
Executive Pay Analysis for the New York Times

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The following analyses were presented by Stephen F. O'Byrne and Mark Van Clieaf as invited experts in a Shareholder Forum workshop project to develop the "Returns on Corporate Capital" measurement of performance. (See the [June 16, 2016 Forum Report: Defining a Simple Measure of "Returns on Corporate Capital."](#))

Introduction

- Our objective is to compare relative pay with relative performance.
 - Our measure of relative pay is actual pay divided by market pay for the CEO's position, industry and company size.
 - Our measure of relative performance is return on corporate capital (ROCC) minus the industry average return on corporate capital.
 - Our basic analysis is a scatterplot of relative pay against relative performance (see p. 7).
- Once we plot relative pay against relative performance, we can ask, what should be the relationship between relative pay and relative performance?
 - 70% of the 200 highest pay executives are paid above market pay for their industry and revenue size (see p. 6) and we would like to decide if these pay premiums are justified by performance.
 - To answer that question, we focus on companies with rough positive alignment of pay and performance, i.e., a positive pay premium and a positive spread or a negative pay premium and a negative spread.
 - Looking at this group, we see that relative performance explains more than a third of the variance in relative pay and that, on average, the log pay premium is about 6 times the ROCC spread (see p. 9).
- Once we have the pay for performance trendline, we can calculate pay premiums from pay for performance, not just pay premiums from simple average pay.
 - The companies far above the trendline are overpaid for their performance (see pp. 10,12,13), while
 - The companies far below the trendline are underpaid for their performance (see pp. 10,26,27).

Key take-aways from the analysis

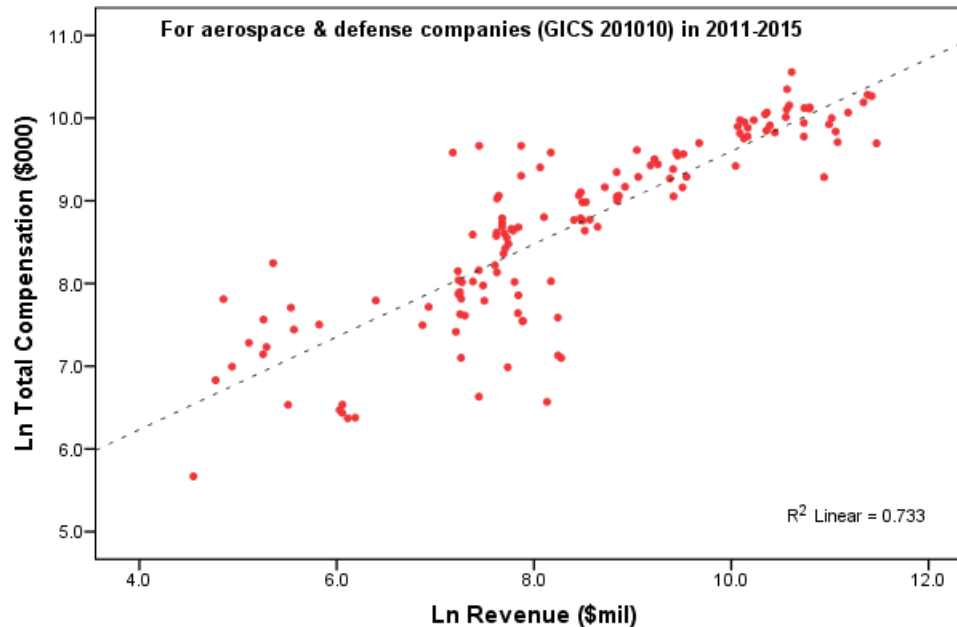
- Looking across the full sample, there is very little correlation of relative pay with relative performance (see p. 7).
- Companies should be plotting relative pay against relative performance but they rarely do so:
 - Companies commonly provide numerous graphs of performance vs time and pay mix, but they rarely plot pay vs performance or relative pay vs relative performance.
 - The CD&A in the 2015 Exxon proxy has 18 numbered graphs and tables, but only one shows pay and performance in the same graph and that graph only shows bonus percent change against earnings percent change.
- By focusing on companies with rough positive alignment, i.e., companies where the pay and performance premiums are both positive or both negative, we can develop a reasonable pay for performance trendline, i.e., the pay premium associated with different levels of ROCC spread.
- We can use the pay for performance trendline to identify high and low payers, i.e., companies with much higher (or much lower) pay premiums than warranted by their Return on Corporate Capital (ROCC) spreads.
 - 31 companies have pay premiums of 200%+ over pay for ROCC performance (see p. 12), and
 - 34 companies have pay premiums of \$12+ million over pay for ROCC performance (see p. 13).

Key take-aways from the analysis (continued)

- 88 (44%) of the 200 highest paid had below industry average 5 year ROCC.
 - 41 of the 88 had a 5 year average ROCC < 8%, probably not clearing their cost of capital hurdle.
 - 74 of the 88 had below industry average 5 year ROCC and a positive pay premium (i.e., over-payment for their industry, size and relative ROCC):
 - The cumulative over-payment for these 74 CEOs was \$835 million in 2015, but
 - Their median Say on Pay “FOR” support was 91%.
 - 59 of the 88 had below industry average 5 year ROCC and a 50%+ pay premium:
 - The cumulative over-payment for these 59 CEOs was \$793 million in 2015, but
 - Their median Say on Pay “FOR” support was 90%.
- 73 (37%) of the 200 highest paid achieved a 5 year ROCC that was 200+ basis points above their industry average, but had a positive pay premium below 40%.
 - Their median Say on Pay “FOR” support was 93%.
 - There is no material difference in Say on Pay support between low performing / high paid companies and high performing / fair pay:
 - 91% support for under-performing companies overpaid for their industry, size and relative ROCC, versus
 - 93% support for over-performing companies with modest or negative pay premiums.
- Only 97 (49%) of the 200 highest paid companies had positive pay for performance alignment.
 - Of the 88 under performing companies 74% did not have positive pay for performance alignment.

Market pay rates are based on five years of pay & sales data for each GICS industry, using data from S&P's Execucomp database

CEO Pay vs Revenue

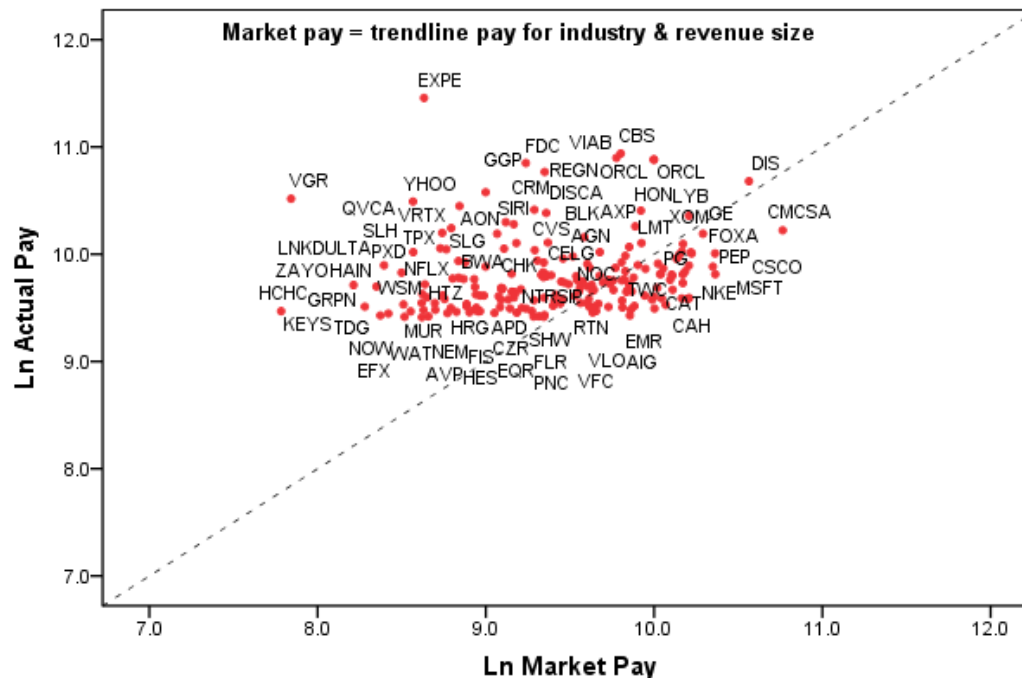


Market pay rates are calculated from a regression of natural log of total compensation against natural log of revenue using five years of historical data from S&P's Execucomp database. Log-log curves, which have been used in compensation analysis since the 1950s, imply that a doubling in size is associated with a constant percentage in pay. For this sample, the equation of the trendline is $\ln \text{ pay} = 3.99 + 0.56 \times \ln \text{ revenue}$, or $\text{pay} = \exp(3.99) \times \text{revenue}^{0.56} = \$54 \times \text{revenue}^{0.56}$. From this equation, we can see that a doubling in revenue increases pay by 47% since $2^{0.56} = 1.47$.

A non-log trendline, $\text{pay} = a + b \times \text{revenue}$, would imply that each additional dollar of revenue increases pay by the same dollar amount. Empirical evidence clearly shows that the pay for additional dollars of revenue is declining, not constant.

70% of the 200 highest paid CEO's are over-paid for their industry sector and revenue size

CEO Pay vs Market Rate

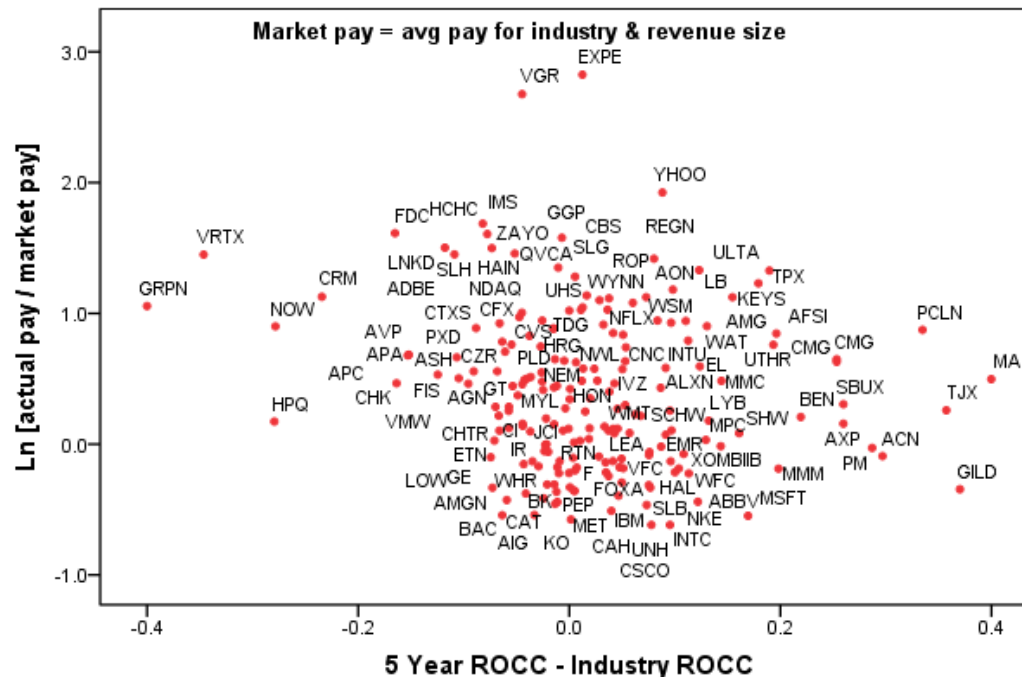


Market pay is calculated from pay-revenue size trendlines for each industry.

Each trendline is based on five years of historical data for the industry using pay data from S&P's Execucomp database.

Across the full sample, relative Return on Corporate Capital (ROCC) explains little of the variation in relative total CEO pay

Relative CEO Pay vs Relative ROCC

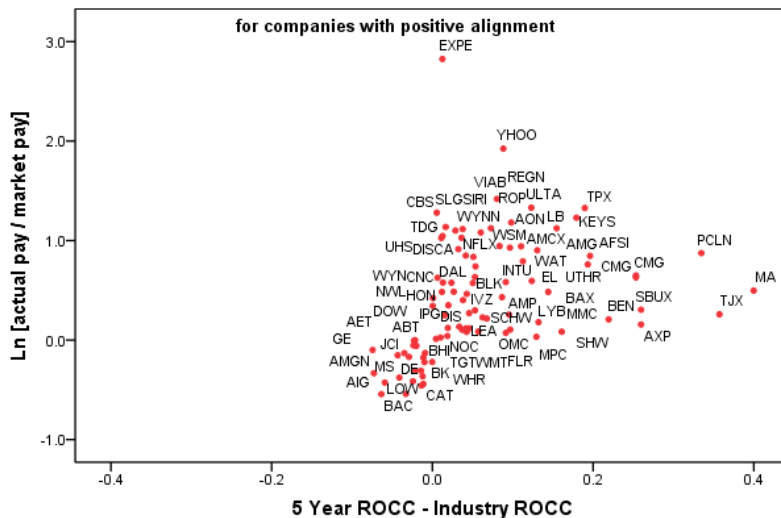


Industry ROCC is aggregate adjusted EBIT divided by aggregate adjusted corporate capital excluding the subject company (see pp. 16, 21). A true industry sector performance comparison.

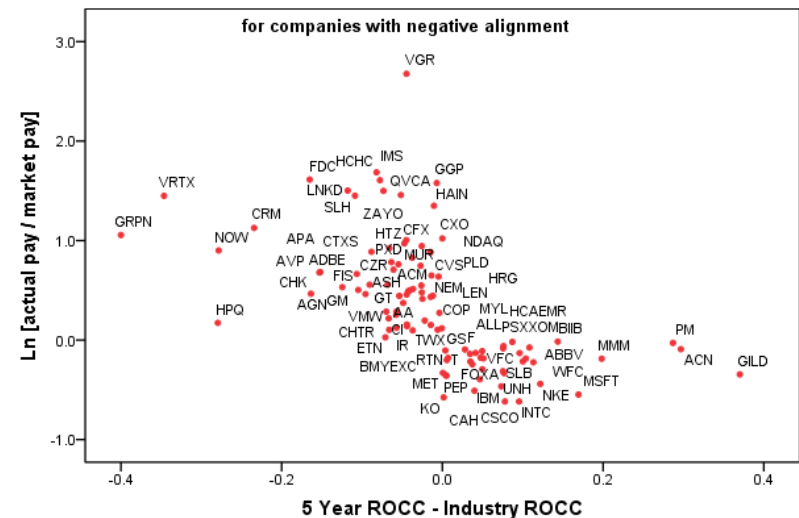
Groupon's relative ROCC is truncated at -40% (vs actual -205%) to provide more space for the other 199 companies.

It's useful to split the sample into companies with positive alignment (left panel) and negative alignment (right panel)

Relative CEO Pay vs Relative ROCC



Relative CEO Pay vs Relative ROCC



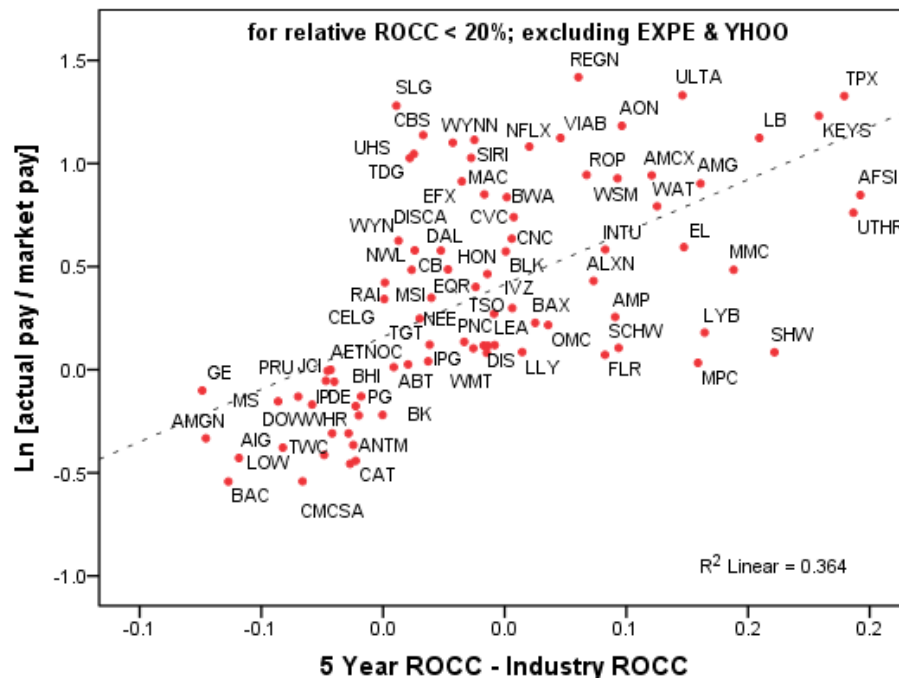
Companies with positive alignment have pay premiums roughly aligned with performance, i.e., a positive pay premium and a positive ROCC spread or a negative pay premium and a negative ROCC spread.

Only 49 % of the 200 highest paid companies had positive pay for performance alignment.

Companies with negative alignment have pay premiums poorly aligned with performance, i.e., a positive pay premium and a negative ROCC spread or a negative pay premium and a positive ROCC spread.

If we look more closely at the companies with positive alignment, we can see that the pay premium is roughly 6x the ROCC spread

Relative CEO Pay vs Relative ROCC

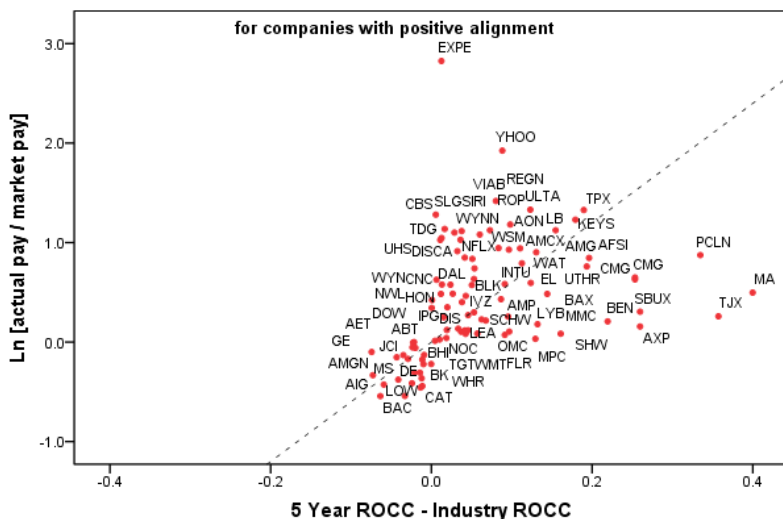


This graph is limited to companies with positive alignment, excluding companies with ROCC spreads greater than 20% and two high payers (EXPE and YHOO).

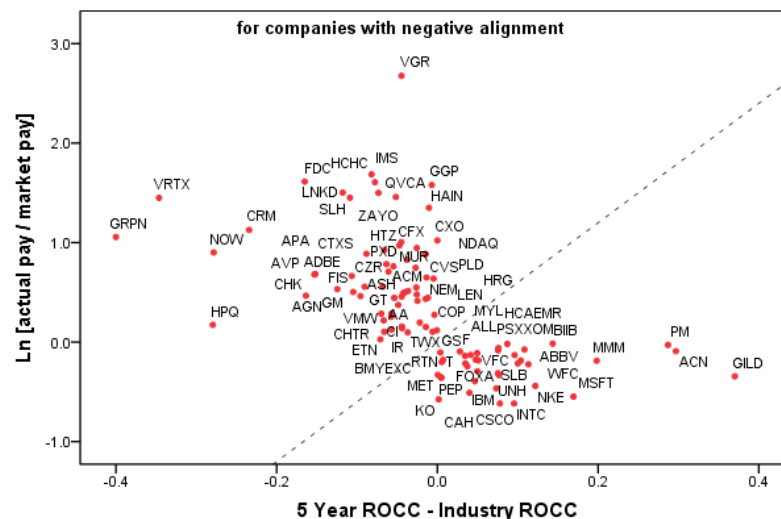
The regression trendline above has a slope of 5.0, but also implies a 17% pay premium at zero spread. If we eliminate the pay premium at zero spread, the slope of the trendline is 6.2, i.e., the log pay premium is 6.2 times the ROCC performance spread.

We can now compare positively and negatively aligned companies with a reasonable Pay for Performance trendline

Relative CEO Pay vs Relative ROCC



Relative CEO Pay vs Relative ROCC



The left panel shows companies with rough positive pay for performance alignment, i.e., a positive pay premium and a positive ROCC spread or a negative pay premium and a negative ROCC spread. The right panel shows companies with negative pay for performance alignment, i.e., a positive pay premium and a negative ROCC or a negative pay premium and a positive ROCC spread.

Both graphs show the pay for performance trendline developed from the positively aligned companies, i.e., log pay premium = 6 x spread. The companies far above the trendline are overpaid for their performance, while the companies far below the trendline are underpaid for their performance.

Executive Pay, ROCC Performance, Pay for Performance & Pay Premiums – what needs to be analyzed!

- **Actual Pay** = Summary Compensation Table pay at grant date filed with SEC.
- **Market Pay** = average total CEO pay for the GICS industry adjusted up or down for the revenue size of the company (using industry regressions of CEO pay vs revenues); market pay is “warranted” or “should be” CEO pay based on industry and revenue size of the company.
- **Actual Percent of Market Pay** = the % ratio of **Actual Pay / Market Pay** where Market Pay is trendline pay for revenue size in the industry; a company with 200% Actual Percent of Market Pay is overpaying trendline pay for revenue size and industry by 100%.
- **5 year industry average ROCC spread** = the difference between a company’s 5 year average ROCC performance and 5 year industry average ROCC performance.
- **Expected Percent of Market Pay** = market pay adjusted for 5 year ROCC spread vs industry; the percentage adjustment in log market pay is 6 times the ROCC spread, so the expected percent of market pay for a 10% ROCC spread is 182% (= $\exp(6 \times 10\%)$).
- **Percent Pay Premium vs Performance** = percent difference of actual CEO pay from market pay adjusted for ROCC spread performance, i.e., $(\text{actual CEO pay} / [\text{market pay} \times \text{expected percent of market pay}]) - 1$.

31 companies with 200%+ Pay Premiums over “Expected” Pay for Performance

Company	Executive	Percent Pay Premium Vs Performance	Pay percent of market based on revenue size		Actual Pay	Market Pay	Market pay adjustment due to relative ROCC performance to industry peers		
			Actual Percent Of Market Pay	Expected Percent Of Market			5 Year Average ROCC Spread	5 Year Average ROCC	5 Year Average Industry ROCC
Groupon (GRPN)	Rich Williams	63539359%	287%	0%	12,437	4,329	-205.1%	-192.1%	13.0%
Vertex Pharmaceuticals (VRTX)	Jeffrey M. Leiden	3305%	426%	13%	28,100	6,594	-34.6%	-16.6%	18.0%
Vector Group (VGR)	Howard M. Lorber	1800%	1453%	76%	36,979	2,545	-4.5%	23.0%	27.5%
Expedia (EXPE)	Dara Khosrowshahi	1464%	1687%	108%	94,604	5,609	1.3%	13.9%	12.7%
First Data (FDC)	Frank J. Bisignano	1251%	502%	37%	51,561	10,275	-16.5%	3.4%	19.9%
ServiceNow (NOW)	Frank Slooman	1208%	246%	19%	12,303	5,001	-27.8%	-7.4%	20.4%
salesforce.com (CRM)	Marc Benioff	1161%	309%	24%	33,363	10,801	-23.4%	-2.7%	20.8%
LinkedIn (LNKD)	Jeffrey Weiner	810%	449%	49%	19,860	4,423	-11.8%	5.8%	17.6%
HC2 Holdings (HCHC)	Philip A. Falcone	783%	540%	61%	12,960	2,400	-8.2%	2.3%	10.5%
Solera Holdings (SLH)	Tony Aquila	719%	426%	52%	22,452	5,264	-10.9%	9.6%	20.5%
IMS Health Holdings (IMS)	Ari Bousbib	695%	499%	63%	34,530	6,925	-7.8%	3.0%	10.8%
Zayo Group Holdings (ZAYO)	Dan Caruso	595%	448%	64%	16,516	3,690	-7.3%	1.3%	8.6%
Hewlett-Packard (HPQ)	Margaret C. Whitman	535%	119%	19%	17,102	14,389	-27.9%	5.7%	33.7%
Liberty Media & Liberty Interactive (LMCA & Q)	Gregory B. Maffei	486%	430%	73%	26,869	6,251	-5.2%	9.3%	14.5%
General Growth Properties (GGP)	Sandeep Mathrani	405%	485%	96%	39,248	8,095	-0.7%	4.1%	4.7%
Avon Products (AVP)	Sherilyn S. McCoy	394%	197%	40%	12,708	6,445	-15.3%	5.0%	20.3%
Apache (APA)	John J. Christmann	393%	198%	40%	15,140	7,638	-15.2%	-3.7%	11.5%
Chesapeake Energy (CHK)	Robert D. Lawler	325%	159%	37%	15,418	9,672	-16.4%	-4.9%	11.5%
Citrix Systems (CTXS)	Robert M. Calderoni	312%	243%	59%	19,631	8,088	-8.8%	11.7%	20.5%
Hain Celestial Group (HAIN)	Irwin D. Simon	311%	386%	94%	16,311	4,231	-1.1%	10.8%	11.8%
Yahoo! (YHOO)	Marissa A. Mayer	303%	684%	170%	35,981	5,258	8.8%	26.1%	17.3%
T-Mobile US (TMUS)	John J. Legere	274%	252%	67%	24,458	9,714	-6.6%	5.6%	12.2%
Adobe Systems (ADBE)	Shantanu Narayen	268%	194%	53%	18,357	9,445	-10.7%	10.2%	20.9%
Anadarko Petroleum (APC)	Robert A. Walker	259%	170%	47%	14,884	8,742	-12.5%	-1.0%	11.5%
LifePoint Health (LPNT)	William F. Carpenter	258%	273%	76%	15,201	5,561	-4.5%	7.9%	12.4%
Colfax (CFX)	Matthew L. Trerotola	251%	264%	75%	17,565	6,649	-4.7%	7.1%	11.8%
SL Green Realty (SLG)	Marc Holliday	248%	360%	103%	23,048	6,408	0.5%	5.2%	4.7%
Pioneer Natural Resources (PXD)	Scott D. Sheffield	220%	219%	68%	13,122	5,999	-6.4%	4.9%	11.3%
Fidelity National Information Services (FIS)	Gary A. Norcross	210%	166%	53%	12,954	7,827	-10.5%	8.4%	18.9%
Ashland (ASH)	William A. Wulfsohn	201%	175%	58%	13,363	7,656	-9.1%	5.0%	14.1%
Nasdaq (NDAQ)	Robert Greifeld	200%	257%	86%	14,706	5,714	-2.6%	11.1%	13.6%

34 companies with \$12+ million CEO Pay Premiums over “Expected” Pay for Performance

Dollar Pay Premium taking account of size & relative ROCC performance

% Pay Premium taking account of size & relative ROCC performance

Market pay adjustment due to relative ROCC performance to industry peers

Company	Executive	Dollar Pay Premium Vs Performance	Percent Pay Premium Vs Performance	Expected Percent Of Market	Actual Pay	Market Pay	5 Year Average ROCC Spread	5 Year Average ROCC	5 Year Average Industry ROCC
Expedia (EXPE)	Dara Khosrowshahi	88,556	1464%	108%	94,604	5,609	1.3%	13.9%	12.7%
First Data (FDC)	Frank J. Bisignano	47,745	1251%	37%	51,561	10,275	-16.5%	3.4%	19.9%
CBS (CBS)	Leslie Moonves	36,405	183%	110%	56,353	18,072	1.6%	13.6%	12.0%
Vector Group (VGR)	Howard M. Lorber	35,033	1800%	76%	36,979	2,545	-4.5%	23.0%	27.5%
Oracle (ORCL)	Mark V. Hurd	33,137	165%	91%	53,245	21,989	-1.5%	21.1%	22.6%
Oracle (ORCL)	Safra A. Catz	33,136	165%	91%	53,244	21,989	-1.5%	21.1%	22.6%
General Growth Properties (GGP)	Sandeep Mathrani	31,483	405%	96%	39,248	8,095	-0.7%	4.1%	4.7%
salesforce.com (CRM)	Marc Benioff	30,717	1161%	24%	33,363	10,801	-23.4%	-2.7%	20.8%
IMS Health Holdings (IMS)	Ari Bousbib	30,185	695%	63%	34,530	6,925	-7.8%	3.0%	10.8%
Regeneron Pharmaceuticals (REGN)	Leonard S. Schleifer	28,854	155%	162%	47,463	11,494	8.0%	25.4%	17.4%
Vertex Pharmaceuticals (VRTX)	Jeffrey M. Leiden	27,275	3305%	13%	28,100	6,594	-34.6%	-16.6%	18.0%
Yahoo! (YHOO)	Marissa A. Mayer	27,055	303%	170%	35,981	5,258	8.8%	26.1%	17.3%
Viacom (VIAB)	Philippe P. Dauman	26,865	98%	155%	54,141	17,607	7.3%	19.1%	11.8%
Liberty Media & Liberty Interactive (LMCA & Q)	Gregory B. Maffei	22,286	486%	73%	26,869	6,251	-5.2%	9.3%	14.5%
Solera Holdings (SLH)	Tony Aquila	19,711	719%	52%	22,452	5,264	-10.9%	9.6%	20.5%
Discovery Communications (DISCA)	David M. Zaslav	17,974	125%	124%	32,377	11,591	3.6%	15.6%	12.0%
T-Mobile US (TMUS)	John J. Legere	17,918	274%	67%	24,458	9,714	-6.6%	5.6%	12.2%
LinkedIn (LNKD)	Jeffrey Weiner	17,678	810%	49%	19,860	4,423	-11.8%	5.8%	17.6%
Sirius XM Holdings (SIRI)	James E. Meyer	17,176	143%	125%	29,158	9,563	3.8%	15.7%	12.0%
SL Green Realty (SLG)	Marc Holliday	16,426	248%	103%	23,048	6,408	0.5%	5.2%	4.7%
Citrix Systems (CTXS)	Robert M. Calderoni	14,868	312%	59%	19,631	8,088	-8.8%	11.7%	20.5%
Hewlett-Packard (HPQ)	Margaret C. Whitman	14,410	535%	19%	17,102	14,389	-27.9%	5.7%	33.7%
Zayo Group Holdings (ZAYO)	Dan Caruso	14,139	595%	64%	16,516	3,690	-7.3%	1.3%	8.6%
Allergan (AGN)	Brenton L. Saunders	13,910	182%	56%	21,565	13,586	-9.6%	3.1%	12.7%
General Motors (GM)	Mary T. Barra	13,883	94%	75%	28,577	19,685	-4.9%	1.8%	6.7%
CVS Health (CVS)	Larry J. Merlo	13,647	148%	85%	22,855	10,830	-2.7%	14.3%	17.0%
Adobe Systems (ADBE)	Shantanu Narayen	13,373	268%	53%	18,357	9,445	-10.7%	10.2%	20.9%
Aon (AON)	Gregory C. Case	13,301	81%	180%	29,735	9,118	9.8%	11.1%	1.3%
Universal Health Services (UHS)	Alan B. Miller	12,685	164%	108%	20,427	7,176	1.3%	13.6%	12.4%
Cofax (CFX)	Matthew L. Trerotola	12,561	251%	75%	17,565	6,649	-4.7%	7.1%	11.8%
Wynn Resorts (WYNN)	Stephen A. Wynn	12,508	153%	119%	20,680	6,880	2.9%	13.5%	10.6%
Groupon (GRPN)	Rich Williams	12,437	63539359%	0%	12,437	4,329	-205.1%	-192.1%	13.0%
Hain Celestial Group (HAIN)	Irwin D. Simon	12,339	311%	94%	16,311	4,231	-1.1%	10.8%	11.8%
Apache (APA)	John J. Christmann	12,071	393%	40%	15,140	7,638	-15.2%	-3.7%	11.5%

Our Pay for Performance & Pay Premium analysis – step by step

Pay Analysis	Performance Analysis
Calculate total compensation (done by Equilar for NYT)	Calculate average return on corporate capital (ROCC) for the past 5 years
Get intercept and slope of market pay line for position and industry	Calculate average ROCC for the industry for the past 5 years
Calculate market pay at current sales	Calculate ROCC premium vs industry, i.e., ROCC – industry ROCC
Calculate actual percent of market pay	Calculate expected percent of market using the pay for performance trendline, i.e., expected percent of market = $\exp(6 \times [\text{ROCC} - \text{industry ROCC}])$
Calculate percent pay premium vs pay for performance, i.e., [actual percent of market / expected percent of market] - 1	
Calculate dollar pay premium vs pay for performance, i.e., actual pay – [market pay x expected percent of market]	

Our ROCC performance analysis for Hewlett Packard

Calculation	Performance Analysis
5.7%	Calculate average return on corporate capital (ROCC) for the past 5 years
33.7%	Calculate average ROCC for the industry for the past 5 years
$-28.0\% = 5.7\% - 33.7\%$	Calculate ROCC premium vs industry, i.e., ROCC – industry ROCC
$\ln(\text{P4P pay}/\text{market pay}) =$ $6 \times [\text{ROCC} - \text{industry ROCC}]$ $\text{P4P pay} / \text{market pay} = \exp(6 \times -.28)$ $= 19\%$	Calculate expected percent of market using the pay for performance trendline, i.e., expected percent of market = $\exp(6 \times [\text{ROCC} - \text{industry ROCC}])$

Return on corporate capital (ROCC) for Hewlett-Packard; ROCC is based on GAAP reporting

ROCC = EBIT / beginning capital

ROCC = [net income + income tax expense + interest expense] / [beginning total assets - (current liabilities - debt in current liabilities)]

Company	Year	Net Income	Income Tax Expense	Interest Expense	Interest Income	Operating Income After Depreciation	Calculated EBIT	Total Assets	Current Liabilities	Debt In Current Liabilities	Calculated Capital	Pre-tax ROCC	Average Pre-tax ROCC
HP INC	2010							124,503	49,403	7,046	82,146		
	2011	7,074	1,908	551	167	11,733	9,533	129,517	50,442	8,083	87,158	11.6%	11.6%
	2012	-12,650	717	865	155	9,361	-11,068	108,768	46,666	6,647	68,749	-12.7%	-0.5%
	2013	5,113	1,397	738	148	8,455	7,248	105,676	45,521	5,979	66,134	10.5%	3.1%
	2014	5,013	1,544	621	136	9,092	7,178	103,206	43,735	3,486	62,957	10.9%	5.1%
	2015	4,554	178	567	129	8,381	5,299	106,882	42,191	2,885	67,576	8.4%	5.7%
Industry excluding company	2010							145,180	41,777	3,630	107,033		
	2011	29,556	9,605	785	101	40,100	39,946	191,968	49,978	4,051	146,041	37.3%	37.3%
	2012	46,553	15,052	753	96	63,583	62,358	258,325	62,243	3,775	199,856	42.7%	40.0%
	2013	45,475	14,807	940	191	58,470	61,222	297,921	65,859	1,804	233,866	30.6%	36.9%
	2014	44,867	15,321	1,192	185	61,460	61,380	323,564	86,599	7,558	244,523	26.2%	34.2%
	2015	55,115	20,320	1,603	166	78,152	77,038	379,057	104,125	13,369	288,300	31.5%	33.7%

Notes: Interest income and operating income after depreciation are shown for comparison, but not included in the calculation of ROCC
Industry ROCC is calculated from aggregate EBIT and capital, excluding the subject company

We use the aggregate pre-tax income and beginning capital of the other companies in the industry to compute industry ROCC

Companies in Technology Hardware, Storage & Peripherals

Excluding Hewlett-Packard

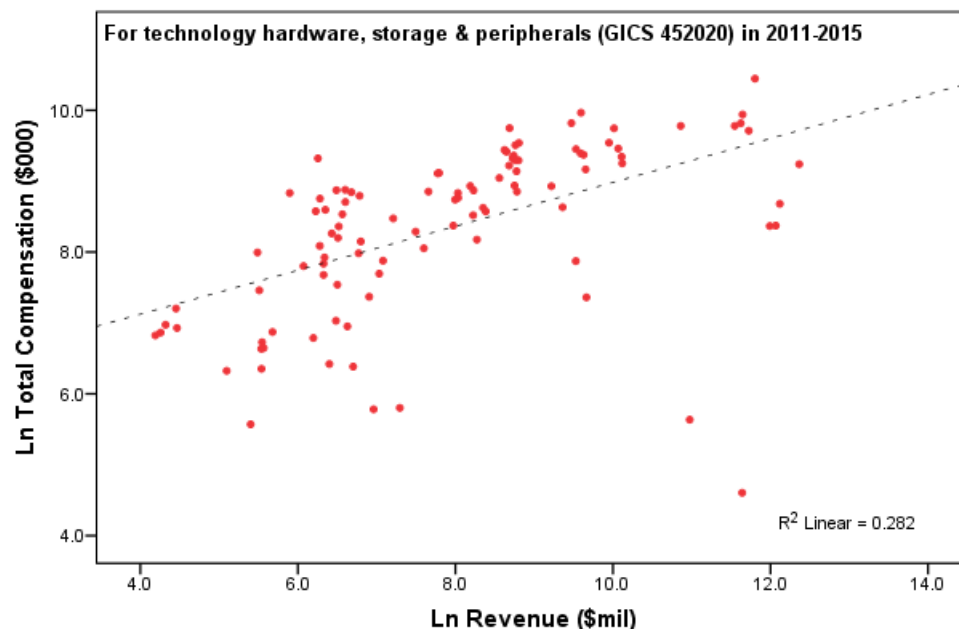
3D SYSTEMS CORP
APPLE INC
AVID TECHNOLOGY INC
CRAY INC
CREATIVE TECHNOLOGY LTD
DIEBOLD INC
EASTMAN KODAK CO
ELECTRONICS FOR IMAGING INC
EMC CORP/MA
HUTCHINSON TECHNOLOGY INC
IMATION CORP
IMMERSION CORP
INTEVAC INC
LEXMARK INTL INC -CL A
NCR CORP
SANDISK CORP
SEAGATE TECHNOLOGY PLC
SILICON GRAPHICS INTL CORP
STRATASYS LTD
SUPER MICRO COMPUTER INC

Our Pay for Performance & Pay Premium analysis for Hewlett Packard

Pay Analysis	Calculation
Calculate total compensation (done by Equilar for NYT)	\$17,102,385
Get intercept and slope of market pay line for position and industry	5.640 + 0.341 x ln sales for GICS 452030, Technology Hardware, Storage & Peripherals
Calculate market pay at current sales	\$14,389 = $\exp(5.640 + 0.341 \times \ln(103,355))$ giving market pay in \$000 using sales in \$millions
Calculate actual percent of market pay	119% = $\$17,102,385 / \$14,389,000$
Calculate percent pay premium vs pay for performance, i.e., [actual percent of market/expected percent of market] - 1	$[119\% / 19\%] - 1 = 535\%$
Calculate dollar pay premium vs pay for performance, i.e., actual pay – [market pay x expected percent of market]	$\$17,102,385 - 19\% \times \$14,389,000 = \$14,410,000$

Market pay trendline for GICS 452020, Technology Hardware, Storage and Peripherals

CEO Pay vs Revenue



Market rates are calculated from a regression of natural log of total compensation against natural log of revenue using five years of historical data from S&P's Execucomp database. Log-log curves, which have been used in compensation analysis since the 1950s, imply that a doubling in size is associated with a constant percentage in pay. For this sample, the equation of the trendline is $\ln \text{ pay} = 5.89 + 0.31 \times \ln \text{ revenue}$, or $\text{pay} = \exp(5.89) \times \text{revenue}^{0.31} = \$361 \times \text{revenue}^{0.31}$.

To ensure that market rates are based on reasonable pay-size relationships even when the industry samples are small, we adjust the slope if it is below 0.341 or above 0.573. These are the minimum and maximum slopes when we do pay-size regressions for industry groups using all history years in the Execucomp database (1992-2015). For GICS 452020, this restriction changes the market pay equation from $5.89 + 0.31 \times \ln \text{ revenue}$ to $5.64 + 0.341 \times \ln \text{ revenue}$. When we adjust the slope, we also adjust the intercept to ensure that the mean predicted value remains equal to the actual mean $\ln \text{ pay}$.

Our ROCC performance analysis for Expedia

Calculation	Performance Analysis
13.9%	Calculate average return on corporate capital (ROCC) for the past 5 years
12.7%	Calculate average ROCC for the industry for the past 5 years
$1.2\% = 13.9\% - 12.7\%$	Calculate ROCC premium vs industry, i.e., ROCC – industry ROCC
$\ln(\text{P4P pay}/\text{market pay}) =$ $6 \times [\text{ROCC} - \text{industry ROCC}]$ $\text{P4P pay} / \text{market pay} = \exp(6 \times .012)$ $= 108\%$	Calculate expected percent of market using the pay for performance trendline, i.e., expected percent of market = $\exp(6 \times [\text{ROCC} - \text{industry ROCC}])$

Return on corporate capital (ROCC) for Expedia; ROCC is based on GAAP reporting

ROCC = EBIT / beginning capital

ROCC = [net income + income tax expense + interest expense] / [beginning total assets - (current liabilities - debt in current liabilities)]

Company	Year	Net Income	Income Tax Expense	Interest Expense	Interest Income	Operating Income After Depreciation	Calculated EBIT	Total Assets	Current Liabilities	Debt In Current Liabilities	Calculated Capital	Pre-tax ROCC	Average Pre-tax ROCC
EXPEDIA INC	2010							6,651	1,889	0	4,762		
	2011	472	76	91	20	500	639	6,505	2,553	0	3,952	13.4%	13.4%
	2012	280	47	88	26	549	415	7,085	2,982	0	4,103	10.5%	12.0%
	2013	233	84	87	25	513	405	7,739	3,294	0	4,445	9.9%	11.3%
	2014	398	92	98	27	595	588	9,021	4,187	0	4,834	13.2%	11.8%
	2015	764	203	126	17	461	1,094	15,504	5,926	430	10,008	22.6%	13.9%
Industry excluding company	Year	Net Income	Income Tax Expense	Interest Expense	Interest Income	Operating Income After Depreciation	Calculated EBIT	Total Assets	Current Liabilities	Debt In Current Liabilities	Calculated Capital	Pre-tax ROCC	Average Pre-tax ROCC
Internet & Catalog Retail	2010							42,531	15,042	779	28,269		
	2011	2,810	1,315	475	70	4,141	4,599	53,148	20,808	1,109	33,450	16.3%	16.3%
	2012	2,149	1,466	532	45	4,534	4,148	64,374	26,668	2,004	39,710	12.4%	14.3%
	2013	3,119	1,148	574	46	5,246	4,841	77,830	30,994	2,011	48,847	12.2%	13.6%
	2014	3,322	1,357	696	56	5,516	5,375	97,367	36,695	3,768	64,440	11.0%	13.0%
	2015	4,324	1,993	1,087	108	7,488	7,404	115,665	43,779	3,792	75,678	11.5%	12.7%

Notes: Interest income and operating income after depreciation are shown for comparison, but not included in the calculation of ROCC
Industry ROCC is calculated from aggregate EBIT and capital, excluding the subject company

We use the aggregate pre-tax income and beginning capital of the other companies in the industry to compute industry ROCC

Companies in Internet & Catalog Retail

Excluding Expedia

AMAZON.COM INC

BLUE NILE INC

EVINE LIVE INC

GROUPON INC

HSN INC

LIBERTY INTERACTV CP QVC GRP

NETFLIX INC

NUTRISYSTEM INC

OVERSTOCK.COM INC

PRICELINE GROUP INC

SHUTTERFLY INC

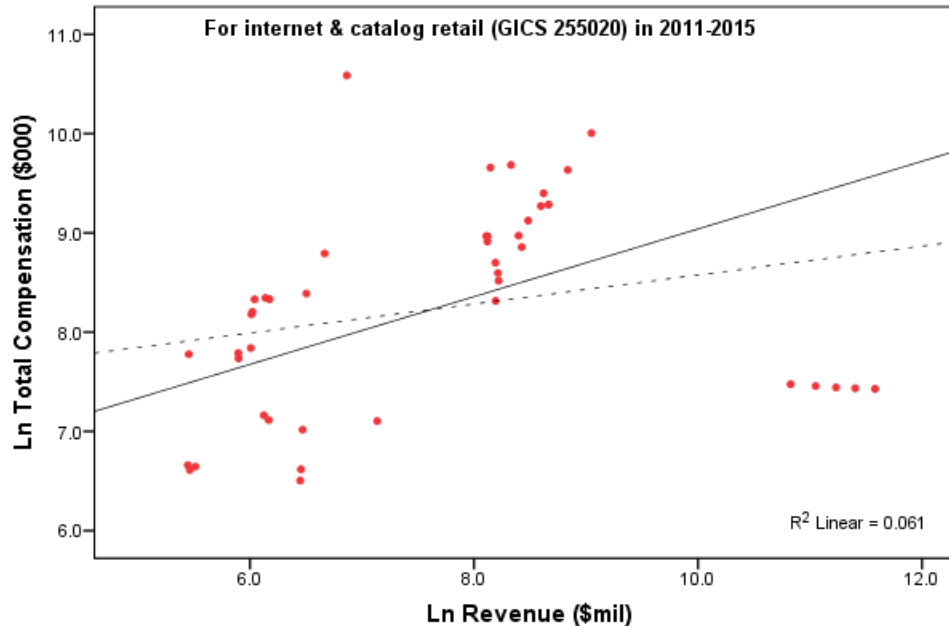
TRIPADVISOR INC

Our Pay for Performance & Pay Premium analysis for Expedia

Pay Analysis	Calculation
Calculate total compensation (done by Equilar for NYT)	\$94,603,552
Get intercept and slope of market pay line for position and industry	5.630 + 0.341 x ln sales for GICS 255020, Internet & Catalog Retail
Calculate market pay at current sales	\$5,609 = $\exp(5.630 + 0.341 \times \ln(6,672))$ giving market pay in \$000 using sales in \$millions
Calculate actual percent of market pay	1687% = $\$94,603,552 / \$5,609,000$
Calculate percent pay premium vs pay for performance, i.e., [actual percent of market/expected percent of market] - 1	$[1687\% / 108\%] - 1 = 1464\%$
Calculate dollar pay premium vs pay for performance, i.e., actual pay – [market pay x expected percent of market]	$\$94,603,552 - 108\% \times \$5,609,000 = \$88,556,000$

Market pay trendline for GICS 255020, Internet & Catalog Retail

CEO Pay vs Revenue



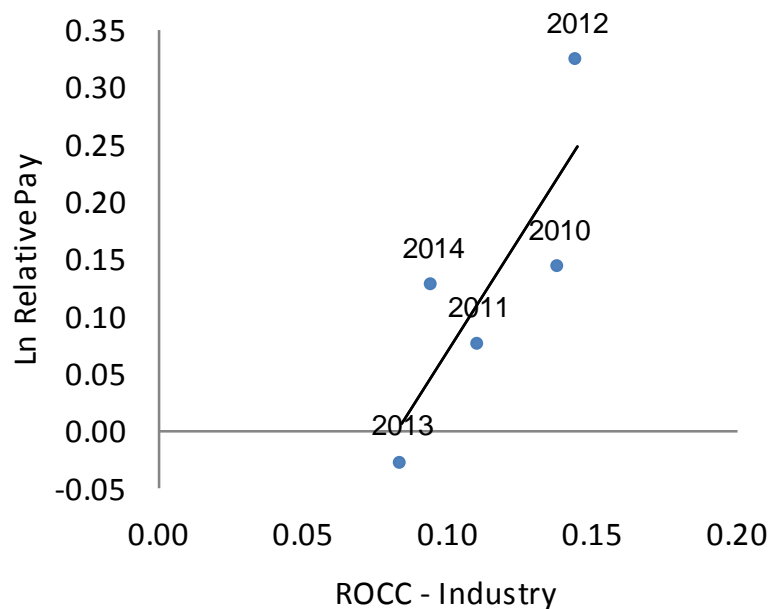
Market rates are calculated from a regression of natural log of total compensation against natural log of revenue using five years of historical data from S&P's Execucomp database. For this sample, the equation of the trendline [the dashed line above] is $\ln \text{ pay} = 7.12 + 0.15 \times \ln \text{ revenue}$, or $\text{pay} = \exp(7.12) \times \text{revenue}^{0.15} = \$1,236 \times \text{revenue}^{0.15}$. The 5 observations in the lower right (all from amazon.com) significantly reduce the slope of the trendline.

To ensure that market rates are based on reasonable pay-size relationships even when the industry samples are small, we adjust the slope if it is below 0.341 or above 0.573. These are the minimum and maximum slopes when we do pay-size regressions for industry groups using all history years in the Execucomp database (1992-2015). For GICS 255020, this restriction changes the market pay equation from $7.12 + 0.15 \times \ln \text{ revenue}$ to $5.63 + 0.341 \times \ln \text{ revenue}$ [the solid line above]. When we adjust the slope, we also adjust the intercept to ensure that the mean predicted value remains equal to the actual mean \ln pay.

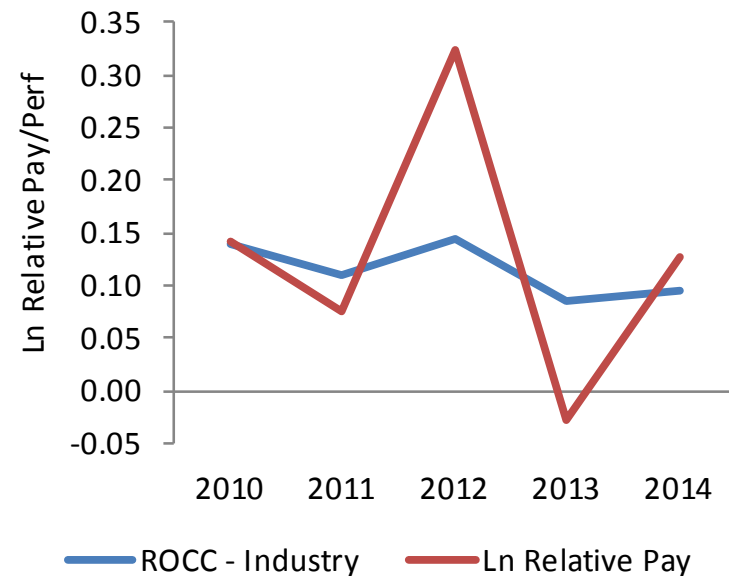
Companies should be presenting individual company graphs of relative pay vs relative ROCC, but very few companies do so

EXXON MOBIL CORP

CEO Grant Date Pay Leverage




CEO Relative Grant Pay & Performance



Regression equation is $\ln \text{ relative grant date pay} = -0.33 + 3.99 \times [\text{ROCC} - \text{industry}]$ with a correlation of 0.83

35 companies with 40%+ Pay discounts from “Expected” pay for performance

**% Pay Discount
(under pay)
adjusted for size
& relative ROCC
performance**



Company	Executive	Percent Pay Premium Vs Performance	Actual Percent Of Market Pay	Expected Percent Of Market	Actual Pay	Market Pay	5 Year Average ROCC Spread	5 Year Average ROCC	5 Year Average Industry ROCC
Phillips 66 (PSX)	Greg C. Garland	-40%	94%	158%	17,400	18,469	7.6%	18.8%	11.2%
Chevron (CVX)	John S. Watson	-42%	92%	157%	19,230	20,906	7.5%	18.3%	10.8%
HCA Holdings (HCA)	R. Milton Johnson	-42%	98%	168%	13,970	14,231	8.7%	20.5%	11.8%
Coca-Cola (KO)	Muhtar Kent	-44%	56%	101%	14,591	25,961	0.2%	15.1%	15.0%
JPMorgan Chase (JPM)	James Dimon	-45%	75%	135%	18,221	24,429	5.0%	14.2%	9.2%
LyondellBasell Industries (LYB)	Bhavesh V. Patel	-46%	120%	221%	24,460	20,429	13.2%	26.6%	13.3%
Express Scripts (ESRX)	George Paz	-49%	67%	132%	14,836	22,008	4.7%	17.1%	12.4%
Emerson Electric (EMR)	David N. Farr	-51%	88%	178%	13,875	15,816	9.6%	20.3%	10.7%
Exxon Mobil (XOM)	Rex W. Tillerson	-52%	93%	192%	24,261	26,165	10.8%	21.1%	10.2%
Marathon Petroleum (MPC)	Gary R. Heminger	-52%	103%	217%	17,351	16,786	12.9%	24.1%	11.2%
Cardinal Health (CAH)	George S. Barrett	-53%	60%	127%	13,270	22,086	4.0%	16.3%	12.3%
International Business Machines (IBM)	Virginia M. Rometty	-53%	73%	157%	19,822	27,092	7.5%	23.7%	16.1%
Schlumberger (SLB)	Paal Kibsgaard	-55%	72%	158%	17,343	24,209	7.7%	13.8%	6.1%
Wells Fargo (WFC)	John G. Stumpf	-55%	83%	186%	19,319	23,251	10.4%	19.3%	8.9%
Halliburton (HAL)	David J. Lesar	-56%	81%	182%	15,572	19,300	10.0%	16.8%	6.8%
Chipotle Mexican (CMG)	Steve Ells	-58%	191%	457%	13,838	7,226	25.3%	36.0%	10.7%
Biogen (BIIB)	George A. Scangos	-58%	98%	237%	16,690	16,947	14.4%	31.0%	16.6%
Sherwin-Williams (SHW)	Christopher M. Conno	-59%	109%	263%	12,488	11,476	16.1%	29.8%	13.7%
Chipotle Mexican (CMG)	Montgomery F. Moran	-59%	188%	457%	13,561	7,226	25.3%	36.0%	10.7%
AbbVie (ABBV)	Richard A. Gonzalez	-59%	80%	197%	18,363	22,951	11.3%	27.4%	16.0%
Cisco Systems (CSCO)	John T. Chambers	-60%	63%	155%	19,621	31,216	7.3%	14.1%	6.8%
UnitedHealth Group (UNH)	Stephen J. Hemsley	-66%	54%	159%	14,518	26,911	7.8%	19.1%	11.3%
Franklin Resources (BEN)	Gregory E. Johnson	-67%	123%	373%	15,097	12,270	21.9%	31.7%	9.8%
The Priceline Group (PCLN)	Darren R. Huston	-68%	240%	745%	15,006	6,263	33.5%	42.3%	8.8%
Nike (NKE)	Mark G. Parker	-69%	64%	208%	16,820	26,129	12.2%	27.8%	15.6%
Intel (INTC)	Brian M. Krzanich	-70%	54%	177%	14,634	27,114	9.5%	23.4%	13.8%
Starbucks (SBUX)	Howard Schultz	-71%	136%	475%	20,091	14,801	26.0%	36.1%	10.2%
3M (MMM)	Inge G. Thulin	-75%	83%	329%	15,500	18,681	19.8%	24.9%	5.1%
American Express (AXP)	Kenneth I. Chenault	-75%	117%	475%	21,688	18,558	26.0%	40.7%	14.8%
Microsoft (MSFT)	Satya Nadella	-79%	58%	276%	18,294	31,659	16.9%	29.3%	12.4%
Philip Morris International (PM)	André Calantzopoulo	-83%	97%	559%	14,501	14,933	28.7%	50.9%	22.2%
Accenture (ACN)	Pierre Nanterme	-85%	91%	594%	15,776	17,297	29.7%	47.2%	17.5%
The TJX Companies (TJX)	Carol Meyrowitz	-85%	130%	853%	17,962	13,866	35.7%	55.1%	19.3%
MasterCard (MA)	Ajay Banga	-85%	164%	1100%	15,538	9,451	40.0%	57.3%	17.3%
Gilead Sciences (GILD)	John C. Martin	-92%	71%	921%	18,756	26,490	37.0%	49.7%	12.7%

33 companies with \$12+ million Pay discounts from “Expected” Pay for Performance

Dollar Pay Discount
(under pay)
adjusted for size &
relative ROCC
performance

Note: all these companies are premium
performance companies out performing their
industry average ROCC by 200+ basis points

Company	Executive	Dollar Pay Premium Vs Performance	Percent Pay Premium Vs Performance	Expected Percent Of Market	Actual Pay	Market Pay	5 Year Average ROCC Spread	5 Year Average ROCC	5 Year Average Industry ROCC
Johnson & Johnson (JNJ)	Alex Gorsky	-12,446	-37%	133%	21,082	25,169	4.8%	16.6%	11.8%
Chevron (CVX)	John S. Watson	-13,647	-42%	157%	19,230	20,906	7.5%	18.3%	10.8%
Emerson Electric (EMR)	David N. Farr	-14,264	-51%	178%	13,875	15,816	9.6%	20.3%	10.7%
Express Scripts (ESRX)	George Paz	-14,286	-49%	132%	14,836	22,008	4.7%	17.1%	12.4%
JPMorgan Chase (JPM)	James Dimon	-14,718	-45%	135%	18,221	24,429	5.0%	14.2%	9.2%
Cardinal Health (CAH)	George S. Barrett	-14,807	-53%	127%	13,270	22,086	4.0%	16.3%	12.3%
Sherwin-Williams (SHW)	Christopher M. Conno	-17,641	-59%	263%	12,488	11,476	16.1%	29.8%	13.7%
Marathon Petroleum (MPC)	Gary R. Heminger	-19,135	-52%	217%	17,351	16,786	12.9%	24.1%	11.2%
Chipotle Mexican (CMG)	Steve Ellis	-19,205	-58%	457%	13,838	7,226	25.3%	36.0%	10.7%
Chipotle Mexican (CMG)	Montgomery F. Moran	-19,482	-59%	457%	13,561	7,226	25.3%	36.0%	10.7%
Halliburton (HAL)	David J. Lesar	-19,605	-56%	182%	15,572	19,300	10.0%	16.8%	6.8%
LyondellBasell Industries (LYB)	Bhavesh V. Patel	-20,687	-46%	221%	24,460	20,429	13.2%	26.6%	13.3%
Schlumberger (SLB)	Paal Kibsgaard	-21,015	-55%	158%	17,343	24,209	7.7%	13.8%	6.1%
International Business Machines (IBM)	Virginia M. Rometty	-22,776	-53%	157%	19,822	27,092	7.5%	23.7%	16.1%
Biogen (BIIB)	George A. Scangos	-23,429	-58%	237%	16,690	16,947	14.4%	31.0%	16.6%
Wells Fargo (WFC)	John G. Stumpf	-24,023	-55%	186%	19,319	23,251	10.4%	19.3%	8.9%
Exxon Mobil (XOM)	Rex W. Tillerson	-25,881	-52%	192%	24,261	26,165	10.8%	21.1%	10.2%
AbbVie (ABBV)	Richard A. Gonzalez	-26,934	-59%	197%	18,363	22,951	11.3%	27.4%	16.0%
UnitedHealth Group (UNH)	Stephen J. Hemsley	-28,387	-66%	159%	14,518	26,911	7.8%	19.1%	11.3%
Cisco Systems (CSCO)	John T. Chambers	-28,866	-60%	155%	19,621	31,216	7.3%	14.1%	6.8%
Franklin Resources (BEN)	Gregory E. Johnson	-30,635	-67%	373%	15,097	12,270	21.9%	31.7%	9.8%
The Priceline Group (PCLN)	Darren R. Huston	-31,633	-68%	745%	15,006	6,263	33.5%	42.3%	8.8%
Intel (INTC)	Brian M. Krzanich	-33,415	-70%	177%	14,634	27,114	9.5%	23.4%	13.8%
Nike (NKE)	Mark G. Parker	-37,450	-69%	208%	16,820	26,129	12.2%	27.8%	15.6%
3M (MMM)	Inge G. Thulin	-45,880	-75%	329%	15,500	18,681	19.8%	24.9%	5.1%
Starbucks (SBUX)	Howard Schultz	-50,226	-71%	475%	20,091	14,801	26.0%	36.1%	10.2%
American Express (AXP)	Kenneth I. Chenault	-66,441	-75%	475%	21,688	18,558	26.0%	40.7%	14.8%
Philip Morris International (PM)	André Calantzopoulos	-69,002	-83%	559%	14,501	14,933	28.7%	50.9%	22.2%
Microsoft (MSFT)	Satya Nadella	-69,198	-79%	276%	18,294	31,659	16.9%	29.3%	12.4%
Accenture (ACN)	Pierre Nanterme	-86,885	-85%	594%	15,776	17,297	29.7%	47.2%	17.5%
MasterCard (MA)	Ajay Banga	-88,459	-85%	1100%	15,538	9,451	40.0%	57.3%	17.3%
The TJX Companies (TJX)	Carol Meyrowitz	-100,257	-85%	853%	17,962	13,866	35.7%	55.1%	19.3%
Gilead Sciences (GILD)	John C. Martin	-225,192	-92%	921%	18,756	26,490	37.0%	49.7%	12.7%

A note on the peer sample & the performance periods used for NY Times study companies without 5 years of history data

- The sample used for industry averages is 2,901 companies with publicly traded stock or debt. The companies were selected because they have complete data for calculation of 2011-2015 ROCC and:
 - Trade on NYSE or NASDAQ (2,682 companies),
 - Are in the Execucomp database (41 companies), or
 - Report total employee compensation (178 companies).
- 5 year average ROCC spread is used for 190 of the 198 companies in the 2016 NYT study; shorter periods are used for 8 companies due to missing data:
 - 4 year average ROCC is used for IMS Health (2012-2015), Nike (2011-2014) and Oracle (2011-2014),
 - 3 year average ROCC is used for Aramark (2013-2015) and Keysight Technologies (2013-2015),
 - 2 year average ROCC is used for PayPal (2014-2015) and T-Mobile (2014-2015), and
 - 1 year ROCC is used for Zayo Group (2015).