

Internet Appendix for CEO Pay Ratio Disclosures and Changes in
Employee Pay Satisfaction

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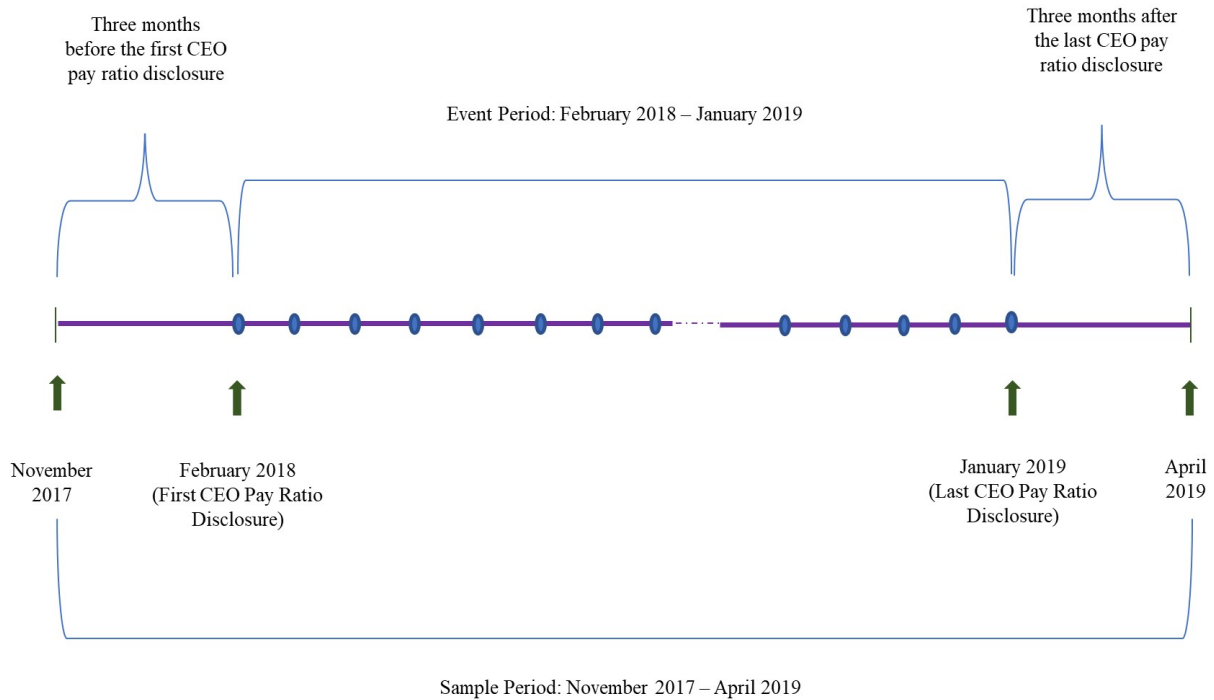
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A Internet Appendix: Tables and Figures

Figure A.1: Event Period Versus Sample Period



Notes. This figure illustrates the distinction between the event period and the sample period. The event period starts in February 2018, when the first CEO pay ratio disclosure is reported, and ends in January 2019, when the last CEO pay ratio disclosure is reported. The sample period accounts for all the Glassdoor data and financial controls used in our regression analysis, which extends from three months before the first CEO pay ratio disclosure is reported to three months after the last CEO pay ratio disclosure is reported.

Figure A.2: Glassdoor Rating Example

Boeing

Overview ▾ 16K Reviews 2.1K Jobs 30K Salaries 71 Q&A 3K Interviews 6.6K Benefits 4.4K Diversity

Employee Review

[See All Reviews \(15509\)](#)

5.0 ★★★★★ ▾ Aug 10, 2023 ...

Really nice company

Program Manager
Current Employee Washington, DC

Recommend CEO Approval Business Outlook

Pros
Amazing organization that caters to most people

Cons
Kinda old in a way of doing things

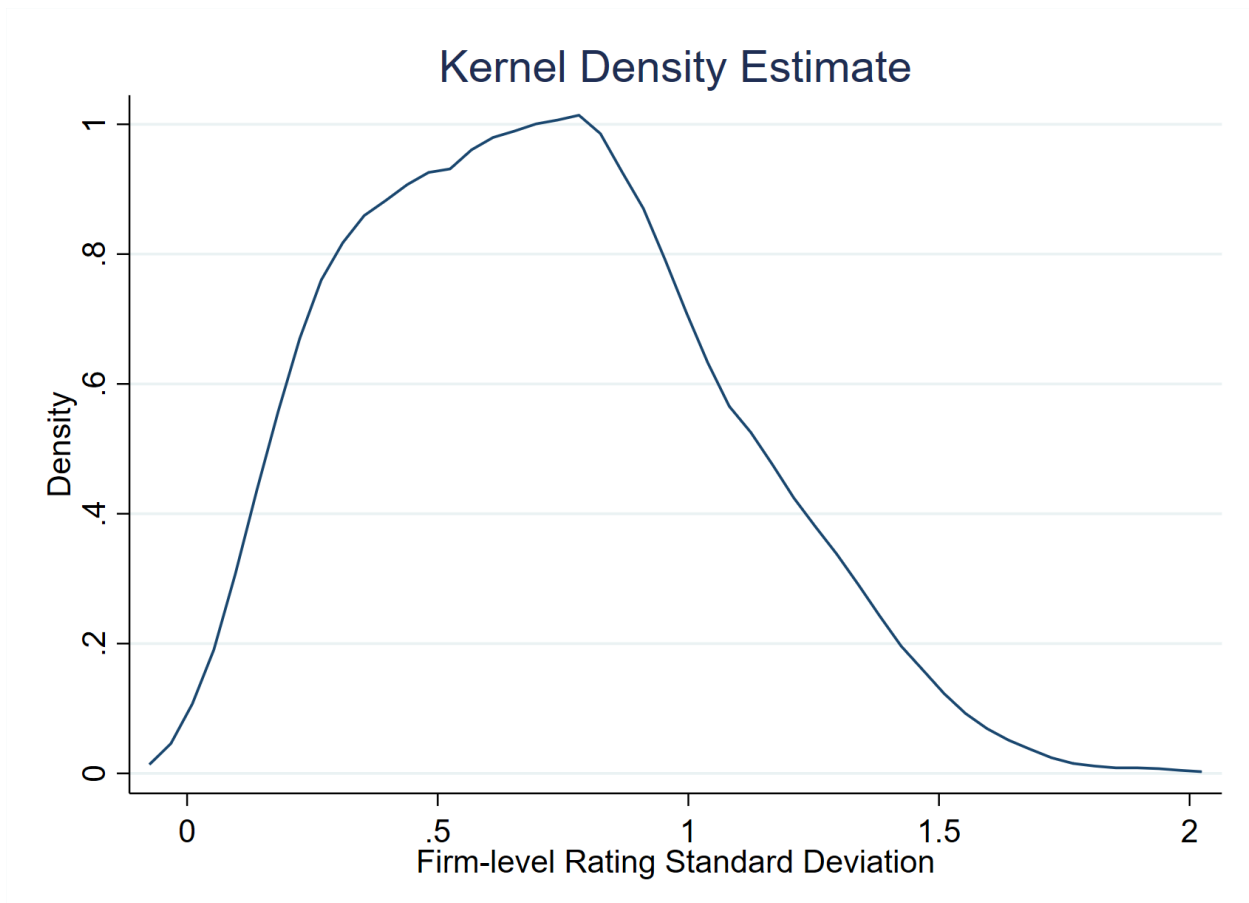
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Helpful Share

See reviews by: [Popularity](#) | [Rating](#) | [Date](#) | [All](#)

Notes. This figure displays a screenshot of an example Glassdoor review.

Figure A.3: **Within-Firm Variation of Monthly Ratings**



Notes. This figure displays the distribution of within-firm variation of monthly average of Compensation-and-Benefits ratings.

Table A.1: Initial Pay Ratio Disclosure Year-Months

	Frequency	Percentage	Cumulative Percentage
2018 February	11	0.81%	0.81%
2018 March	479	35.22%	36.03%
2018 April	561	41.25%	77.28%
2018 May	48	3.53%	80.81%
2018 June	38	2.79%	83.60%
2018 July	26	1.91%	85.51%
2018 August	23	1.69%	87.21%
2018 September	33	2.43%	89.63%
2018 October	30	2.21%	91.84%
2018 November	16	1.18%	93.01%
2018 December	47	3.46%	96.47%
2019 January	48	3.53%	100.00%
Total	1,360		

Notes. This table presents the event year-month distribution of the final sample.

Table A.2: Initial Pay Ratio Disclosure Year-Months

	Number of Firms	Number of Firm-Months
Hand-collected initial pay ratio data	2,237	N/A
Expand the firms into firm-months (from Nov. 2017 to Apr. 2019)	2,064	37,152
Delete firm-months overlapping with next or previous proxy statements	2,064	33,710
Keep firms without missing controls	2,024	32,900
Require at least one rating in both pre- and post-periods	1,360	22,565
Final sample without missing Compensation- and-Benefits ratings	1,360	18,647
Alternative samples used in robustness tests		
(1) Staggered regression sample	1,360	43,710
(2) Fixed window sample	1,447	27,078
(3) Back-filled missing months sample	1,522	24,711

Notes. This table presents our sample selection. Below the final sample of 1,360 firms and 18,647 firm-months, we also report the three alternative samples that are used in the robustness tests in Table 5.

Table A.3: Variable Definitions

Variable	Variable Definition	Data Source
Glassdoor:		
Number of Ratings	The inverse hyperbolic sine transformation of the number of employee ratings.	Glassdoor.com
Compensation-and-Benefits Rating	Monthly average of compensation-and-benefits ratings from Glassdoor.com.	Glassdoor.com
Work-Life-Balance Rating	Monthly average of work-life-balance ratings from Glassdoor.com.	Glassdoor.com
Average Rater Salary	The average rater pay in a given firm-month, using self-reported data on annualized salaries by Glassdoor participants.	Proprietary Data from Glassdoor
Pay Ratio:		
Post Disclosure	1 in firm-months if the firm has provided the initial pay ratio, and 0 otherwise.	DEF-14A
Low Median Employee Pay	1 if the firm has a median employee pay that is below the median value of firms that disclosed before the focal firm, and 0 otherwise.	DEF-14A
Low CEO Pay	1 if the firm has a CEO pay that is below the median value of firms that disclosed before the focal firm, and 0 otherwise.	DEF-14A
Controls:		
Log Assets	The logarithm of total assets.	Compustat
Number of Segments	The number of operating industries.	Compustat
Intangible Assets	Intangible assets divided by total assets.	Compustat
Book to Market	Book value of equity divided by the market capitalization.	Compustat
Log Firm Age	The logarithm of one plus the number of months after the firm first appears in CRSP.	CRSP

Log Analyst Coverage		The logarithm of one plus the number of analysts making EPS forecasts for the firm during the year.	IBES
Institutional holding	Share-	The percentage of the firm's shares owned by institutional investors.	Thompson Reuters 13 F
Earnings Surprise		Seasonal difference in quarterly earnings before extraordinary items divided by stock price.	Compustat
Cash Holding		Cash and cash equivalents divided by total assets.	Compustat

Cross-sectional Tests:

Low CEO Pay increase	In-	1 if the CEO pay increase relative to the previous year is below the median value of firms that disclosed before the focal firm, and 0 otherwise.	Execucomp
Log CEO Pay		The logarithm of one plus total CEO compensation.	Execucomp
Log Number of Previous Ratings		The logarithm of one plus the number of employee ratings one year before the initial pay ratio disclosures.	Glassdoor.com
Log Previous Media Coverage	Media	The logarithm of one plus the number of labor-related news articles one year before the initial pay ratio disclosure. We require the relevance score to be 100 and only use flash and full articles.	RavenPack
Log Same-Industry Firms		The logarithm of one plus the number of firms headquartered within 20 miles of the focal firm's headquarters and specialized in the same industry.	EDGAR/NBER Websites
Log Cumulative Peer Announcers	Peer	The logarithm of one plus the number of peer firms who have already disclosed their pay ratios before the focal firms' initial pay ratio disclosure date.	DEF-14A

Table A.4: Addressing Potential Selection Effects

	Compensation-and-Benefits				
	(1)	(2)	(3)	(4)	(5)
Post Disclosure	0.062** (2.82)	0.062** (2.18)	0.063*** (3.01)	0.054*** (3.20)	0.049** (2.43)
Log Assets	0.015 (0.20)	0.064 (0.94)	0.022 (0.30)	0.102* (1.99)	0.094* (2.02)
Number of Segments	-0.007 (-0.17)	0.012 (0.26)	0.008 (0.14)	0.023 (0.50)	0.021 (0.53)
Intangible Asset	-0.320 (-1.36)	0.010 (0.03)	-0.279 (-1.13)	-0.035 (-0.13)	-0.299 (-1.33)
Book to Market	0.069 (0.78)	-0.056 (-0.64)	-0.014 (-0.17)	0.018 (0.37)	0.010 (0.16)
Log Firm Age	-0.225 (-0.95)	0.124 (0.45)	-0.032 (-0.13)	0.165 (0.55)	-0.002 (-0.01)
Log Analyst Coverage	-0.020 (-0.24)	0.084 (0.88)	0.003 (0.03)	0.025 (0.52)	-0.018 (-0.37)
Institutional Shareholding	0.388* (1.99)	0.107 (0.52)	0.594*** (3.18)	0.171 (1.27)	0.277* (1.92)
Earnings Surprise	0.281 (1.37)	0.372 (1.39)	0.273 (1.46)	0.219 (1.03)	0.299* (2.04)
Cash Holding	-0.186 (-0.92)	-0.163 (-0.80)	-0.137 (-0.68)	-0.056 (-0.28)	-0.250* (-1.91)
Observations	12,273	8,763	12,790	14,499	18,260
R-squared	0.35	0.36	0.35	0.35	0.34
Firm FE	Yes	Yes	Yes	Yes	Yes
Year-Month FE	Yes	Yes	Yes	Yes	Yes
Exclude Manager-Level Ratings	No	No	No	No	Yes

Notes. This table reports the robustness checks of excluding firms with high proportions of foreign employees and of excluding the ratings of high-paid employees. In Column (1), we exclude firms that report foreign segments based on the data from Compustat. In Column (2), we exclude firms whose foreign employees exceed domestic employees, based on the data from Orbis. In Column (3), we exclude firms whose foreign employees exceed domestic employees, based on the data from Revelio Labs. In Column (4), we exclude firms who voluntarily report that their median employees are in foreign countries. In Column (5), we only use the compensation-and-benefits ratings from non-manager employees. Variable definitions are provided in Table A.3 in the Internet Appendix. We double cluster standard errors by year-month and firm, and we report t -statistics in parentheses. Statistical significance is denoted by ***, **, and * for 1%, 5%, and 10%, respectively.

Table A.5: **Effect on Ratings Dispersion**

	Compensation-and-Benefits Dispersion	
	(1)	(2)
Post Disclosure	-0.033** (-2.89)	-0.034*** (-2.90)
Log Assets		0.041 (1.11)
Number of Segments		0.030 (1.57)
Intangible Asset		-0.126 (-0.90)
Book to Market		0.024 (0.66)
Log Firm Age		0.072 (0.41)
Log Analyst Coverage		0.070 (1.55)
Institutional Shareholding		0.088 (0.63)
Earnings Surprise		0.204* (1.97)
Cash Holding		-0.179 (-1.68)
Observations	14,030	14,030
R-squared	0.18	0.18
Firm FE	Yes	Yes
Year-Month FE	Yes	Yes

Notes. This table presents the results of regressing Compensation-and-Benefits ratings dispersion, defined as the standard deviation in a firm's ratings in a given month, on the indicator variable *Post Disclosure*, which equals one in the month that the firm discloses its initial CEO pay ratio and each subsequent month, and equals zero in the months before the disclosure. Column (1) reports the basic regression following our main difference-in-differences research design without control variables, whereas Column (2) reports the regression results of the fully controlled model. Variable definitions are provided in Table A.3 in the Internet Appendix. We double cluster standard errors by year-month and firm, and we report *t*-statistics in parentheses. Statistical significance is denoted by ***, **, and * for 1%, 5%, and 10%, respectively.

Table A.6: **Additional Robustness Tests**

	Compensation-and-Benefits				
	(1)	(2)	(3)	(4)	(5)
Post Disclosure	0.064*** (6.10)	0.062*** (4.59)	0.048** (2.59)	0.042* (1.92)	0.053** (2.14)
Log Assets	0.042 (0.84)	0.055 (1.09)	0.082 (1.58)	0.066 (1.21)	0.072 (1.34)
Number of Segments	0.019 (0.92)	0.002 (0.06)	0.022 (0.58)	0.010 (0.26)	0.040 (0.99)
Intangible Asset	-0.013 (-0.08)	-0.147 (-0.72)	-0.173 (-0.72)	-0.238 (-0.99)	-0.111 (-0.46)
Book to Market	-0.021 (-0.68)	-0.010 (-0.21)	0.023 (0.40)	0.045 (0.78)	0.025 (0.36)
Log Firm Age	0.072 (0.61)	0.005 (0.02)	0.077 (0.36)	0.062 (0.30)	-0.054 (-0.20)
Log Analyst Coverage	0.014 (0.35)	-0.020 (-0.45)	0.037 (0.85)	0.020 (0.43)	-0.034 (-0.60)
Institutional Shareholding	0.202* (2.02)	0.160 (1.65)	0.219 (1.74)	0.124 (0.98)	0.174 (1.35)
Earnings Surprise	0.188 (1.54)	0.268 (1.64)	0.314* (2.05)	0.295* (1.94)	0.260 (1.60)
Cash Holding	-0.134 (-1.16)	-0.103 (-0.82)	-0.229 (-1.56)	-0.173 (-1.18)	-0.309* (-1.74)
Abnormal Five-star Reviews			0.008*** (3.24)		
Median Employee Pay Increase \times Post Disclosure					0.015 (0.75)
Observations	17,024	17,599	18,375	18,410	16,419
R-squared	0.53	0.40	0.35	0.34	0.34
Firm FE	Yes	Yes	Yes	Yes	Yes
Year-Month FE	Yes	Yes	Yes	Yes	Yes

Notes. This table reports the results from additional robustness tests. In Columns (1) and (2), we re-estimate our main specification after removing overly influential observations identified based on Cook’s D and Standardized DFBetas, respectively. In Column (3), we re-estimate our main specification when controlling for the measure of abnormal five-star reviews proposed by [Gong and Thomas \(2023\)](#). The principle behind their measure is to regress the annual numbers of five-star reviews on firm fundamentals and use the residual to capture the “abnormal” number of five-star reviews. In Column (4), we repeat our main analysis with Glassdoor ratings excluding the ones with the highest scores for all dimensions. In Column (5), we interact *Post Disclosure* with *Median Employee Pay Increase*, which is defined as one if the increase in median employee pay between the first and second years of the disclosure surpasses the inflation rate, and zero otherwise. Variable definitions are provided in Table A.3 in the Internet Appendix. We double cluster standard errors by year-month and firm, and we report *t*-statistics in parentheses. Statistical significance is denoted by ***, **, and * for 1%, 5%, and 10%, respectively.