

Internet appendix to:
Shareholder Governance and CEO Compensation:
The Peer Effects of Say on Pay

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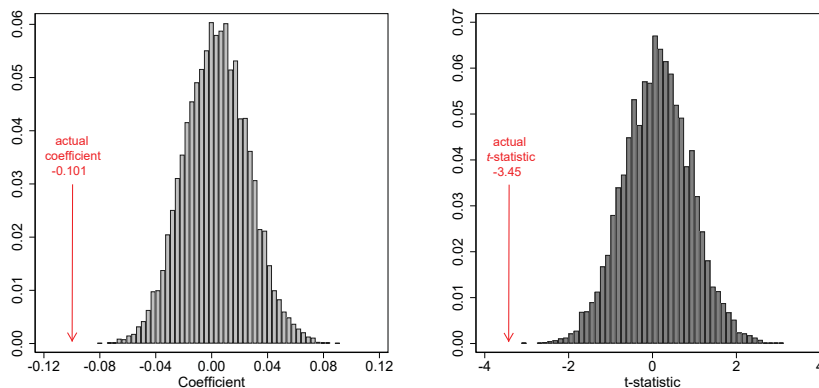
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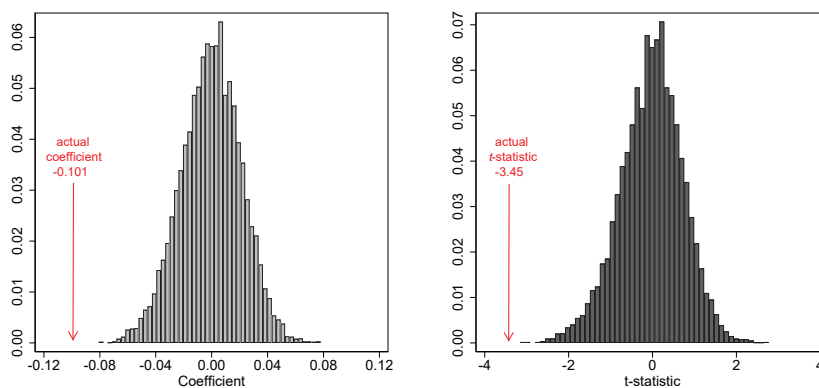
Figure IA.1. Additional falsification tests

The figures show the distribution of coefficients and t -statistics for the variable $Primary \times Post$ based on 10,000 runs of model 2 of Table 3. In each run, each of a firm's actual compensation peers is replaced with a *pseudo* compensation peer that is randomly drawn from firms with assets and sales similar to those of the actual compensation peer ($\pm 50\%$). In panel A, pseudo firms share the same GICS2-industry as the actual primary firms' peers. In panel B, pseudo firms share the same GICS6-industry as the actual primary firms' peers. In panel C, the set of pseudo firms are drawn from among the peers of the actual compensation peers. Firms are classified as primary and control firms based on the say on pay outcomes of their pseudo compensation peers. Arrows indicate the coefficient and t -statistic from model 2 of Table 3.

A. Pseudo peers drawn from the same GICS 2-digit industry



B. Pseudo peers drawn from the same GICS 6-digit industry



C. Pseudo peers drawn from the peers of the actual peers

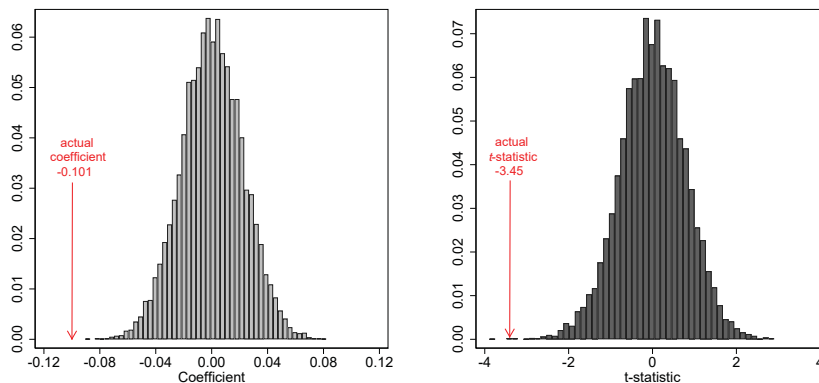


Table IA.1: Industry distribution

This table presents the Fama-French 17 industry distribution of weak-vote, primary, and control firms in our sample. *Weak-vote firms* are those firms that receive low support on their say on pay vote support; *Primary firms* are firms with 10% or more weak-vote peers in their compensation peer group; and *Control firms* are firms that are in neither of the above two categories over the sample period.

	Weak-vote firms		Primary firms		Control firms	
	#	%	#	%	#	%
Food	3	1.4	6	1.7	25	4.9
Mining and minerals	6	2.8	4	1.2	4	0.8
Oil and petroleum products	9	4.2	25	7.2	6	1.2
Textiles, apparel, & footwear	2	1.0	7	2.0	8	1.6
Consumer durables	7	3.3	3	0.9	7	1.4
Chemicals	3	1.4	7	2.0	18	3.5
Drugs, soap, parfums, tobacco	2	0.9	10	2.9	21	4.1
Construction and construction materials	6	2.8	20	5.7	14	2.8
Steel works	5	2.3	5	1.4	3	0.6
Fabricated products	2	0.9	2	0.6	7	1.4
Machinery and business equipment	25	11.7	63	18.1	62	12.2
Automobiles	3	1.4	2	0.6	10	2.0
Transportation	7	3.3	11	3.2	22	4.3
Utilities	4	1.9	2	0.6	41	8.0
Retail stores	16	7.5	28	8.0	27	5.3
Banks, insurances, other financials	38	17.8	44	12.6	119	23.3
Other	76	35.5	110	31.5	116	22.8
Total	214	100	349	100	510	100

Table IA.2. Compensation responses following peers' weak say on pay votes with matched control firms

This table repeats the analysis in Table 3 using a propensity-matched sample of control firms. For each primary firm in our sample, we identify the control firm that is closest to the primary firm on its Mahalanobis distance propensity score. Propensity scores are calculated using log of total compensation, size, market-to-book value of equity, industry-adjusted ROA, and industry. The dependent variable in all models is the logarithm of total CEO compensation. *Weak-vote* equals 1 for firms that received a low say on pay vote support, and *Primary* equals 1 for firms with weak-vote peers. *Post* equals 1 in years following the say on pay event year (2012 for control firms). The set of firm control variables is the same as that used in Table 3. Table A.1 describes the construction of all variables. Standard errors are clustered at the industry level, and p -values are shown in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Dependent variable	<i>log of total compensation</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Primary</i>	0.068*** (0.008)	0.081*** (0.006)	0.060** (0.044)	0.063** (0.038)	0.056* (0.083)	
<i>Primary</i> \times <i>Post</i>	-0.110*** (0.009)	-0.097** (0.018)	-0.086** (0.031)	-0.107*** (0.005)	-0.102** (0.013)	-0.087** (0.017)
<i>Weak-vote</i>	0.127*** (0.000)	0.171*** (0.000)	0.191*** (0.000)	0.185*** (0.000)	0.164*** (0.002)	
<i>Weak-vote</i> \times <i>Post</i>	-0.233*** (0.000)	-0.148*** (0.006)	-0.151*** (0.004)	-0.162*** (0.003)	-0.153** (0.010)	-0.259*** (0.000)
Observations	3,908	3,908	3,908	3,908	3,908	3,908
<i>R</i> -squared	0.604	0.675	0.692	0.719	0.739	0.848
Firm controls	No	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	n/a	n/a	n/a
Industry FE	No	No	Yes	n/a	n/a	n/a
Industry \times Year FE	No	No	No	Yes	Yes	Yes
State \times Year FE	No	No	No	No	Yes	Yes
Firm FE	No	No	No	No	No	Yes

Table IA.3. Firm responses and compensation consultants

This table examines whether firm responses are related to the presence of specific compensation consultants. In all regressions, the dependent variable is the logarithm of total CEO compensation. *Weak-vote* equals 1 for firms that received a low say on pay vote support, and *Primary* equals 1 for firms with weak-vote peers. *Post* equals 1 in years following the say on pay event year (2012 for control firms). All columns include the same firm controls as shown in Table 3. Table A.1 describes the construction of all variables. Standard errors are clustered at the industry level, and p -values are shown in parentheses. $*p < 0.10$; $**p < 0.05$; $***p < 0.01$.

Dependent variable	<i>log of total compensation</i>			
	Comp consultant fixed effects		Comp consultant FE × Fiscal year FE	
Model	(1)	(2)	(3)	(4)
<i>Primary</i>	0.112*** (0.000)	0.085*** (0.002)	0.110*** (0.000)	0.086*** (0.002)
<i>Primary</i> × <i>Post</i>	-0.068** (0.033)	-0.098*** (0.003)	-0.066** (0.037)	-0.102*** (0.002)
<i>Weak-vote</i>	0.201*** (0.000)	0.205*** (0.000)	0.191*** (0.000)	0.197*** (0.000)
<i>Weak-vote</i> × <i>Post</i>	-0.119*** (0.003)	-0.165*** (0.001)	-0.117*** (0.006)	-0.166*** (0.001)
Observations	5,792	5,792	5,792	5,792
<i>R</i> -squared	0.740	0.779	0.752	0.789
Firm controls	Yes	Yes	Yes	Yes
Year FE	Yes	n/a	n/a	n/a
State × Year FE	No	Yes	No	Yes
Industry × Year FE	No	Yes	No	Yes
Comp. consultant FE	Yes	Yes	No	No
Comp. consultant × Year FE	No	No	Yes	Yes

Table IA.4. Distribution of CEO pay changes

The table shows univariate pay changes from the pre- to post-period among primary, weak-vote, and control firms across different percentiles of pay changes. For example, the median weak-vote firm (median primary firm) increased its pay by 2.2% (17.8%) between the pre- and post-period, whereas the median control firm increased its pay by 21.9% over the same period. As a result, the median weak-vote firm (median primary firm) experienced a relative pay decrease of 19.7% (of 4.1%).

Percentile	Weak-vote firms	Primary firms	Control firms	Relative pay changes	
				Weak-vote vs. control firms	Primary vs. control firms
5%	-43.6%	-42.0%	-25.8%	-17.8%	-16.2%
10%	-32.5%	-25.3%	-14.9%	-17.6%	-10.4%
25%	-14.9%	-1.4%	1.8%	-16.7%	-3.2%
50%	2.2%	17.8%	21.9%	-19.7%	-4.1%
75%	30.4%	38.7%	42.9%	-12.6%	-4.2%
90%	68.8%	73.2%	79.8%	-11.0%	-6.6%
95%	105.1%	99.1%	126.4%	-21.3%	-27.3%

Table IA.5. Say on pay vote frequency

This table examines whether firm responses are related to firms' say on pay vote frequency (Kronlund and Sandy 2018). Panel A shows the vote frequency for primary, weak-vote, and control firms. Panel B separates the sample by the number of say on pay votes firms have within the 2 years following the say on pay event year (2012 for control firms). Panel C uses a three-way interaction term with an interaction variable *Annual say on pay vote* that equals 1 if a firm has a say on pay vote each year. In all models, the dependent variable is the logarithm of total CEO compensation. *Weak-vote* equals 1 for firms that received a low say on pay vote support, *Primary* equals 1 for firms with weak-vote peers. *Post* equals 1 in years following the say on pay event year (2012 for control firms). All columns include the same firm controls as shown in Table 3. Table A.1 describes the construction of all variables. Standard errors are clustered at the industry level, and *p*-values are shown in parentheses. **p* < 0.10; ***p* < 0.05; ****p* < 0.01.

A. Say on pay vote frequencies

	Control firms	Primary firms	Weak-vote firms	Total
Voting every year	441	333	224	998
Voting every 2 years	2	0	0	2
Voting every 3 years	67	26	1	94
	510	359	225	1,094

B. Subsample analysis

Dependent variable	<i>log of total compensation</i>							
	No say on pay vote in the next year		No say on pay votes within next 2 years		One say on pay vote within next 2 years		Two say on pay votes within next 2 years	
Sample	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Primary</i>	0.339** (0.042)	0.144 (0.314)	0.765*** (0.001)	0.540 (0.189)	0.146*** (0.009)	0.067 (0.255)	0.063*** (0.006)	0.089*** (0.000)
<i>Primary</i> × <i>Post</i>	-0.764 (0.273)	-0.345 (0.417)	-0.235 (0.509)	-0.281 (0.448)	-0.273*** (0.005)	-0.228** (0.015)	-0.034 (0.279)	-0.066** (0.032)
Observations	123	123	92	92	562	561	4,100	4,052
<i>R</i> -squared	0.497	0.717	0.224	0.442	0.722	0.804	0.727	0.786
Firm controls	No	Yes	No	Yes	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	n/a	Yes	n/a
State × Year FE	No	No	No	No	No	Yes	No	Yes
Industry × Year FE	No	No	No	No	No	Yes	No	Yes

C. Three-way interaction term

Dependent variable	<i>log of total compensation</i>		
	(1)	(2)	(3)
<i>Primary</i>	0.080*** (0.001)	0.113*** (0.000)	0.085*** (0.001)
<i>Primary</i> × <i>Post</i>	-0.107 (0.332)	-0.183* (0.062)	-0.196* (0.060)
<i>Primary</i> × <i>Post</i> × <i>Annual say on pay votes</i>	0.058 (0.591)	0.128 (0.179)	0.118 (0.231)
<i>Annual say on pay votes</i>	0.044 (0.145)	-0.020 (0.461)	-0.033 (0.229)
Observations	4,916	4,916	4,859
<i>R</i> -squared	0.693	0.741	0.785
Firm controls	No	Yes	Yes
Year FE	Yes	Yes	n/a
State × Year FE	No	No	Yes
Industry × Year FE	No	No	Yes

Table IA.6. Stock and option grants

This table shows changes in the number of granted stocks and options following own or peers' weak say on pay votes. The dependent variable is the number of granted stocks and options in a given year (in thousands of units). *Weak-vote* equals 1 for firms that receive low say on pay vote support, and *Primary* equals 1 for firms with weak-vote peers. *Post* equals 1 in years following the say on pay event year. Firm controls are identical to those shown in Table 3. Table A.1 describes the construction of all variables. Standard errors are clustered at the industry level, and p -values are shown in parentheses. * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Dependent variable	<i>Number of stocks & options granted</i>	
	Tobit	
Model	(1)	(2)
<i>Primary</i>	73.220*** (0.000)	50.808*** (0.000)
<i>Primary</i> \times <i>Post</i>	-32.547*** (0.007)	-38.834*** (0.000)
<i>Weak-vote</i>	82.005*** (0.000)	57.632*** (0.001)
<i>Weak-vote</i> \times <i>Post</i>	-46.048*** (0.001)	-42.941*** (0.002)
Observations	6,183	6,183
R -squared	n/a	n/a
Firm controls	No	Yes
Year FE	Yes	n/a
State \times Year FE	No	Yes
Industry \times Year FE	No	Yes
Interaction var. \times Year FE	n/a	n/a

Table IA.7. Intensive margin of compensation responses

This table relates firm responses to the fraction of peer firms with a weak-vote. The dependent variable in all models is the logarithm of total CEO compensation. *Primary* equals 1 for firms with weak-vote peers. *Post* equals 1 in years following the say on pay event year. The set of firm controls is the same as that used in Table 3. Table A.1 describes the construction of all variables. Standard errors are clustered at the industry level, and *p*-values are shown in parentheses. **p* < 0.10; ***p* < 0.05; ****p* < 0.01.

Dependent variable Model	<i>log of total compensation</i>		
	(1)	(2)	(3)
<i>Primary</i>	0.094** (0.018)	0.096** (0.020)	
<i>Primary</i> × <i>Post</i>	-0.069 (0.342)	-0.122 (0.112)	-0.111 (0.103)
<i>Primary</i> × <i>Post</i> × <i>Frac. Weak-vote Peers</i>	-0.217 (0.666)	-0.067 (0.879)	-0.047 (0.929)
Observations	3,447	3,342	3,342
<i>R</i> -squared	0.741	0.825	0.918
Firm controls	No	Yes	Yes
Year FE	Yes	n/a	n/a
Industry × Year FE	No	Yes	Yes
State × Year FE	No	Yes	Yes
Firm FE	No	No	Yes

Table IA.8. Potential information channels

This table examines potential channels along which information about the weak say on pay vote of compensation peers could have traveled. Model 1 analyzes whether having at least one shared compensation consultant with the weak-vote peers in the event year influences the response of primary firms. Model 2 repeats this analysis, while using the fraction of shared compensation consultants. Model 3 analyzes the impact of shared ownership with weak-vote peers by institutional investors in the event year. This analysis includes all 13F filing institutional owners that hold at least 0.1 percent of outstanding shares. Model 4 repeats this analysis, while using the number of shared 13F owners with weak-vote peers in the event year. Models 5 and 6 consider the role of shared board connections between primary firms and their weak-vote peers in the event year. Models 7 and 8 use the geographic distance between primary firms' headquarters and their weak-vote compensation peers' headquarters to proxy for the potential of information traveling via local networks. The dependent variable in all models is the logarithm of total CEO compensation. *Weak-vote* equals 1 for firms that received a low say on pay vote support, and *Primary* equals 1 for firms with weak-vote peers. *Post* equals 1 in years following the say on pay event year (2012 for control firms). The set of firm control variables is the same as that used in Table 3. Table A.1 describes the construction of all variables. Standard errors are clustered at the industry level, and *p*-values are shown in parentheses. **p* < 0.10; ***p* < 0.05; ****p* < 0.01.

Channel	<i>log of total compensation</i>							
	Shared comp. consultant		Common inst. ownership		Board connections		Geographic distance	
Interaction variable	Has shared consultant with weak-vote peers	Fraction of comp. consultants shared with weak-vote peers	Fraction of shares commonly owned with weak-vote peers	# of common institutional asset managers with weak-vote peers	# of directors sitting on boards of weak-vote peers	# of directors on boards of weak-vote peers and on at least one comp. committee	median distance to weak-vote peers	minimum distance to weak-vote peers
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Primary</i>	0.077*** (0.004)	0.086*** (0.002)	0.141*** (0.004)	0.134*** (0.003)	0.091*** (0.001)	0.094*** (0.001)	0.070* (0.058)	0.075** (0.041)
<i>Primary</i> × <i>Post</i>	-0.098*** (0.008)	-0.089** (0.013)	-0.176*** (0.006)	-0.099* (0.099)	-0.099*** (0.002)	-0.102*** (0.002)	-0.083 (0.164)	-0.103** (0.048)
<i>Weak-vote</i>	0.209*** (0.000)	0.208*** (0.000)	0.211*** (0.000)	0.210*** (0.000)	0.209*** (0.000)	0.208*** (0.000)	0.197*** (0.000)	0.199*** (0.000)
<i>Weak-vote</i> × <i>Post</i>	-0.166*** (0.001)	-0.166*** (0.000)	-0.161*** (0.001)	-0.162*** (0.001)	-0.166*** (0.001)	-0.165*** (0.001)	-0.184*** (0.002)	-0.185*** (0.002)
<i>Primary</i> × <i>Interaction var.</i>	0.042 (0.236)	0.043 (0.578)	-0.264* (0.071)	-0.002* (0.067)	0.013 (0.753)	-0.070 (0.488)	-0.001 (0.962)	-0.011 (0.749)
<i>Primary</i> × <i>Interaction var.</i> × <i>Post</i>	-0.005 (0.886)	-0.078 (0.292)	0.297 (0.146)	0.000 (0.976)	-0.009 (0.806)	0.053 (0.632)	-0.049 (0.385)	-0.028 (0.670)
Observations	6,183	6,183	6,183	6,386	6,183	6,183	4,422	4,422
<i>R</i> -squared	0.774	0.773	0.774	0.774	0.773	0.773	0.774	0.774
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry × Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FE × Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes