

Benchmarking of Pay Components in CEO Compensation Design

by

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Main Research Question:

Do firms benchmark pay components beyond total CEO pay?

Main Findings:

- Firms benchmark not only with respect to total pay, but also to the pay structure (weights on each pay component);
- The benchmarking adjustments to the weights on each pay component are similar, except for salary.
- Changes to pay components reflects not only an attempt to close the gap to the previous year's peer pay component, but it also reflects current year's trends on component of pay.

What Influences CEO Pay?



Russell 3000 Board Engagements				
Rank	Consulting Firm	2015	2014	2013
1	Frederic W. Cook & Co.	16.0%	16.4%	16.0%
2	Pearl Meyer & Partners	11.4%	11.5%	12.3%
3	Towers Watson	8.3%	8.6%	8.4%
4	Meridian Compensation	7.9%	7.4%	6.7%
5	Compensia	6.9%	6.6%	5.9%
6	Pay Governance	6.7%	6.8%	7.0%
7	Radford	6.1%	5.4%	4.7%
8	Mercer	4.5%	5.0%	5.2%
9	Exequity	3.4%	3.7%	3.4%
10	Semler Brossy Consulting Group	3.3%	3.3%	3.2%

Contribution

- Several papers show evidence that CEO total pay is benchmarked to peer's pay. (Bizjak, Lemmon and Naveen (2008), Bizjak, Lemmon and Nguyen (2011), Faulkender and Yang (2010), Albuquerque, DeFranco and Verdi (2013), Laschever (2013)
- Recently, Murphy and Sandino (2019) show that firms hire compensation consultants to provide advice on (1) incentive pay (“composition”); (2) the pay components (“complexity”) and/or (3) to provide benchmarking information to set competitive pay packages (“benchmarking”).
- Proxy Advisors' recommendations have a significant influence on Say-on-Pay voting outcomes (e.g., Ertimur, Ferri and Oesch, 2013; Malenko and Shen, 2016) and on firm's governance choices (Copland, Larcker and Tayan, 2018).

Delaware's Vice-Chancellor Leo Strine regarding the influence of ISS:

“[P]owerful CEOs come on bended knee to Rockville, Maryland, where ISS resides, to persuade the managers of ISS of the merits of their views ... They do so because the CEOs recognize that some in institutional investors will simply follow ISS's advice rather than do any thinking of their own.”

- Firms benchmark the weights on each pay component.

Paper Hypotheses

- **H1:** When the level of CEOs' pay component X deviates from the norms at their peer firms in year $t-1$, CEOs will incur an “adjustment towards the peers” pay correction in their year t pay component X.

$$\text{Ln}(\text{Peer pay component } X_{t-1} / \text{Firm pay component } X_{t-1})$$

- **H2:** The adjustments of the level of pay component X is also affected by the current year change in the level of pay component X at the selected peers.

$$\text{Ln}(\text{Peer target pay of } X_t) - \text{Ln}(\text{Peer target pay of } X_{t-1})$$

- **H3:** Benchmarking of the pay structure affects CEO pay components; CEOs whose share of pay component X in total compensation is below (above) the peer group median in year $t-1$, will receive an upward (downward) adjustment in the level of pay component X in year t .

$$\left[\left(\frac{\text{peer pay component X}}{\text{peer total compensation}} \right)_{i,t-1} - \left(\frac{\text{pay component X}}{\text{CEO total compensation}} \right)_{i,t-1} \right]$$

Main Results

Table 5. Impact of Benchmarking in the Structure of CEO Pay

$$(3) \Delta \left(\frac{\text{pay component X}}{\text{CEO total compensation}} \right)_{i,t} = \beta_0$$

$$\mathbf{H3:} + \beta_1 \left[\left(\frac{\text{peer pay component X}}{\text{peer total compensation}} \right)_{i,t-1} - \left(\frac{\text{pay component X}}{\text{CEO total compensation}} \right)_{i,t-1} \right] \\ + \beta_2 (\text{IndustryDum}_{i,t}) \times (\text{YearDum}_t) + \varepsilon_{i,t}$$

Table 5- Continued

Panel C: Regression tests of benchmarking in the structure of CEO pay

	Change in the weight of pay component X in total compensation					
	(1)	(2)	(3)	(4)	(5)	(6)
	Salary	Performance pay	Non-equity performance pay	Equity pay	Stock awards	Option awards
Distance from peer group's median weight	0.50*** (0.027)	0.49*** (0.020)	0.54*** (0.02)	0.5*** (0.02)	0.34*** (0.015)	0.34*** (0.016)
Year × Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,859	4,859	4,859	4,859	4,859	4,859
Adjusted R ²	0.32	0.32	0.34	0.31	0.18	0.22

Main Results

Table 7. Impact of Benchmarking in the Change of Pay Component

$$(5) \Delta \text{Ln}(\text{CEO compensation component } X_{i,t}) = \beta_0 +$$

$$\beta_1 \text{Ln}(\text{Relative compensation } X_{i,t-1}) + \beta_2 \Delta \text{Ln}(\text{Peer based target pay } X_{i,t}) +$$

$$\beta_3 \left[\left(\frac{\text{peer pay component } X}{\text{peer total compensation}} \right)_{i,t-1} - \left(\frac{\text{pay component } X}{\text{CEO total compensation}} \right)_{i,t-1} \right] + \beta_4 \Delta \text{Ln}(\text{Sales}_{i,t-1}) +$$

$$\beta_5 \Delta \text{Ln}(\text{Sales}_{i,t}) + \beta_6 \Delta(\text{Stock return}_{i,t}) + \beta_7 \Delta(\text{Stock return}_{i,t-1}) + \beta_8 \Delta(\text{ROA}_{i,t}) +$$

$$\beta_9 \Delta(\text{ROA}_{i,t-1}) + \beta_{10} \Delta \text{Ln}(\text{Risk}_{i,t-1}) + \beta_{11} \Delta \text{Ln}(\text{Risk}_{i,t}) + \beta_{12} \Delta(\text{MTB}_{i,t-1}) +$$

$\text{Ln}(\text{Peer Pay } X_{t-1} / \text{Firm Pay } X_{t-1})$

$\text{Ln}(\text{Peer Pay } X_t) - \text{Ln}(\text{Peer Pay } X_{t-1})$

Results from fitting equation (5) using seemingly unrelated regressions.

	Change in Ln (CEO compensation component X)		
	(1) Salary	(2) Non-equity performance pay	(3) Equity pay
Intercept	0.054*** (0.0032)	0.029 (0.034)	0.099*** (0.030)
H1: Ln(relative compensation of X)	0.09*** (0.0047)	0.26*** (0.017)	0.26*** (0.016)
H2: Change in Ln(peer-based target pay of X)	0.042** (0.017)	0.19*** (0.022)	0.21*** (0.024)
H3: Distance from peer group's median weight	0.022* (0.012)	0.23** (0.11)	0.40*** (0.073) !
Other explanatory variables as in Table 6	Yes	Yes	Yes
Year × Industry FE	Yes	Yes	Yes
Observations	3,150	3,150	3,150
System Weighted R ²		0.31	

Table 8: Tests of the difference in benchmarking between total compensation and pay components.

What about Ln(Peer Pay X_t)-Ln(Peer Pay X_{t-1})?	Change in Ln (CEO compensation)					
	(1) Salary	(2) Non-equity performance pay	(3) Equity pay	(4) Salary	(5) Non-equity performance pay	(6) Equity pay
Intercept	0.053*** (0.0032)	0.060* (0.036)	0.09*** (0.03)	0.056*** (0.0032)	0.019 (0.034)	0.091*** (0.03)
Ln(relative total compensation)	0.017*** (0.0021)	0.21*** (0.023)	0.38*** (0.019)	0.013*** (0.0020)	0.18*** (0.022)	0.40*** (0.018)
Change in Ln(target of total pay)	0.019*** (0.0049)	0.098* (0.055)	0.23*** (0.045)	0.0099** -0.0049	0.035 (0.053)	0.24*** (0.045)
Ln(relative compensation of X)				0.092*** (0.0053)	0.31*** (0.015)	0.31*** (0.019)
Change in Ln(peer-based target pay of X)				0.038** (0.017)	0.21*** (0.023)	0.22*** (0.03)
Other explanatory variables as in Table 6	Yes	Yes	Yes	Yes	Yes	Yes
Year \times Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,197	3,197	3,197	3,150	3,150	3,150
System Weighted R ²		0.23			0.30	

Suggestions

1. Expand theory motivating benchmarking (Slides 10-11)
2. Ruling out concurrent effects (Slides 12)
3. Does the benchmarking effect vary cross-sectionally? (Slides 13)
4. Explore relevance of benchmarking overtime (Slides 14)
5. Refocus the paper (Slides 15)

Why benchmarking?

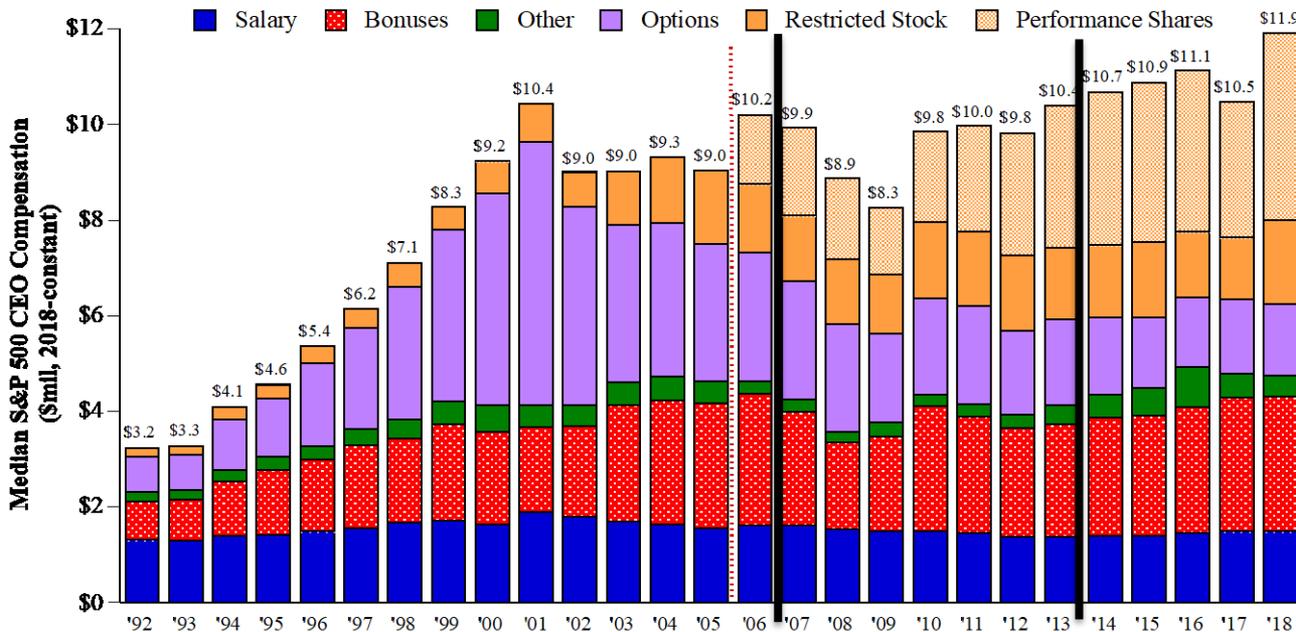
- Why do firms benchmark?
 - To gauge market price of talent (e.g., Holmstrom and Kaplan, 2003)
- Why do we observe benchmark the different pay components?
 - Paper: Because pay components have different incentives
 - Different components are valued differently by CEOs:
 - \$1M of salary is not the same as \$1M of restricted stock!! => why benchmark total pay?

How do firms benchmark?

- Do firms benchmark
 - to the \$ value? (Section 162m limits salary)
 - the parameters in bonus/performance shares (thresholds/targets)? (bonus and performance shares are a function of performance)
 - the weights (proportion)?
- What is the motivation?
- Are the adjustments sustainable?

Pay Components Overtime and Other Effects

Murphy and Jensen, 2018



How to distinguish the effect of benchmarking from compensation consultants, ISS and time trends?

- ⇒ Control for:
- compensation consultants,
 - ISS quality scores, and
 - Chg in component of pay of firms in an index (S&P500) to capture market trends

Benchmarking across firms

- Does the benchmarking effect vary with
 - Industry?
 - Cremers and Grinstein (2014) show that benchmarking is more prevalent in industries where CEO skills are more generic (not firm-specific) as a way to price transferable ability skills.
 - Quality of the peers?
 - Firms' level of corporate governance?

Benchmarking overtime

- Has benchmarking become more prevalent over time?
 - Murphy and Zabochnik (2004, 2007) and Custódio, Ferreira and Matos (2013) document a shift in the labor market where general (more transferable) skills have become more important than firm specific skills => benchmarking becomes more relevant to retain CEOs.

Section 4. Determinants of CEO Pay and its Components

$$\begin{aligned} & (2) \text{Ln}(\text{CEO compensation}_{i,t}) \\ &= \alpha_0 + \alpha_1 \text{Ln}(\text{Sales}_{i,t-1}) + \alpha_2 \text{Ln}(\text{Sales}_{i,t}) + \alpha_3 (\text{Stock return}_{i,t}) \\ &+ \alpha_4 (\text{Stock return}_{i,t-1}) + \alpha_5 (\text{ROA}_{i,t}) + \alpha_6 (\text{ROA}_{i,t-1}) + \alpha_7 \text{Ln}(\text{Risk}_{i,t-1}) \\ &+ \alpha_8 \text{Ln}(\text{Risk}_{i,t}) + \alpha_9 (\text{MTB}_{i,t-1}) + \alpha_{10} (\text{MTB}_{i,t}) + \alpha_{11} (\text{Leverage}_{i,t-1}) \\ &+ \alpha_{12} (\text{Leverage}_{i,t}) + \alpha_{13} (\text{CEO Age}_{i,t}) + \alpha_{14} (\text{CEO Duality Dum}_{i,t}) \\ &+ \alpha_{15} (\text{IndustryDum}_{i,t}) \times (\text{YearDum}_t) + e_{i,t}, \end{aligned}$$

- Suggestions: Add controls for corporate governance or drop analysis of determinants of CEO pay (concurrent characteristics) and instead include CEO FE (see Graham, Li and Qiu, 2012) => ↑ Adj. R²

Conclusion

- Interesting and well-written paper!
- Analysis carefully conducted.
- Suggestions focused on expanding its contribution and further enhancing the credibility of the study.
- Best of luck!

Thank you!