How "Competitive Pay" Undermines Pay for Performance (and What Companies Can Do to Avoid That)

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The mantra of all compensation committees is "pay for performance." Read any Compensation Discussion and Analysis (CD&A) in the company's proxy and you will find numerous references to pay for performance as a major objective in setting and implementing pay programs. Yet a closer reading of the CD&A will reveal that the method often used to set compensation levels is an approach called "competitive pay." The competitive pay method sets a target amount of total compensation—salary, bonus, and equity—within a specified range of the amount paid to the executive's peers, typically companies that are similar based on industry sector and size. Unfortunately, as used in current practice, competitive pay targets undermine pay for performance. In the pages that follow, we will explain why that's so and how companies can tie their competitive pay targets to performance so that they actually achieve pay for performance.

Executive pay programs are expected to accomplish three main, but in some ways competing, goals: (1) provide strong incentives to create shareholder value; (2) retain key talent, particularly in periods of poor performance attributable to market and industry factors; and (3) limit compensation cost to levels that maximize the wealth of the company's shareholders. Although these three main objectives of executive pay plans haven't changed since the rise of large corporations in the late 19th century, the tools used to achieve them have changed. In the first half of the 20th century, sharing formulas were the primary tools used by American companies for rewarding key managers and employees. In the second half of the 20th century, and since that time, sharing formulas have been largely replaced by "competitive pay" concepts derived from labor market analysis of peers. One of the main effects of the rise of competitive pay as the controlling concept has been to elevate the importance of the last two objectives—retention and cost—while effectively weakening managers' incentives to increase longer-run efficiency and value.

The competitive pay concept has further eroded managerial incentives by becoming an integral part of the metrics used by proxy advisers to evaluate the cost-effectiveness of CEO pay programs. Directors and compensation committee members have embraced the competitive pay concept because it provides easy cover from the proxy advisers and, more importantly, because they have no easy way to assess the negative impact of competitive pay on the strength of management incentives to increase shareholder value. Without a way to quantify the relationship between pay and performance, compensation committees have adopted pay practices that have paid for performance more by chance than by design. As a result, today's companies often provide widely different pay for very similar levels of longer-run corporate performance.

In this article, we will provide a brief history of U.S. executive pay practices, showing that the compensation consultants who led the post-WW II transformation of executive pay never intended companies to provide competitive pay in the way the concept has since been applied by corporate boards and their advisers. Next, we show that the erosion of management incentives caused by the use of competitive pay is not an accidental result, but an inherent feature, of competitive pay practices. At the same time, however, we use historical data to identify some basic strengths—to go along with the limitations—of U.S. corporate pay practices. More specifically, we show that the level of pay for performance achieved by S&P 1500 companies, while significant, has barely changed during the past 15 years and has left considerable room for improvement. With the aim of raising this level, we illustrate—using the case of Dow Chemical—how companies and directors can use this historical pay data to measure and monitor the incentive strength of their plans. We close by presenting a simple pay plan that provides "perfect" pay for performance—a plan that can be used by directors as a benchmark to evaluate and, if necessary, redesign their current pay programs.

A Sharing Formula Was the Guiding Concept in the First Half of the 20th Century

The bonus plan adopted by General Motors in 1922 illustrates the typical approach to executive pay in the first half of the 20th century. The bonus formula was 10% of after-tax profit in excess of a 7% return on GM's total capital—a measure of GM's performance that might be called "economic profit."[1]

1. Provided we assume that GM's weighted average cost of capital is 7%. The measure is also strikingly similar to the concept of Economic Value Added, or EVA. Throughout the rest of this article, we will use the term "economic profit" to describe such measures.

The bonus plan participants represented 5% of all salaried employees in 1922—later increasing to 9%—and the plan was viewed as an opportunity for key employees to function as partners of GM's shareholders. The bonus formula governed all incentive compensation received by GM executives, stock as well as cash, and was used without any change until 1947, when the sharing percentage was increased to 12% and the capital charge was reduced to 5%. The limited bonus eligibility ensured that the normal bonus pool would be substantial in relation to the aggregate salaries of the participants. The fixed and modest sharing percentage provided a simple signal to directors and investors that GM had strong and cost-efficient management incentives. The fixed percentage ensured that executive bonuses could not be increased without increasing the shareholders' economic profit in equal proportion. And the modest size of the sharing percentage, 10%, meant that shareholder cost was limited to a level that was likely to maximize shareholder wealth.

Our basic measure of incentive strength, which we will refer to throughout this article as *pay leverage,* is the ratio of the percentage change in pay to the percentage change in performance (however we choose to measure it). The GM bonus plan has pay leverage of 1.0 in relation to the company's economic profit because any given percentage change in economic profit results in an equal percentage change in the bonus pool.

The main challenge for directors overseeing a bonus plan like GM's was to ensure that the company retained key talent, particularly in periods when the bonus pool was zero or negative because of poor industry performance. GM's directors achieved this retention objective in three ways. First, the directors limited the share of the bonus pool that was available to top management, helping to ensure that the bonus pool would be adequate to retain and motivate lower-level employees. The Bonus and Salary Committee, which was composed solely of directors not participating in the bonus plan, initiated the bonus allocation process by determining the aggregate allotment to the operating executives on the board as a percentage of the total pool. Second, bonus awards were paid out over time in five equal annual installments, and subject to forfeiture if an executive left GM. Third, the directors made a decision each year whether part of the formula bonus pool should be deferred and added to a bonus reserve that would be available for payout in a later year that might have poor performance due to industry factors.

The GM bonus plan design was very common in the first half of the 20th century, but gradually disappeared after World War II. A 1936 study by future Harvard Business School Dean John Baker found that 18 of the 22 companies he analyzed had similar plans.

Competitive Pay Has Been the Guiding Concept Since World War II

After World War II corporate human resource practice became increasingly focused on the concepts of "job value" and "competitive pay." The rise and growing influence of these concepts can be seen in the Hay Guide Chart for job evaluation, which was standardized in 1951, and the American Management Association (AMA) surveys of executive pay, which were initiated in 1950. The AMA surveys were designed by Arch Patton of McKinsey & Company. As a measure of Patton's influence on the field, between 1950 and 1985 the *Harvard Business Review* published no less than 26 of his articles, many of them reporting on the results of the latest AMA survey.

The replacement of sharing formulas by competitive pay practices took place gradually during the post-War period. One major development was a pronounced shift in emphasis from pay *for profit* to pay *for revenue*. The early AMA surveys used profit as a measure of company size, but soon switched to revenue. In a 1966 article in the *Harvard Business Review*, Patton wrote:

The disassociation between pay and profits is a development of relatively recent years. McKinsey studies up to about five years ago—and those made by others as well—indicated that high or low top management pay tended to coincide with high or low company profitability. The erosion of this profit-oriented relationship may well stem, at least in part, from the increasing management use of compensation surveys which gauge company size in terms of sales volume… [T]his trend is both important and troubling; it means that the connection between top management motivation and the basic goal of industry—profits—is being watered down… [R]ewarding management for volume increases that are not reasonably matched by profit gains raises the specter of the 'profitless prosperity' that accompanies overproduction.[2]

Along with the shift from profit to revenue as the defining characteristic of "peers," setting pay targets without regard to performance led to a growing disconnect between pay and performance. This change was well described by Bud Crystal of the consulting firm Towers Perrin, who succeeded Patton as the most noted and quoted compensation consultant in America, when he wrote in 1985,

Many—indeed, most—companies attempt to articulate where they would like their compensation levels to be vis-à-vis the external market… Hence, you will hear statements such as, 'We want to be at the 75th percentile of the comparator group's pay distribution.'…Is there anything wrong with setting levels

2. Arch Patton, "Top Executive Pay: New Facts & Figures," *Harvard Business Review* (Sep/Oct 1966), *vol 44, no 5, p.96*

The Displacement of Sharing Formulas by Competitive Pay: The Case of IBM

IBM provides a highly representative example of the post-WWII changes in executive pay that took place throughout corporate America. When he took the CEO job in 1914, Tom Watson, Sr. had a 5% share of the company's after-tax profits. During his tenure as CEO, which lasted until 1956 (when his son Tom Jr. took over), Watson Sr. reduced his own profit share and gave profit shares of varying percentages to both line and staff executives. In the mid-1960s, 90 senior IBM executives had individual shares of corporate profit. But in the late 1960s, a study by a consulting firm led to a complete replacement of corporate profit shares by "target" bonuses that, depending on the position, were between 33% and 100% of salary—and by "target" option grants that were set at three times cash compensation.

this way? Shouldn't a company articulate how competitive it wants to be and then move toward that goal? Indeed it should. But therein lies the rub. For having articulated, say, a 75th percentile goal, our hypothetical company, accustomed to achieving its objectives, proceeds to do just that. Hence, it pays at the 75th percentile in normal times, in prosperous times, and in poor times. Small wonder then that there is so little correlation between company performance and pay in so many studies that have been conducted. Where did the company go wrong? Quite simply, it forgot to specify the performance circumstances under which it wished to achieve the 75th percentile of the competitive pay distribution.[3]

And Patton agreed with Crystal. When Patton died in 1996, his obituary in *The New York Times* noted his regret that "managers had badly abused his survey and that 'this resulted largely from management assuming that all of its executives were above-average performers.'"[4]

Why, then, did so many companies move to competitive pay? The standard explanation was that substituting dollar-denominated incentive compensation schemes for sharing formulas made it much easier to achieve two of the three basic objectives of executive pay: retaining key talent and limiting shareholder cost. The competitive position target limited retention risk because target pay levels would not fall below the target percentile. And it limited shareholder cost because target pay levels would not rise above those associated with the target percentile.

But implicit in this change were subtle redefinitions of the retention and cost objectives. Old-fashioned sharing formulas paid generously when the company was doing well, and paid poorly when the company was doing poorly. Since superior company performance generally reflects superior management performance, sharing formulas led companies to pay above average for superior management and below average for poor management. In other words, companies with sharing formulas paid a premium to retain superior performers, while taking some "risk" that poor performers would leave. By contrast, today's competitive position targets provide the same target compensation for both superior and poor performers. In so doing, they effectively increase retention risk for superior performers and reduce retention risk for poor performers.

Competitive Position Targets Lead to Big Gains for Rebounding from Poor Performance

What's important to recognize about competitive position targets, then, is that they are designed to provide the same *expected* compensation every year, *regardless of a company's past, or cumulative, performance*. One might be tempted to describe the system as having "no memory" in the sense that there is no penalty for poor performance—apart from the reduction in the current year's pay—that gets carried forward into future years.

But the more serious distortion of incentives caused by the annual recalibration of competitive position targets is that it effectively rewards companies for poor performance, providing higher cumulative rewards when companies falter early and then make it back to ground zero. Sharing formulas, by contrast, can provide consistently and predictably high cumulative compensation for superior multi-year corporate performance, and predictably lower cumulative compensation for longer-run corporate underperformance. And this difference, as we will show below, has a dramatic impact on incentive strength and the relationship between pay and performance.

To see how competitive position targets can undermine the relationship between cumulative pay and cumulative performance, let's look at the example provided by John Akers, one of Tom Watson Jr.'s successors as the CEO of IBM. Akers served as CEO from 1986 until 1992, when he was forced out and replaced by Lou Gerstner.

3. Graef S. Crystal, "Common Mistakes in Current Practice," in *Executive Compensation: A Strategic Guide for the 1990s,* Harvard Business School Press, 1985.

4. *The New York Times*, November 30, 1996.

In 1986, the IBM board gave Akers an at-the-money option on 19,000 shares exercisable at $145. In the years that followed, as the stock price declined, they gave him larger and larger option share grants to offset the decline in the stock price and maintain the value of his annual compensation package at a competitive level. In 1990, the board awarded him options on 96,000 shares exercisable at $97. And by the end of 1992, the board had put him in a position where he would have realized a gain of $17.6 million just for getting the stock price back to $145. Contrast this with the reward Akers would have received if the stock had stayed at $145 for six years and he had continued each year to receive his initial pay package, 19,000 options exercisable at $145. In that case, his cumulative reward would have been $0, a number far more consistent with the experience of his shareholders.

The Akers example has been repeated time and time again throughout corporate America because so many companies have embraced competitive pay concepts. Table 1 shows 15 similar examples drawn from S&P's Execucomp database, which since 1992 has been reporting pay data for the top five most highly paid executives of S&P 1500 companies. These 15 CEOs, which are drawn from a list of all CEO five-year tenures with stock price declines of 25% or more, were identified as having the largest potential gains from just getting their stock prices back to their five-year highs.[5] The table shows their "base shares"—that is, their equity grant shares in the year prior to the five-year period—and the additional shares in excess of their base share rate they received over the five years.[6]

Take the case of Scott McNealy, the CEO of Sun Microsystems, whose equity compensation in 2000 (his "base" year) was 250,000 option shares exercisable at $160.00. Over the next five years, instead of receiving 250,000 more options exercisable at $160.00 each year, he received the following: 375,000 options exercisable at $74.32; 875,000 options exercisable at $50.36; 250,000 options exercisable at $14.80; 375,000 options exercisable at $15.40; and 313,000 options exercisable at $15.16. The total number of options granted over the five years was 2,188,000, or 938,000 more than if he had continued to receive his base year rate of 250,000 options per year.

To quantify the dollar value of these additional shares in Table 1, we used the highest stock price achieved over the five-year period. For Sun Microsystems, this was the beginning price of $181.88. At this price, McNealy's gain on five annual option grants of 250,000 shares exercisable at $160.00 would have been $27 million. By comparison, the gain at $181.88 on the five option grants McNealy actually received would have been $317 million, a difference of $290 million. Besides representing an amount equal to ten times the value of his base shares, this potential $290 million gain from poor performance was 235% of his expected total compensation for the five-year period, assuming five years at his base-year compensation rate of $24.7 million.

How did McNealy's potential windfall compare to that of the other 14 CEOs in this group? For the median of the 15 CEOs, the potential gain from poor performance was 147% of expected total compensation for the five-year period, assuming five years at the base-year compensation rate.

What evidence do we have that these 15 cases are representative of U.S. companies? All the CEOs listed in Table 1 had tenures of at least six years, starting from 1992 (the first year in S&P's Execucomp database) or later, and their companies all experienced stock price declines of at least 25% from the base-year ending stock prices. When we look at all CEOs with a base year followed by a five-year tenure in which the stock declined 25% or more (and limit the sample to CEOs who were paid at least 80% of market total compensation in the base year), we get a total sample of 2,735 cases. More than a third (34%) of this group had potential gains from poor performance that were as large—when expressed as a percentage of expected five-year total compensation—as that of the median CEO in Table 1.

For some of the CEOs listed in the table, such as John Chambers of Cisco, there were industry factors that played a much larger role in the stock price decline than they did for Akers at IBM. While nine of the 15 companies in Table 1 underperformed their industry—including Sun Microsystems, and by some 85%—Cisco under John Chambers outperformed its industry by 12% over the five-year period. When the decline in the stock price is attributable to industry factors, there is a compelling case to increase grant shares and reduce the exercise price since the executive was not responsible for the stock price decline. But the same logic also ought to apply to the upside. CEOs aren't responsible for industry price increases and shouldn't be rewarded for them. The additional option shares awarded Chambers were not set up in such a way as to filter out the beneficial effects of industry factors on the value of his options. And since positive industry performance had no effect on either the exercise price or the number of shares vesting, his options effectively rewarded him for those company stock price increases that were attributable to industry factors as generously as for the price increases that could be credited to superior management.

At the end of this article, we will show how grant shares and vesting can be adjusted for industry performance so that executives are not penalized for poor industry performance or rewarded for good industry performance.

5. Though we do exclude cases with very large performance share grants where we can't be sure that the shares would vest at the five-year high.

6. The table doesn't show the reductions in option exercise price, but it does show the lowest stock price in the five year period, which gives a sense of the potential reduction in option exercise price.

Table 1 **CEOs with Large Potential Wealth Gains from Poor Performance**

			Base Shares (000s)				Shares Over Base in Next 5 Years								
Company	CEO	Base Year	Restricted Stock	Perfor-mance Shares	Stock Options	Base Year Total Compensation Percent Of Market	Restricted Stock	Performance Shares	Stock Options	Base Year Ending Stock Price	Lowest Price in Next 5 Years	Highest Price in Next 5 Years	Value of Shares Over Base At Highest Price ($000)	5th Year Ending Price	Value of Shares Over Base At Ending Price ($000)
CISCO SYSTEMS INC	Chambers	2000	0	0	4,000	836%	0	0	-2,500	65.44	8.12	65.44	491,141	19.15	23,020
SUN MICROSYSTEMS INC	McNealy	2000	0	0	250	227%	0	0	938	181.88	9.36	181.88	290,013	14.92	30
UNITEDHEALTH GROUP INC	McGuire	1996	0	0	2,000	134%	0	3,800	19,320	5.63	3.70	17.69	274,666	17.69	274,666
CAPITAL ONE FINANCIAL CORP	Fairbank	2005	0	0	573	168%	137	184	921	86.40	7.80	86.40	186,480	42.56	40,583
CALPINE CORP	Cartwright	2000	0	0	93	128%	397	0	3,849	45.06	0.15	45.06	175,291	0.21	83
AT&T INC	Whitacre, Jr.	1999	0	87	413	142%	295	1,221	5,523	48.75	18.85	48.75	169,718	25.77	41,099
SPRINT NEXTEL CORP	Esrey	1993	0	0	170	121%	61	0	6,727	17.38	12.94	42.06	130,336	42.06	130,336
PENNEY (J C) CO	Ullman, III	2006	0	50	188	146%	302	590	299	81.24	13.71	81.24	105,122	41.55	47,540
BRISTOL-MYERS SQUIBB CO	Dolan	2001	23	17	447	94%	285	425	317	51.00	19.49	51.00	91,375	26.32	22,661
DISNEY (WALT) CO	Iger	2007	0	249	378	147%	-1	-164	3,647	34.39	15.14	52.28	75,450	52.28	75,450
AMERICAN EXPRESS CO	Chenault, J.D.	2006	0	156	425	120%	0	-50	3,859	60.67	9.71	60.67	74,949	47.17	40,342
CARDINAL HEALTH INC	Walter	2001	0	0	272	92%	212	0	2,019	69.00	36.08	70.05	71,774	64.33	60,026
COMPUTER SCIENCES CORP	Honeycutt	1999	0	0	286	191%	186	0	981	79.13	24.30	79.13	70,563	45.85	31,108
GEORGIA-PACIFIC CORP	Correll	1999	0	25	155	96%	0	554	1,188	50.75	9.81	50.75	69,263	37.48	46,146
CIGNA CORP	Hanway	2001	0	0	420	145%	423	0	1,100	30.88	11.38	43.86	69,025	43.86	69,025

A Simulation That Shows the Distorting Effects of Competitive Pay Concepts

The examples shown in Table 1 do not give us a reliable picture of how large or widespread are these unintended windfalls from competitive pay practices. To get a more representative view, we can use simulation techniques based on making a few simplifying assumptions about how equity markets perform and how most companies recalibrate their equity and option grants each year.

Using a Monte Carlo process, we projected 1,000 different five-year future performance stock-price scenarios for a single "typical" company and then simulated stock and option grants to the company's top managers after assuming that the company provides market pay every year regardless of past performance.[7] We began by setting the company's initial stock price at $50, and its competitive pay package at $4 million. Then for each year in each scenario, we calculated a competitive stock grant by dividing the market compensation of $4 million by the stock price at the beginning of the year. So in year 1, for example, all scenarios were assumed to have stock grants of 80,000 shares ($4 million divided by $50 per share). In year 2, the number of shares starts to diverge.

What kind of insights does this process give us? In the bottom (that is, worst-performing) 10% of the scenarios, the stock price drops from $50 to under $31, which means that the number of stock grant shares must increase from 80,000 to almost 130,000 to provide $4 million of compensation. By contrast, for the best-performing 10% of scenarios, in which the year 2 stock price exceeds $86, the number of stock grant shares needed to provide the $4 million of compensation falls from 80,000 to below 47,000.

These two examples illustrate the "performance penalty" inherent in a competitive position target: poor performance is rewarded with an increase in shares, while superior performance is penalized by a reduction in shares. What's more, the passage of time, instead of dampening these effects, tends to enlarge them. At the end of five years, 10% of the scenarios have resulted in grants of more than 750,000 shares and 25% have granted more than 540,000. On the low end, 10% of the scenarios—and most of the cumulative best performers—have granted less than 246,000 shares and 25% have granted less than 306,000.

7. The simulation assumes that shareholder wealth is lognormally distributed with randomly generated annual returns, stock volatility is 0.4 (the median stock volatility of S&P 1500 companies), the annual expected return is 10.0% and the stock pays no dividends.

Table 2 **Four Scenarios from the Monte Carlo Simulation**[8]

	Scenario 150		Scenario 123		Scenario 175		Scenario 386	
	10th Percentile Shares		25th Percentile Shares		75th Percentile Shares		90th Percentile Shares	
Year	Beginning Stock Price	Stock Grant Shares	Beginning Stock Price	Stock Grant Shares	Beginning Stock Price	Stock Grant Shares	Beginning Stock Price	Stock Grant Shares
1	50.00	80.0	50.00	80.0	50.00	80.0	50.00	80.0
2	61.51	65.0	36.56	109.4	41.46	96.5	36.50	109.6
3	85.35	46.9	82.11	48.7	33.84	118.2	32.21	124.2
4	152.06	26.3	88.83	45.0	29.99	133.4	16.68	239.8
5	148.97	26.9	167.11	23.9	35.45	112.8	19.82	201.8
6	104.60		250.74		31.25		38.24	
Total		245.1		307.1		540.9		755.4

To give the reader a sense of the kind of stock price performance associated with this large variation in the number of granted shares, Table 2 shows the price and stock grant history for four individual scenarios—one each at the 10th, 25th, 75th, and 90th percentiles of *shares granted*. A quick glance at this table shows the clear association between higher stock price and lower numbers of shares granted, but also the weaker relationship between ending stock price and cumulative shares granted.

To evaluate the impact of these differences in share grants on pay for performance, we calculated the value of each scenario's grants at a series of future prices—we can call them 1Q Year 6 prices. Figure 1 shows the result of this exercise in the form of five "cumulative pay curves"—one for each of the four scenarios in Table 2 and one for a fixed share grant.

The clear message from the cumulative pay curves shown in the figure is that prior performance dramatically changes the reward for cumulative performance. One way to see this effect is to trace the dashed horizontal line in Figure 1, which shows the stock price performance for each of the five scenarios that is needed to provide cumulative pay of $20 million dollars. For the scenario with 90th percentile share grants, a stock price of $26.48 is high enough to provide $20 million in cumulative pay; but for the scenario with 10th percentile shares, a stock price of $81.60 is needed to provide the same $20 million in cumulative pay. This means that the range in stock price performance for the same level of cumulative pay is three times (and would be even greater if we went to the top and bottom 1%).

Figure 1 also allows us to see how competitive pay concepts weaken the link between cumulative pay and performance by showing the range of pay for achieving the same shareholder wealth. By drawing a vertical line where cumulative shareholder wealth reaches $80, we can see that the 10th percentile of share grants provides less than $20 million in cumulative pay for achieving shareholder wealth of $80, while the 90th percentile share scenario provides more than $60 million in cumulative pay for achieving the same shareholder wealth, a difference of more than three times! Since all of our scenarios have 100% of pay in equity, and hence 100% of pay at risk, this analysis shows that percentage of pay at risk is a poor proxy for incentive strength.

If we do a similar analysis using stock option grants, we get even more extreme results (which are summarized in Figure 2). For this analysis, we make the simplifying assumptions that the expected value of an at-the-money option is one-third of the stock price—which makes the number of option grant shares three times the number of stock shares—and that cumulative pay from the option grants is equal to the in-the-money amounts.

The dashed line in Figure 2 shows that the level of shareholder wealth required to provide $20 million in cumulative pay varies from a low of $33 for the 90th percentile share scenario to a high of $97 for the 10th percentile scenario, a difference of almost three times. And if we compare the difference in cumulative pay for achieving shareholder wealth of $80, cumulative pay ranges from a low of $11 million for the 10th percentile share scenario to a high of $121 million for the 90th percentile scenario, a difference of 11 times![9]

Competitive Pay Policies Also Make Pay Leverage Haphazard and Unpredictable

Up to this point, we have shown that a competitive pay policy undermines the relationship between cumulative pay and cumulative performance. A second major problem with competitive pay policies is their effect on pay leverage. As we defined it earlier, pay leverage is the percentage change in pay that is associated with each 1% change in corporate performance.

8. The four scenarios shown in this table are four individual scenarios out of 1,000. Other scenarios have similar share totals with somewhat different price paths. For example, not all scenarios with 10th percentile shares have prices declines in the last two years.

9. What's more, our regression analysis shows that for stock prices up to $100, stock price only explains 44% of the variation in option value.

Figure 1

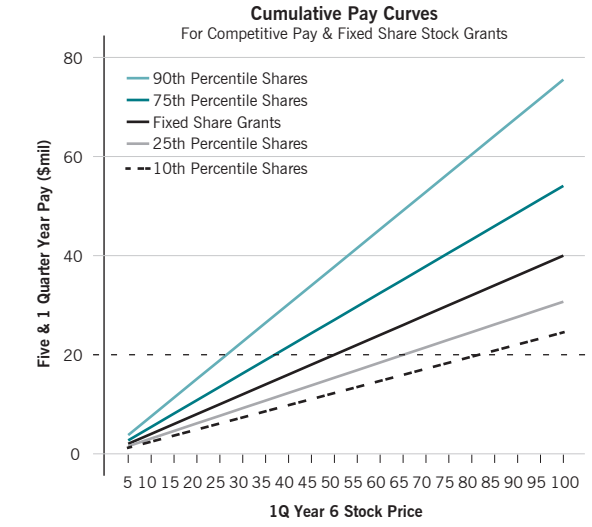


Figure 2

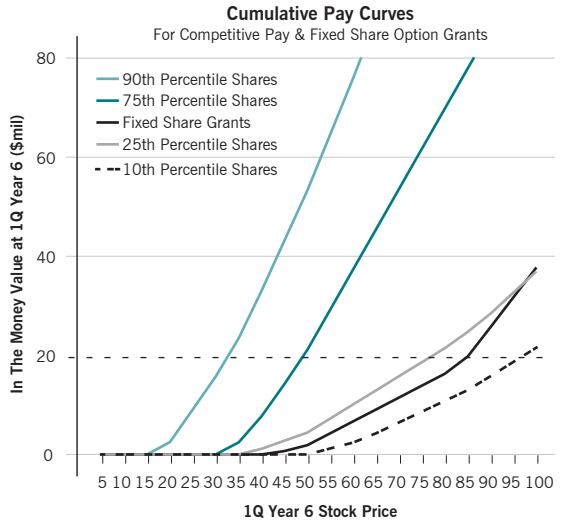


Figure 3

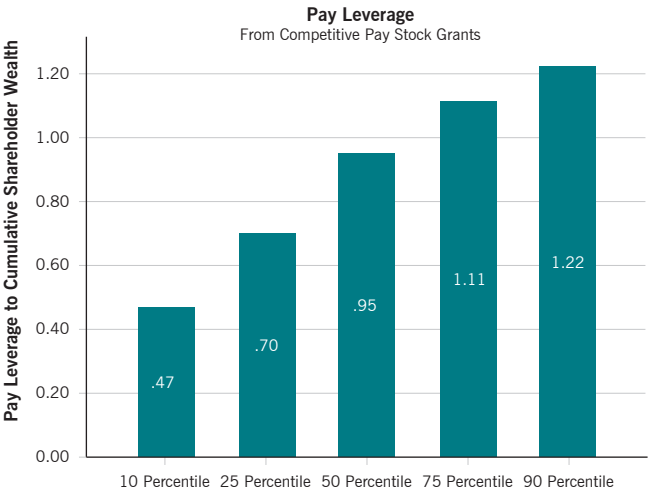
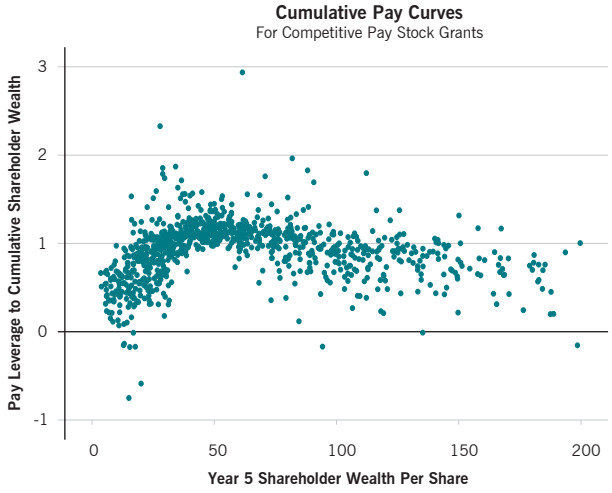


Figure 4



For each of the 1,000 scenarios we ran earlier, we then calculated pay leverage using cumulative pay and cumulative performance (measured in terms of shareholder wealth) at the end of each year.[10] As shown in Figure 3, the pay leverage of stock grants varies widely, ranging from 0.47 at the 10th percentile to 1.22 at the 90th percentile.

Thus one clear effect of competitive stock grants is to make pay leverage highly uneven and, for corporate boards and investors, largely unpredictable. As mentioned earlier, competitive pay policies create a systematic "performance penalty" in the sense that poor performance is rewarded by an increase in grant shares, while superior performance is penalized by a reduction in grant shares. Although such a performance penalty suggests that the main effect of competitive pay policies is to reduce pay leverage for progressively higher levels of performance, our simulation analysis shows

10. More technically, pay leverage was calculated as the slope of the regression trend line that relates the natural log of relative cumulative pay to the natural log of relative shareholder wealth, and hence, tells us the percent change in relative pay associated with a 1% increase in relative shareholder wealth. Relative cumulative pay is cumulative pay divided by cumulative market pay. Relative shareholder wealth is actual shareholder wealth divided by shareholder wealth assuming the average industry return. For more discussion of pay leverage calculations, see the Dow Chemical case below and O'Byrne's two articles, "Assessing Pay for Performance," Conference Board Director Notes, vol 23. no. 19 (October 2011) and "Achieving Pay for Performance," Conference Board Director Notes, vol. 24, no. 24 (December 2012).

Figure 5

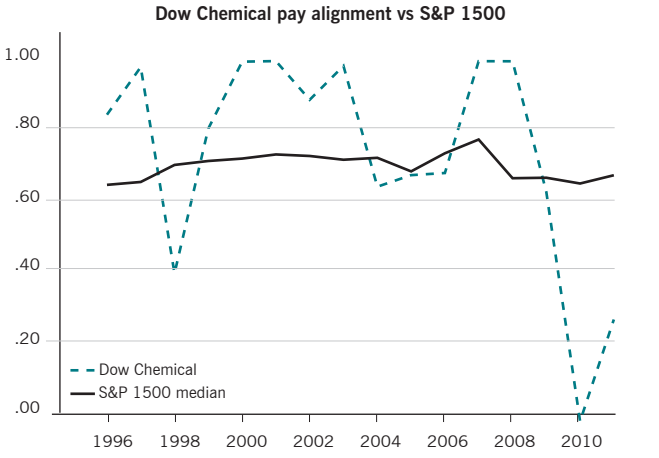
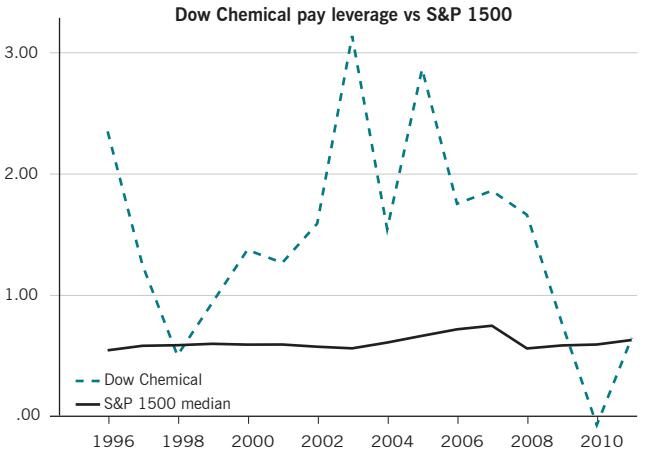


Figure 6



that the actual effect is more complicated, and in some ways more counterproductive.

As can be seen in Figure 4, pay leverage declines as shareholder wealth increases above its initial value of $50. But also clear from the figure is the enormous variation in pay leverage at *all* levels of shareholder wealth—and the suggestion that both exceptionally bad and good performance tend to reduce pay leverage. This means that it is virtually impossible for directors adopting competitive pay policies to have any sense of what future pay leverage will be—which in turn means they can have very little confidence they are achieving the basic objective of providing a strong incentive to increase shareholder value.

The Case of Dow Chemical

Although Monte Carlo simulations can help directors and investors understand the general implications of competitive pay policies, they don't provide a measure that directors can use to evaluate the incentive strength of their companies' executive pay plans. Using the case of Dow Chemical, we now show how directors and investors can use historical pay data to measure incentive strength.

We will start with a couple of basic concepts and a high-level overview of Dow's long-run pay for performance, and then drill down to get a close look at the company's pay program during one fairly recent—and, as it turns out, highly unusual—five-year period. But before we get started, we need to review two important concepts: (1) pay alignment and (2) pay leverage. Both measures are calculated from five years of data for pay and performance, with both pay and performance measured on a cumulative basis from the start of the five-year period. Pay alignment is the *correlation* of pay and performance for the five-year period; as such, it is a measure of the extent to which pay and performance move in the same direction. Pay leverage is a measure of incentive strength. As defined earlier, it is the percentage change in pay that is associated with a 1% change in performance. Our pay for performance measures come from a "line of best fit" regression in which the slope of the line represents pay leverage and the associated correlation represents alignment. To make the trendline more accurate, we calculate it using measures of *relative* pay and *relative* performance. Relative pay is actual pay divided by market pay, and relative performance is actual shareholder wealth divided by shareholder wealth assuming peer group average performance.[11]

In Figures 5 and 6, we show the pay alignment and pay leverage for Dow Chemical's top five executives during the 16-year period 1996-2011 and compare them to the median alignment and leverage of S&P 1500 companies over the same period.

And let's start with the data for U.S. companies generally. During the entire 16-year period, as can be seen in Figure 5, the median pay alignment of the S&P 1500 ranged from a low of 0.63 in 1996 to a high of 0.76 in 2007. And since the value for each individual year represents the alignment for the entire preceding five-year period, the alignment of 0.66 reported for the year 2011 implies that, for the median S&P 1500 company during the period 2007-2011, relative performance "explains" 44% (or .66 x .66) of the variation in relative pay. While 44% is not insignificant, we will show later that a simple pay plan with annual grants of performance shares could increase it to 100%.

11. The regression trendline relates the natural log of relative pay to the natural log of relative shareholder wealth. Both relative pay and relative shareholder wealth are measured on a cumulative basis from the start of year 1.

Figure 7

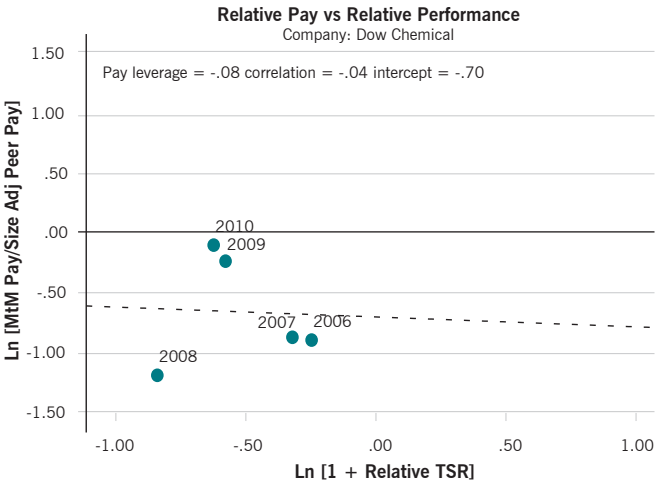
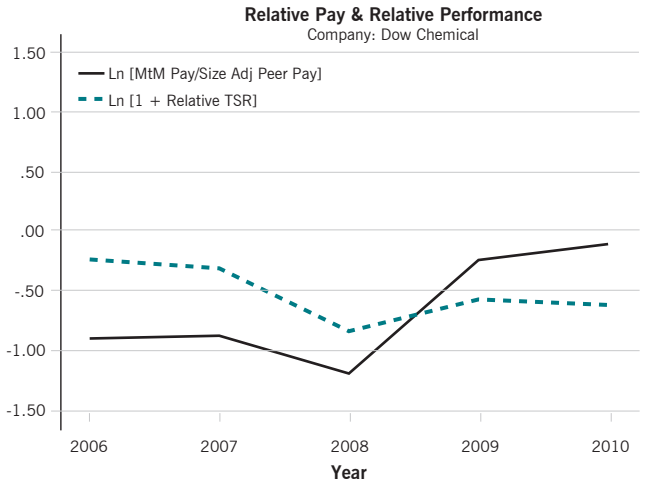


Figure 8



What about the pay leverage of U.S. companies? As can be seen in Figure 6, the median pay leverage of S&P 1500 companies ranged from a low of 0.54 in 1996 to a high of 0.74 in 2007. And the pay leverage of 0.62 reported for the year 2011 can be interpreted as saying that, for the median S&P 1500 company during the years 2007-2011, each 1% increase (or decrease) in relative shareholder wealth was associated with an increase (or drop) of 0.62% in relative pay.

As these numbers suggest—and as Steve Kaplan argues in the article immediately preceding—there is plenty of evidence that pay shows some sensitivity to performance in corporate America. And, as can also be seen in the two figures, both Dow Chemical's pay alignment and pay leverage were in fact well above average during most of this 16-year cycle. During the 14 five-year periods prior to 2010, Dow's pay alignment fell below 0.5 only once and exceeded 0.8 eight times, while leverage never fell below 0.49 and exceeded 1.00 eleven times. Nevertheless, there are many U.S. companies with weak pay for performance, including Dow Chemical in 2006-2010.

Dow Chemical Pay in 2006-2010: An Aberration

To understand what went wrong at Dow Chemical during this period, we need to take a closer look at the pay leverage analysis. In Figure 7, we show the pay leverage regression for the company's top five executives for the five-year period starting in 2006 and running through the end of 2010. Figure 7 shows cumulative pay and cumulative performance for each of the five years; in other words, the 2006 data point is pay and performance for just the one year 2006; the 2007 data point reflects the pay and performance for the two years 2006-2007…and the 2010 data point is pay and performance for the five years 2006-2010.

The slope of the pay leverage regression trendline is -0.08, which means that a 1% increase in the wealth of Dow's shareholders (relative to the wealth of the shareholders of its competitors) was actually associated with a *decrease* in the (relative) pay of Dow's top executives of 0.08%.[12] To put this another way—and as can be seen more clearly in Figure 8—even as Dow continued to underperform its competitors through most of this five-year period, by 2010 the total pay of its top executives, approached the pay of its competitors' top managers.

The pay leverage regression in Figure 7 also shows two additional dimensions of pay for performance: alignment, or correlation, which we discussed above; and performance-adjusted cost. For Dow, pay alignment, like pay leverage, is negative, which means that relative pay goes up when relative performance goes down. The intercept represents performance-adjusted cost, or the pay premium at peer group average performance. In the case of Dow, the intercept of -.70 can be interpreted as saying that the company's top five pay would be 50% below market[13] at peer group average performance. But since Dow's pay leverage is negative, this calculated pay "premium" is not very meaningful because it assumes that the company would further reduce pay as its performance improved to match that of its peer group. For a typical company, where

12. More precisely, the pay and performance measures shown in Figures 7 and 8 are measures of *relative* pay and *relative* performance. Relative pay is actual pay, measured on a mark to market basis at the end of the single or multi-year period, divided by cumulative market pay for the same period. Relative performance is actual shareholder wealth divided by shareholder wealth assuming the median peer group return over the single or multi-year period. Moreover, both axes in the figures are natural log scales, so the slope of the regression trendline, which is the dashed line on the graph, is the percentage change in relative pay resulting from a 1% increase in relative performance. The equation of the regression trendline is ln(relative pay) = -.70 - .08 x ln(1 + relative TSR). The calculation of mark to market pay is explained in detail in O'Byrne's articles, "Assessing Pay for Performance," *Conference Board Director Notes*, vol 3, no 19 (October 2011) and "Achieving Pay for Performance," *Conference Board Director Notes*, vol 4, no 24 (December 2012).

13. The regression intercept gives the log pay premium at peer group average performance. To convert the log pay premium to a percentage pay premium, we need to take the anti-log and subtract 1. The percentage pay premium for Dow is Exp(-.70)-1 = -50%. This low pay premium assumes that pay would continue to decline as Dow's relative return approached 0.

Table 3 **Grant Date Pay and the Calculation of Mark to Market Pay**

Company	Year	Top 5 Cumulative Mark to Market Pay	SEC Total Compensation	SVA Grant Date Total Compensation	SVA Grant Date Total Compensation: Non-Performance Pay	Annual Cash Bonus	Multi-year Performance Cash Target	Stock Compensation Expected Value	Option Compensation Expected Value	Expected Accretion In Pension Value
Dow Chemical	2006	21,774	43,542	31,562	6,265	533	4,375	9,243	8,433	2,713
	2007	44,583	37,108	35,503	4,774	979	4,458	12,188	10,335	2,769
	2008	48,651	38,630	36,971	5,314	533	5,395	13,511	9,583	2,634
	2009	168,496	43,298	37,419	5,255	9,959	0	15,197	3,401	3,607
	2010	240,956	51,081	44,876	5,420	11,130	0	12,921	11,532	3,874
	Totals		213,659	186,331						

	Year	Non-Performance Pay	Annual Cash Bonus	Estimated Year 5 Vesting Multiple	Estimated Performance Cash Earned	Restricted Shares	Performance Shares	Estimated Performance Shares Earned	Option Shares	Option Exercise Price	Year 5 Option Value	5 Year Change In Pension Value
	2006	6,265	533	0.00	0	106.810	106.810	0.000	867.660	43.680	8,493	
	2007	4,774	979	0.78	3,482	139.800	139.800	109.200	1,087.000	43.590	11,370	
	2008	5,314	533	0.88	4,742	179.664	170.340	149.734	1,481.080	38.620	16,760	
	2009	5,255	9,959	1.27	0	319.660	664.660	845.696	2,093.330	9.530	42,796	
	2010	5,420	11,130	0.88	0	193.900	207.100	182.689	1,174.000	27.790	16,049	
Share totals						939.834		1,287.319				
Stock price						34.14		34.14				
Contribution to MtM Pay		27,028	23,135		8,225	32,086		43,949			95,469	11,066
Cumulative MtM Pay		27,028	50,162		58,387	90,473		134,422			229,890	240,956

Notes: Our pay for performance analysis is based on "mark to market" pay for five cumulative pay periods starting from the same base year, 1 year pay, 2 year cumulative pay, …, 5 year cumulative pay. Mark to market pay values equity compensation based on the stock price at the end of each cumulative pay period and estimates the vesting multiples for performance share and performance cash plans. Estimated vesting multiples are calculated from relative TSR versus the GICS industry group, assuming a common vesting schedule, i.e., threshold vesting of 50% at 25th percentile performance, target vesting of 100% at 50th percentile performance and maximum vesting of 200% at 75th percentile performance. Maximum vesting is less than 200% if the company reports a lower maximum award.

pay leverage is positive, the pay premium at peer group average performance provides a useful measure of retention risk, with larger premiums indicating lower retention risk.

If we look more closely at Figure 7, we can that see the line-of-best-fit for the years 2006-2008 would be upward sloping, but far below the level of pay found in 2009 and 2010. This suggests that there was a dramatic increase in pay in 2009 that undermined Dow's longstanding commitment to positive pay leverage and alignment. How and why did this happen?

A Closer Look at Dow Chemical Top 5 Pay in 2006-2010

To answer this question, we need to look at the information provided in Table 3, which summarizes the main components of Dow's executive pay packages.

The place to start is with "grant date pay"—that is, annual total compensation with equity compensation valued at the date of grant—which is reported in the third and fourth columns of data in the upper panel of the table. The third column shows the total compensation reported in the proxy. The fourth column shows our own calculation of total compensation, which corrects a number of important shortcomings of the calculation that is required by the SEC.[14]

As reported in the lower panel of Table 3, which shows the components of cumulative mark-to-market (or "realizable") pay for the full five-year period, the number of restricted shares, the number of performance shares, and the number of option grant shares all increased sharply in 2009—and the option exercise price fell sharply. The 2009 option grant—on 2,093,330 shares exercisable at $9.53—would provide a gain of $61 million at the stock price, $38.62, where the prior year's grant just comes into the money.

Why did this happen? Why did an underperforming company with a demonstrated historic commitment to pay for performance suddenly decide to substantially increase the grant shares for its top executives?

Dow's stock price dropped from almost $44 at the end of 2005 to just over $15 at the end of 2008, a 60% decline in

14. First, we value options using a common set of assumptions that are applied to all companies, including an expected option term of six years and the historical volatility for the 60 months ending at the prior fiscal year end. For Dow, we get significantly lower option values than the company reports. Second, we include only the options granted in the year, while the SEC in 2006-2009 required the grant date value of the options vesting in the year. Third, we include the target value of long-term performance cash awards granted in the year, while the SEC includes the value of the awards earned in the year even if they were granted in a prior year. Fourth, we include the expected accretion of the executive's beginning-of-year pension value, while SEC requires the change in the pension value during the year. Our calculation provides a better measure of the expected value of the compensation awarded during the year. The SEC compensation in Table 3 is from S&P's Execucomp database. When a revised pay figure is reported in a subsequent proxy, Execucomp uses the revised figure.

Table 4

Calculation of Target Compensation and Stock Grant Shares

Year	Top 5 Market Compensation ($000)	Stock Price with Dividends	Company Cumulative Wealth Ratio	Peer Group Cumulative Wealth Ratio	Company Relative Wealth Ratio	Premium For Loss Of Expected Industry Return	Target Compensation ($000)	Stock Grant Shares
2005		43.82	1.00	1.00				
2006	48,383	41.43	0.95	1.19	0.80	10%	42,350	1,022.146
2007	48,383	42.52	0.97	1.31	0.74	10%	39,285	924.033
2008	48,383	17.35	0.40	0.91	0.43	10%	23,144	1,334.098
2009	48,383	33.00	0.75	1.33	0.57	10%	30,234	916.286
2010	48,383	41.64	0.95	1.75	0.54	10%	28,866	693.147

Market compensation is based on peer group data adjusted for size differences.
Target comp = market comp x company relative wealth ratio ^ target leverage x (1 + premium for loss of expected industry return).
Stock grant shares = target compensation divided by ending stock price.
10% = Premium for the loss of the future industry return on equity compensation.
Pay premium is needed to provide competitive compensation in present value terms since the perfect P4P plan does not reward management for stock price increases due to industry factors

shareholder wealth after taking account of dividends. Over the same period, since shareholder wealth at the median peer company declined by less than 10%, even the *relative* wealth of Dow shareholders was down by over 50%. Moreover, by February 11, 2009, when the directors were making year-end pay decisions, the stock had fallen further to $9.53, down 75% from the stock price at the time of the prior year's pay decisions, $38.62.

The Compensation Committee's first reaction was to reduce pay: "The Committee made LTI grants significantly lower in market values to the NEOs (named executive officers) for 2009, averaging 59% lower than 2008 grants." But despite these reductions in grant value, the new option grant promised the top five executives a $61 million gain just for getting the stock price back to the 2008 option exercise price. Moreover, the Committee made two other decisions that raised pay. First, in February 2009, the Committee "exercised discretion, as stated in the Executive Summary as part of our compensation philosophy, and changed the 2009 Performance Award program to a discretionary program without financial targets." As can be seen in Table 3, this raised the discretionary cash bonus from $533,000 in 2008 to $9.96 million in 2009. Second, in October 2009, "the Committee approved a special Performance Share grant for Messrs. Liveris, Weideman, Kalil, Haller, and Banholzer, as well as for other select executives that will play a key role in accelerating the Company's transformation over the next two years and are critical to retain." The Committee's rationale for the special grant was that it brought the total LTI value for the year to the market median: "There were no material differences between the market LTI values and the 2009 total LTI award values for any of the NEOs and they represent market median of the Survey Group for comparable positions."

In making these decisions, the Dow directors clearly believed that any increase in equity grant shares or any reduction in option exercise price was justifiable as long as it did not raise grant date pay above the market median. They felt no obligation to explain why shareholders would be better off giving the top five executives a $61 million gain for getting the stock price back to the prior year option exercise price, perhaps because they regarded the negative incentive consequences of competitive pay as completely unavoidable.

To us this thinking is clear evidence that directors, both then and now, do not have the tools to develop an alternative to competitive pay policy and to achieve higher levels of pay for performance. We now show how the directors of Dow Chemical could design a performance share plan that provides "perfect" pay for performance

A Stock Compensation Plan that Provides Perfect Pay for Performance

The Perfect Performance Share Plan, or PPSP, has just one element of compensation, an annual grant of performance shares that is made at the end of each year. We will illustrate the PPSP for Dow Chemical over the five year period 2006-2010 and make the assumption that all shares granted vest at the end of 2010. This does not preclude the payment of cash compensation; it just means that any cash compensation is considered a draw against the amount of compensation ultimately due. We will also illustrate the PPSP with a target pay leverage of 1.0 (though with slightly more complicated calculations, the PPSP could be modified to provide perfect pay for performance at any target leverage).

The objective of the PPSP, as already noted, is to provide perfect pay for performance. At the risk of getting a bit technical, perfection here means that the regression of (the log of) relative pay on (the log of) relative performance, using cumulative measures of relative pay and relative performance from the start of the plan (the beginning of 2006, in our example), must have a correlation of 1.0 with a slope of 1.0

Table 5

Calculation of Vesting Multiples						
Year	Stock Grant Shares (000s)	Projected Vesting Multiple 2006	Projected Vesting Multiple 2007	Projected Vesting Multiple 2008	Projected Vesting Multiple 2009	Projected Vesting Multiple 2010
2005						
2006	1,022.146	1.00	0.90	1.31	0.90	0.68
2007	924.033		1.00	1.44	0.99	0.75
2008	1,334.098			1.00	0.69	0.52
2009	916.286				1.00	0.76
2010	693.147					1.00
Stock Price		41.43	42.52	17.35	33.00	41.64
Stock Value		42,350	78,571	69,433	120,937	144,328
Cumulative Adj Mkt Comp		53,222	106,443	159,665	212,887	266,109
Company Relative Wealth Ratio		0.796	0.738	0.435	0.568	0.542

Projected vesting multiple = (1 + TSR) ^ (tgt leverage - 1) x [1 / (1 + peer group return) ^ tgt leverage]
Stock value = shares x price x vesting multiple
Since 1 + relative TSR = (1 + TSR) / (1 + peer group return), the vesting stock value is equal initial stock value x (1 + relative TSR) ^ tgt leverage; this means that the vesting stock value will perfectly track relative TSR from the date of grant forward

and an intercept of zero. To achieve this result, two conditions must be satisfied: (1) the number of shares granted is based on market compensation adjusted for relative performance from the start of the five-year period up to the date of grant; and (2) the vesting multiple is equal to 1/(1 + the median peer group return from the date of grant). For the calculation of target compensation and grant shares for each year, see Table 4.

We estimated the expected aggregate market compensation for the Dow top five executives to be $48.3 million by using a 14-company peer group that includes Du Pont, PPG Industries, Monsanto, Praxair, Air Products & Chemicals, Ashland, Sherwin-Williams, Ecolab, Eastman Chemical, Lubrizol, Airgas, RPM International, Valspar, and Scotts Miracle-Gro.[15]

At the end of 2006, Dow's relative shareholder wealth ratio was 0.80, a ratio that reflects Dow shareholders's loss of 5% in a year in which median peer group shareholders gained 19%.[16] This makes target compensation $38.7 million ($48.3 million x 0.8), a number that we then increased by 10% (to $42.35 million) to adjust for the expected industry return.[17]

To calculate the number of PPSP grant shares, we next divided the target compensation of $42.35 million by the year-end stock price (adjusted for dividends since the end of 2005) of $41.43. For 2006, this gives a top five grant of 1,022,146 shares. We repeat this analysis to calculate grant shares at the end of each of the next four years. In 2008, target compensation drops all the way down to $23.1 million since Dow's relative shareholder wealth ratio has declined to 0.43. But even so, 2008 provides the largest share grant because the stock price (again adjusted for dividends) falls to $17.35.

The second key element of the PPSP is the stock vesting ratio—that is, the percentage of shares in the original grant that are eventually "earned" by the executives based on the post-grant performance of the company. Vesting is determined by the industry return from the date of grant until the end of year five, or 2010. We calculate expected vesting at the end of each year based on the industry return from the date of grant to the end of the measurement year.

At the end of 2010, the lowest vesting ratio, 0.52, was for the grant at the end of 2008. Over the life of this grant, the median peer group cumulative wealth ratio increased from 0.91 to 1.75**.** This means that the peer group return for the period was 92.3% ((1.75/0.91)-1). This in turn makes the vesting multiple 0.52 (1/(1 + 92.3%), which means that 48% of the shares originally granted are forfeited at the end of 2010.

A closer look at the 2008 grant shows why this seemingly large forfeiture makes sense. Target compensation for 2008 was $23.1 million. When the stock (adjusted for dividends) increased from $17.35 at the end of 2008 to $41.64 at the end of 2010, the value of the 2008 grant shares increased to $55.55 million. But a good part of this increase was due to the performance of the industry, not superior management

15. A regression was used to adjust for size differences and to calculate market pay at Dow's 2006 revenue of $49 billion. The regression shows that a doubling of company revenue size would increase the expected total pay of Dow's top 5 by 46%. In our pay leverage regressions (such as the ones used in Figure 7) we don't adjust market pay for subsequent increases in revenue size to make sure that we don't understate leverage by obscuring value leverage that is correlated with revenue growth. We follow the same practice in illustrating the PPSP.

16. The result of .80 comes from dividing 0.95 by 1.19.

17. The stock component of market compensation is expected to increase over time because stock has a positive expected return. But the value of the PPSP grant, as we will see below, increases only if the excess return is positive; and to make the grant's value competitive with the future value of market compensation, we increase it by 10%. This adjustment is based on management pay data for 19,000 five-year periods ending in 1996-2011 that shows that the median difference between cumulative mark-to- market ("realizable ") pay and cumulative grant date pay was 10%.

Table 6

Leverage and Alignment of Perfect P4P Mark to Mkt Pay

Year	Expected Cumulative Market Compensation ($000)	Top 5 Cumulative Stock Value ($000)	Company Relative Wealth Ratio	Ln Relative Mark to Market Pay	Ln Relative Performance
2006	53,222	42,350	0.80	-0.229	-0.229
2007	106,443	78,571	0.74	-0.304	-0.304
2008	159,665	69,433	0.43	-0.833	-0.833
2009	212,887	120,937	0.57	-0.565	-0.565
2010	266,109	144,328	0.54	-0.612	-0.612
Mark to Market Pay Leverage				1.000	
Mark to Market Pay Alignment				1.000	
MtM Pay Premium (ln) at Avg Perf				0.000	
MtM Pay Premium (%) at Avg Perf				0%	

Leverage and Alignment of Actual Mark to Mkt Pay

Year	Expected Cumulative Market Compensation ($000)	Cumulative MtM Compensation ($000)	Company Relative Wealth Ratio	Ln Relative Mark to Market Pay	Ln Relative Performance
2006	53,222	21,774	0.80	-0.894	-0.229
2007	106,443	44,583	0.74	-0.870	-0.304
2008	159,665	48,651	0.43	-1.188	-0.833
2009	212,887	168,496	0.57	-0.234	-0.565
2010	266,109	240,956	0.54	-0.099	-0.612
Mark to Market Pay Leverage				-0.081	
Mark to Mark Pay Alignment				-0.042	
MtM Pay Premium (ln) at Peer Avg Perf				-0.698	
MtM Pay Date Premium (%) at Peer Avg Perf				-50%	

240,956	Cumulative MtM Pay
144,328	Perfect P4P MtM Pay

Relative mark to market pay is calculated from expected, not actual, peer group mark to market pay.
Expected cumulative mark to market pay is cumulative grant date pay adjusted for the average difference (+10%) between cumulative mark to market pay and cumulative grant date pay.

performance at Dow. Dow's relative shareholder wealth ratio went from 0.43 at the end of 2008 to 0.54 at the end of 2010, an increase of only 24.7%. Adjusted for vesting, the value of the 2008 grant shares was only $28.9 million (0.52 x $55.55 million), which is just 24.7% more than the grant value of $23.1 million. This means that the value of the grant would have increased by only the amount of Dow's excess return, which is exactly the result the PPSP is trying to achieve.

Table 6 shows that PPSP does, in fact, provide perfect pay for performance. As reported in the table, pay leverage is 1.00, pay alignment is 1.00, and the pay premium for peer average performance is 0%. The table also shows that the PPSP would have provided cumulative pay of $144.3 million to the Dow top five executives, or just 60% of the $241.0 million they actually received. As this last comparison is meant to show, getting pay for performance wrong can be pretty expensive for shareholders.

Conclusion

The transition from sharing formulas to competitive pay as the guiding concept in executive pay was largely complete years ago, but few directors (or investors) seem to appreciate its significance or the challenges it poses. The demise of sharing formulas leaves directors with no meaningful signal of incentive strength. Percentage of pay at risk has long been a widely accepted proxy for incentive strength, but our examples of weak incentives with 100% of pay at risk make clear that it's not a very meaningful proxy. Moreover, the widely accepted proxy for retention risk—percentage below market (with no consideration of performance)—does not lead to sensible human resource strategy. It does the shareholders no good to pay a premium to retain poor performers, while underpaying superior performers.

Directors need meaningful measures of incentive strength and retention risk. We have shown how directors can use historical pay data to compute pay leverage, which provides a meaningful measure of incentive strength, and the pay premium at peer group average performance, which provides a meaningful measure of retention risk. We also present a simple pay plan with annual grants of performance shares that provides perfect pay for performance. This plan provides a benchmark to guide the evaluation and redesign of current pay programs.

To be fair to corporate boards, there is a meaningful level of pay for performance at many U.S. companies today. The median S&P 1500 company has pay leverage of 0.6, which means that a 1% increase in relative shareholder wealth increases relative pay by 0.6%. The median S&P 1500 company also has pay alignment of 0.66, so relative performance explains 44% of the variation in relative pay. But there is a lot of room for improvement. Few investors would be happy if their hedge fund or mutual fund adhered to its fee arrangement only 44% of the time.

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