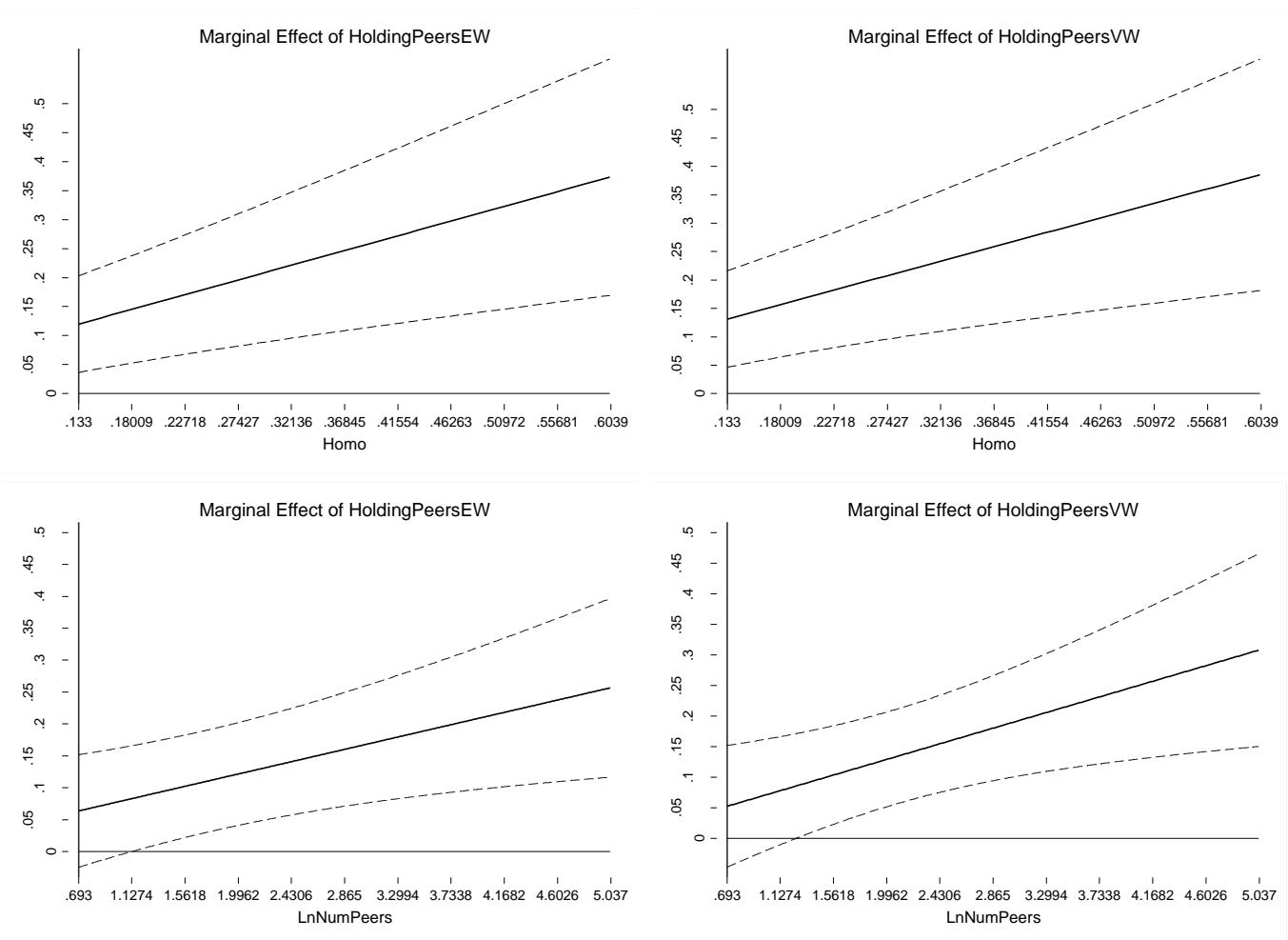
### Assessing the Impact of Potential Omitted Variable Bias: HoldingPeersEW



### Assessing the Impact of Potential Omitted Variable Bias: HoldingPeersVW



**Fig. IA-1.** Assessing the impact of potential omitted variable bias. This figure uses the information from Table IA-3 to plot the identified set for the effect of cross-ownership on the tendency to vote against management given different values of  $\tilde{\delta}$ . The regions between the two lines (in the upper right and lower left parts) include all values of  $\beta$  that are consistent with a coefficient of proportionality between 0 and  $\tilde{\delta}$ . The bounds are derived by setting  $R_{max} = \text{Min}(1, 1.3\tilde{R})$ .



**Fig. IA-2.** The total marginal effect. This figure plots the total marginal effect of cross-ownership on *VoteAgainstMgmt* conditional on the industry homogeneity index (upper panels) and the log number of peer firms (lower panels) within the ranges of these two variables in our sample. The dash lines indicate 95% confidence intervals.

**Table IA-1**

Falsification tests using non-peers

This table reports the results of falsification tests using non-peers, defined as firms that are in an unrelated industry. For each industry in each year, we define an unrelated industry as the industry that is closest to the industry under consideration in terms of the number of firms and, if there are multiple industries with the closest number of firms, average firm size (i.e., sales revenue). The dependent variable is *VoteAgainstMgmt*, defined as the fraction of votes against management cast by the funds affiliated with the fund family.  *HoldingNonPeers<sup>EW</sup>* is the sum of fractional ownership by the fund family in the non-peers of the focal firm.  *HoldingNonPeers<sup>VW</sup>* is the market cap-weighted sum of fractional ownership by the fund family in the non-peers of the focal firm.  *HoldingOwn* is the fund family's fractional ownership in the focal firm. We use four alternative industry definitions, namely two-digit SIC codes (Panel A), three-digit SIC codes (Panel B), four-digit SIC codes (Panel C), and the FIC-300 industries (Panel D). The numbers in parentheses are *t*-statistics based on standard errors that are clustered at the fund family level. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively.

*Panel A: Non-peers based on two-digit SIC codes*

Dep. Variable	<i>VoteAgainstMgmt</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
<i> HoldingNonPeers<sup>EW</sup></i>	0.001 (0.156)	-0.001 (-0.154)	0.039 (1.526)			
<i> HoldingNonPeers<sup>VW</sup></i>				0.005 (0.528)	0.005 (0.987)	0.057 (1.476)
<i> HoldingOwn</i>	-0.767** (-2.540)	-0.739*** (-3.001)	-0.789*** (-3.055)	-0.774** (-2.593)	-0.736*** (-2.991)	-0.792*** (-3.087)
Proposal FEs	Yes	Yes	Yes	Yes	Yes	Yes
Fund family FEs	Yes	No	No	Yes	No	No
Fund family × Year FEs	No	Yes	No	No	Yes	No
Fund family × Year × Ind FEs	No	No	Yes	No	No	Yes
Observations	177,135	177,089	167,973	177,135	177,089	167,973
R-squared	0.497	0.548	0.629	0.497	0.548	0.629

*Panel B: Non-peers based on three-digit SIC codes*

Dep. Variable	<i>VoteAgainstMgmt</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
<i> HoldingNonPeers<sup>EW</sup></i>	0.002 (0.466)	0.000 (0.055)	-0.001 (-0.025)			
<i> HoldingNonPeers<sup>VW</sup></i>				0.005 (0.647)	0.004 (0.893)	0.012 (0.321)
<i> HoldingOwn</i>	-0.773** (-2.555)	-0.743*** (-3.007)	-0.820*** (-3.014)	-0.776** (-2.588)	-0.740*** (-3.001)	-0.821*** (-3.038)
Proposal FEs	Yes	Yes	Yes	Yes	Yes	Yes
Fund family FEs	Yes	No	No	Yes	No	No
Fund family × Year FEs	No	Yes	No	No	Yes	No
Fund family × Year × Ind FEs	No	No	Yes	No	No	Yes
Observations	177,135	177,089	153,455	177,135	177,089	153,455
R-squared	0.497	0.548	0.664	0.497	0.548	0.664

*Panel C: Non-peers based on four-digit SIC codes*

Dep. Variable	VoteAgainstMgmt					
	(1)	(2)	(3)	(4)	(5)	(6)
<i> HoldingNonPeers<sup>EW</sup></i>	-0.000	-0.000	-0.017			
	(-0.032)	(-0.013)	(-0.435)			
<i> HoldingNonPeers<sup>VW</sup></i>				0.007	0.007	0.017
				(0.733)	(1.360)	(0.422)
<i> HoldingOwn</i>	-0.764**	-0.739***	-0.990***	-0.770**	-0.736***	-0.993***
	(-2.506)	(-2.996)	(-3.342)	(-2.562)	(-2.990)	(-3.358)
Proposal FEs	Yes	Yes	Yes	Yes	Yes	Yes
Fund family FEs	Yes	No	No	Yes	No	No
Fund family × Year FEs	No	Yes	No	No	Yes	No
Fund family × Year × Ind FEs	No	No	Yes	No	No	Yes
Observations	176,816	176,770	145,782	176,816	176,770	145,782
R-squared	0.497	0.548	0.679	0.497	0.548	0.679

*Panel D: Non-peers based on the FIC-300 industries*

Dep. Variable	VoteAgainstMgmt					
	(1)	(2)	(3)	(4)	(5)	(6)
<i> HoldingNonPeers<sup>EW</sup></i>	-0.005	0.002	0.004			
	(-0.462)	(0.331)	(0.099)			
<i> HoldingNonPeers<sup>VW</sup></i>				-0.008	0.006	0.059
				(-0.472)	(0.722)	(1.114)
<i> HoldingOwn</i>	-0.770**	-0.752***	-0.727***	-0.768**	-0.751***	-0.732***
	(-2.559)	(-3.080)	(-2.940)	(-2.542)	(-3.086)	(-2.977)
Proposal FEs	Yes	Yes	Yes	Yes	Yes	Yes
Fund family FEs	Yes	No	No	Yes	No	No
Fund family × Year FEs	No	Yes	No	No	Yes	No
Fund family × Year × Ind FEs	No	No	Yes	No	No	Yes
Observations	172,136	172,089	153,109	172,136	172,089	153,109
R-squared	0.497	0.548	0.657	0.497	0.548	0.657

**Table IA-2**

## Fund-level cross-ownership and voting behavior

This table reports OLS regression analysis of the relation between the tendency to vote against management and cross-ownership at the fund level. The dependent variable is *VoteAgainstMgmt*, defined as an indicator that equals one if the fund votes against management recommendation and zero otherwise. *FundHoldingPeers<sup>EW</sup>* is the sum of fractional ownership by the fund in the peers of the focal firm as given in Eq. (A.1). *FundHoldingPeers<sup>VW</sup>* is the market cap-weighted sum of fractional ownership by the fund in the peers of the focal firm as given in Eq. (A.2). *FundHoldingOwn* is the fund's fractional ownership in the focal firm. The unit of observations in the regressions is a proposal-fund. The numbers in parentheses are *t*-statistics based on standard errors that are clustered at the fund level. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively.

Dep. Variable	<i>VoteAgainstMgmt</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>FundHoldingPeers<sup>EW</sup></i>	0.710*** (4.797)	0.971*** (5.250)	1.586*** (5.686)			
<i>FundHoldingPeers<sup>VW</sup></i>				1.010*** (3.540)	1.703*** (4.633)	2.665*** (4.811)
<i>FundHoldingOwn</i>	-0.778* (-1.756)	-0.427 (-1.103)	0.496 (0.820)	-0.558 (-1.306)	-0.227 (-0.601)	0.788 (1.355)
Proposal FEs	Yes	Yes	Yes	Yes	Yes	Yes
Fund FEs	Yes	No	No	Yes	No	No
Fund × Year FEs	No	Yes	No	No	Yes	No
Fund × Year × Ind FEs	No	No	Yes	No	No	Yes
Observations	546,861	545,590	493,903	546,861	545,590	493,903
R-squared	0.511	0.549	0.642	0.511	0.549	0.642

**Table IA-3**

Cross-ownership and voting behavior: Baseline results using a common set of observations

This table repeats columns 1, 3, 4, and 6 of Panel A of Table 2 in the paper by using the same set of observations in columns 3 and 6. The dependent variable is *VoteAgainstMgmt*, defined as the fraction of votes against management cast by the funds affiliated with the fund family.  *HoldingPeers<sup>EW</sup>* is the sum of fractional ownership by the fund family in the peers of the focal firm as given in Eq. (A.1).  *HoldingPeers<sup>VW</sup>* is the market cap-weighted sum of fractional ownership by the fund family in the peers of the focal firm as given in Eq. (A.2). The unit of observations in the regressions is a proposal-fund family. The numbers in parentheses are *t*-statistics based on standard errors that are clustered at the fund family level. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively.

Dep. Variable	<i>VoteAgainstMgmt</i>			
	(1)	(2)	(3)	(4)
<i> HoldingPeers<sup>EW</sup></i>	0.123*** (3.606)	0.203*** (3.234)		
<i> HoldingPeers<sup>VW</sup></i>			0.133*** (4.117)	0.230*** (3.871)
Proposal FEs	Yes	Yes	Yes	Yes
Fund family FEs	Yes	No	Yes	No
Fund family × Year × Ind FEs	No	Yes	No	Yes
Observations	160,860	160,860	160,860	160,860
R-squared	0.498	0.628	0.498	0.628

**Table IA-4**

## Voting behavior in the pre-merger period

This table reports the results of falsification tests in the setting of financial institution mergers assuming that the mergers occur before the actual dates. The dependent variable is *VoteAgainstMgmt*, defined as the fraction of votes against management cast by the funds affiliated with the acquiring fund family. *TargetHoldingPeers<sup>EW</sup>* is the sum of fractional ownership by the target fund family in the peer firms of a focal firm in the quarter immediately before the merger announcement date. *TargetHoldingPeers<sup>VW</sup>* is the market cap-weighted sum of fractional ownership by the target fund family in the peer firms of a focal firm in the quarter immediately before the merger announcement date. *Post* is a dummy variable to indicate the period after the pseudo-event date.  *HoldingOwn* is the acquiring fund family's fractional ownership in the focal firm. Panels A and B assume that the mergers are held 12 and 24 months prior to the actual mergers, respectively. The numbers in parentheses are *t*-statistics based on standard errors that are clustered at the merger level. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively.



*Panel A: Pseudo-events occurring 12 months prior to the actual mergers*

Dep. Variable	VoteAgainstMgmt			
	(1)	(2)	(3)	(4)
<i>TargetHoldingPeers</i> <sup>EW</sup> × <i>Post</i>	-0.046 (-0.256)	-0.138 (-0.641)		
<i>TargetHoldingPeers</i> <sup>EW</sup>	0.235 (1.293)	0.353 (1.396)		
<i>TargetHoldingPeers</i> <sup>VW</sup> × <i>Post</i>			0.070 (0.449)	0.142 (0.903)
<i>TargetHoldingPeers</i> <sup>VW</sup>			0.029 (0.469)	0.023 (0.310)
<i>Post</i>	0.009 (0.158)	0.019 (0.367)	0.008 (0.150)	0.012 (0.259)
<i>HoldingOwn</i>	0.894 (1.228)	0.703 (1.295)	0.846 (1.199)	0.657 (1.276)
Proposal FEs	Yes	Yes	Yes	Yes
Merger FEs	Yes	Yes	Yes	Yes
Fund-family × Year FEs	No	Yes	No	Yes
Observations	3,468	3,466	3,468	3,466
R-squared	0.689	0.696	0.689	0.696

*Panel B: Pseudo-events occurring 24 months prior to the actual mergers*

Dep. Variable	VoteAgainstMgmt			
	(1)	(2)	(3)	(4)
<i>TargetHoldingPeers</i> <sup>EW</sup> × <i>Post</i>	0.139 (0.325)	0.045 (0.139)		
<i>TargetHoldingPeers</i> <sup>EW</sup>	-0.073 (-0.180)	0.022 (0.076)		
<i>TargetHoldingPeers</i> <sup>VW</sup> × <i>Post</i>			0.040 (0.221)	0.011 (0.073)
<i>TargetHoldingPeers</i> <sup>VW</sup>			-0.004 (-0.033)	0.017 (0.157)
<i>Post</i>	-0.015 (-0.326)	0.028 (0.363)	-0.013 (-0.307)	0.029 (0.368)
<i>HoldingOwn</i>	-1.887 (-1.365)	-1.689 (-1.349)	-1.902 (-1.367)	-1.703 (-1.351)
Proposal FEs	Yes	Yes	Yes	Yes
Merger FEs	Yes	Yes	Yes	Yes
Fund-family × Year FEs	No	Yes	No	Yes
Observations	2,692	2,689	2,692	2,689
R-squared	0.668	0.696	0.668	0.696

**Table IA-5**

Voting behavior of institutions not involved in mergers

This table reports the results of falsification tests in the setting of financial institution mergers by examining the voting behavior of non-merging fund families, i.e., those that are not involved in the mergers. The dependent variable is *VoteAgainstMgmt*, defined as the fraction of votes against management cast by the funds affiliated with non-merging fund families. *TargetHoldingPeers<sup>EW</sup>* is the sum of fractional ownership by the target fund family in the peer firms of a focal firm in the quarter immediately before the merger announcement date. *TargetHoldingPeers<sup>VW</sup>* is the market cap-weighted sum of fractional ownership by the target fund family in the peer firms of a focal firm in the quarter immediately before the merger announcement date. *Post* is a dummy variable to indicate the period after the merger effective date. *HoldingOwn* is the non-merging fund family's fractional ownership in the focal firm. The numbers in parentheses are *t*-statistics based on standard errors that are clustered at the merger level. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively.

Dep. Variable	<i>VoteAgainstMgmt</i>			
	(1)	(2)	(3)	(4)
<i>TargetHoldingPeers<sup>EW</sup></i> × <i>Post</i>	0.005 (0.383)	-0.003 (-0.220)		
<i>TargetHoldingPeers<sup>EW</sup></i>	-0.014 (-1.510)	-0.011 (-1.078)		
<i>TargetHoldingPeers<sup>VW</sup></i> × <i>Post</i>			-0.008 (-0.861)	0.002 (0.313)
<i>TargetHoldingPeers<sup>VW</sup></i>			-0.002 (-0.214)	-0.010* (-1.936)
<i>Post</i>	-0.006*** (-5.351)	-0.000 (-0.144)	-0.006*** (-5.302)	-0.000 (-0.194)
<i>HoldingOwn</i>	-0.461*** (-4.741)	-0.670*** (-8.321)	-0.461*** (-4.741)	-0.670*** (-8.321)
Proposal FEs	Yes	Yes	Yes	Yes
Merger FEs	Yes	Yes	Yes	Yes
Fund-family × Year FEs	No	Yes	No	Yes
Observations	362,728	362,693	362,728	362,693
R-squared	0.498	0.550	0.498	0.550

**Table IA-6**

IV approach

This table presents the first-stage, reduced-form, and IV (second-stage) estimates using an IV approach. The dependent variable in the first two columns is  $AcquirerHoldingPeers^{EW}$  ( $AcquirerHoldingPeers^{VW}$ ), which is the sum of fractional ownership (the market cap-weighted sum of fractional ownership) by the acquiring fund family in the peer firms of a focal firm in the quarter immediately before the merger announcement date or the quarter immediately after the merger effective date. The dependent variable in columns 3 through 6 is  $VoteAgainstMgmt$ , which is the fraction of votes against management cast by the funds affiliated with the acquiring fund family.  $TargetHoldingPeers^{EW}$  is the sum of fractional ownership by the target fund family in the peer firms of a focal firm in the quarter immediately before the merger announcement date.  $TargetHoldingPeers^{VW}$  is the market cap-weighted sum of fractional ownership by the target fund family in the peer firms of a focal firm in the quarter immediately before the merger announcement date.  $Fitted\ AcquirerHoldingPeers$  is the fitted value of  $AcquirerHoldingPeers$  from the first-stage regressions.  $Post$  is a dummy variable to indicate the period after the merger effective date.  $HoldingOwn$  is the acquiring fund family's fractional ownership in the focal firm. The numbers in parentheses are  $t$ -statistics based on standard errors that are clustered at the merger level. \*\*\*, \*\*, and \* represent significance at the 1%, 5%, and 10% levels, respectively.

Dep. Variable	<i>Acquirer Holding Peers<sup>EW</sup></i>	<i>Acquirer Holding Peers<sup>VW</sup></i>	<i>VoteAgainstMgmt</i>			
	First-stage estimates		Reduced-form estimates		IV estimates	
	(1)	(2)	(3)	(4)	(5)	(6)
$TargetHoldingPeers^{EW} \times Post$	0.605*** (3.660)		0.459*** (6.843)			
$TargetHoldingPeers^{VW} \times Post$		0.516*** (3.403)		0.400*** (3.147)		
$Fitted\ AcquirerHoldingPeers^{EW}$					0.758** (2.458)	
$Fitted\ AcquirerHoldingPeers^{VW}$						0.775*** (3.630)
$Post$	-0.021** (-2.907)	-0.018* (-2.021)	-0.362 (-1.729)	-0.365 (-1.750)	-0.347 (-1.620)	-0.351 (-1.652)
$HoldingOwn$	1.106*** (5.848)	0.485 (1.125)	-4.209 (-1.077)	-4.065 (-1.059)	-5.048 (-1.317)	-4.440 (-1.169)
Proposal FEs	Yes	Yes	Yes	Yes	Yes	Yes
Firm $\times$ Merger FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,444	3,444	3,444	3,444	3,444	3,444
R-squared	0.998	0.998	0.809	0.809	0.808	0.809