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What Investors Need to Know about Executive Pay

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Abstract.

Public company disclosures give analysts a comprehensive measure of top management's total compensation, but do not provide a comprehensive measure of management's incentive to increase shareholder value. We present comprehensive measures of management's value and growth incentives. Our incentive measures ("value wealth leverage" and "revenue wealth leverage") show the sensitivity of management wealth to changes in shareholder wealth and changes in revenue. We show how investors can use these measures to determine whether top management has a strong value creation incentive, a strong incentive to pursue value-destroying growth, or neither. We also present findings from our study of S&P 1500 companies, including an analysis of the impact of value wealth leverage on subsequent shareholder returns. Our results show that companies with high value wealth leverage tend to outperform other firms, in terms of excess returns, but the effects are concentrated among value (as opposed to growth) firms.

Disclosure requirements recently imposed by the Securities and Exchange Commission (SEC) give investors a comprehensive measure of top management's total compensation, but do not provide a comprehensive measure of management's incentive to increase shareholder value. In this article, we present two comprehensive incentive measures: the sensitivity of management wealth to changes in shareholder wealth ("value wealth leverage") and the sensitivity of management wealth to changes in revenue ("revenue wealth leverage"). We show how investors can use these measures to answer four important questions:

1. How strong is management's incentive to create shareholder value?
2. How strong is management's incentive to grow revenues?
3. Does management have an incentive to pursue value-destroying revenue growth?
4. Is higher value wealth leverage (i.e., strong wealth creation incentives) associated with significant excess returns?

Percent of pay at risk: the conventional way to think about incentives

Exhibit 1 shows the 2006 total compensation of ExxonMobil CEO Rex Tillerson reported under the new SEC disclosure rules. The total compensation disclosure makes it fairly easy to calculate the conventional measure of incentive strength, the percent of pay that is "at risk." The only complication for Tillerson is the need to split the change in pension value into two components because the pension is based on salary and bonus.

Exhibit 1: 2006 Total Compensation for ExxonMobil CEO Rex Tillerson

	Salary	Bonus	Stock Awards	Change In Pension Value	Other	Total
2006 compensation ($000)	1,500	2,800	4,160	4,068	482	13,009
Percent of total:						
Performance based		22%	32%	20%		74%
Non-performance based	12%			11%	4%	26%

The conventional approach to executive pay is based on three premises. The first is that the percent of pay at risk is a good proxy for incentive strength and hence, an executive who has a high percent of pay tied to market and operating measures of shareholder value, like Tillerson, has a strong incentive to create shareholder value. The second premise is that re-calibrating total compensation each year to achieve a competitive position target, e.g., 50th percentile pay among an executive's peer group, will ensure that pay is sufficient to attract and retain key talent. The third premise is that setting the competitive position target at or close to median pay levels will ensure that the shareholder cost of management compensation is reasonable. In the conventional view, a high percent of pay at risk and a 50th percentile competitive position target achieves all three of these basic objectives.

In this article, we argue that there are serious flaws in the conventional approach. First, percent of pay at risk is not a good measure of incentive strength, as we demonstrate below. Second, a fixed competitive position target is not a sensible retention objective. It is not needed to retain poor performers, and is likely insufficient to retain superior performers. It also creates a strong incentive for value-destroying growth that threatens to neutralize the incentive provided by management's stock and option holdings. Fourth, a competitive position target is not a complete measure of shareholder cost. The goal of incentive plans should be to improve performance. The conventional approach measures the cost, but not the benefit, of incentive compensation.

Wealth leverage: a better way to think about incentives

A better analysis of executive pay starts with the premise that executives, like investors, are motivated by expected changes in wealth, not by changes in annual pay. Our definition of executive wealth is:

- the current value of company stock and stock options, plus
- the present value of expected future compensation, which includes salary, bonuses, stock and option grants, and pensions.

We express the return on this wealth as follows:

$$\text{Executive Wealth Return} = \frac{\Delta\text{Executive Wealth} + \text{Cash Received}}{\text{Beginning Wealth}}$$

where ΔExecutive Wealth is the increase or decrease in executive wealth for the year and Cash Received is cash compensation and stock sale proceeds. Value wealth leverage is the ratio of executive wealth return to shareholder return:

$$\text{Value Wealth Leverage} = \frac{\text{Executive Wealth Return}}{\text{Shareholder Wealth Return}}$$

where Shareholder Wealth Return = $\frac{\Delta\text{Price} + \text{Dividends}}{\text{Beginning Price}}$.

Value wealth leverage measures the sensitivity of changes in executive wealth to changes in shareholder wealth. The value wealth leverage of a "pure" entrepreneur, with 100% of wealth in company stock, is 1.0 because any percentage change in shareholder wealth results in an equal percentage

change in the entrepreneur's wealth. A value wealth leverage of 0 indicates no relationship between executive and shareholder wealth.

Revenue wealth leverage is the ratio of the executive wealth return to the percentage change in sales.

Estimating wealth leverage for public companies

The conventional approach to pay – annual re-calibration to a target competitive position - makes future compensation independent of current value performance. Market pay estimates developed by companies and compensation consultants are highly sensitive to company revenue size, but rarely show any sensitivity to company performance. Revenue size accounts for a large percentage of the variation in executive pay (48% for the median industry group in 2006), while shareholder return explains such a small portion of pay variation (5% for the median industry group in 2006) that few companies bother to make any adjustment for the difference between their own performance and the average performance of their peer group.

Since market pay estimates are largely unaffected by company performance, annual re-calibration to competitive pay levels creates systematic "performance penalties". If the company has done well, equity grant shares are reduced to offset the increase in the stock price. If the company has done poorly, equity grant shares are increased to offset the decline in the stock price. With annual re-calibration to competitive pay levels, current shareholder value performance will have little effect on future incentive compensation even though it may have a big effect on current year incentive compensation. To capture this important difference, we estimate wealth leverage using a weighted-average of leverage estimates for five wealth components—stock holdings, option holdings, current incentive compensation, the present value of expected future incentive compensation (excluding current-year incentive compensation) and the present value of expected future non-performance pay.

Exhibit 2 below shows our estimates of value and revenue wealth leverage for Rex Tillerson as of the end of 2006. The current and future pay values in this table are based on a normalized total compensation, equal to current base salary, multiplied by (1 + a three-year average of each pay component as a percent of salary), projected to age 65 (ten years for Tillerson in 2006).

Exhibit 2: 2006 Wealth Leverages for ExxonMobil CEO Rex Tillerson

		Percent Of Total Wealth	Compo-nent Value WL	Contri-bution to Value WL	Compo-nent Revenue WL	Contri-bution to Revenue WL
Stock holdings ($000)	$26,951	13%	1.00	0.13	0.00	0.00
Option holdings	14,711	7%	1.91	0.13	0.00	0.00
Current year incentive comp (IC)	15,747	8%	0.62	0.05	0.38	0.03
PV of IC beyond the current year	132,723	64%	0.06	0.04	0.38	0.24
PV of non-performance pay	18,065	9%	0.00	0.00	0.38	0.03
Total wealth ($000)	$208,196	100%		0.35		0.30

How we estimate component leverage

The value wealth leverage of stock holdings is 1.0, because any percentage change in shareholder wealth causes an equal percentage change in the value of the executive's stock. We use the Black-Scholes model to calculate the value wealth leverage of stock options. The wealth leverage of a typical ten-year executive option is about 1.6 when the option is at the money, but higher when the option is out of the money and lower when the option is in the money.

We use regressions of relative pay on relative performance to estimate the value leverage of current and future pay. Our relative pay measure is total compensation (actual, not normalized), divided by market total compensation. Our estimate of market total compensation is based on a multivariate regression that takes account of position/pay rank, industry and company revenue size. Relative performance is the ratio of actual shareholder wealth to expected shareholder wealth based on the average industry return for the year. We use the sensitivity of current year pay to

year[-n] performance to estimate the sensitivity of year[+n] pay to current year performance. We use regressions of relative pay on relative revenue size to estimate the revenue leverage of current and future pay. The present value of expected future pay assumes employment to age 65, pay inflation equal to the average historical pay inflation of executives in S&P's Execucomp database and a discount rate equal to the 20-year government bond rate plus 3%. The appendix explains our methodology in more detail.

While we use a large number of regressions to estimate the leverage of expected future pay, the regressions show two simple results that are entirely consistent with the conventional approach to pay: value leverage is close zero, while revenue leverage is substantial and persistent. We believe that our assumptions about job tenure, pay inflation and the discount rate for expected future compensation are quite reasonable. Even substantial changes in these assumptions would not change our key findings that future pay has little sensitivity to shareholder value, but substantial sensitivity to revenue and that stock and option holdings account provide almost all of top management's shareholder value incentive. Tillerson's future incentive pay leverages (value leverage of 0.06 and revenue leverage of 0.38) are typical. For the median S&P 1500 top 5 executive, future incentive pay has value leverage of 0.01 and revenue leverage of 0.41.

There is no inherent reason that future pay provides a weak value incentive and a strong revenue incentive. It would not do so if companies used fixed share grant guidelines for equity compensation, But there is little evidence of fixed share grant guidelines. Using 1992-2007 option grant data for executives reported in Standard & Poor's Execucomp database, we can find 54,451 cases of three consecutive stock option grants. Only 5% of these cases have the same number of option shares for all three years. This is further evidence of the strength of the conventional approach to pay.

Tillerson has low value wealth leverage despite a high percent of pay at risk

Compared to other CEOs in the S&P 1500, Tillerson's value wealth leverage is near the 25th percentile and his revenue wealth leverage is near the 75th percentile. His value wealth leverage is well below the median (0.35 vs. 0.66) among energy industry CEOs and his revenue wealth leverage is well above it (0.30 vs. 0.20). The average value wealth leverage of Tillerson's current and future compensation is only 0.11 even though cash and stock incentive pay account for almost 90% of his annual compensation. If pay at risk were analogous to equity, the value wealth leverage of Tillerson's current and future compensation would be 0.9 and his total value wealth leverage would be above 1.0 because of his stock option holdings. This example shows why percent of pay at risk is a poor proxy for management's incentive to create shareholder value.

Tillerson's stock and option holdings account for 20% of his total wealth, but almost 75% of his value wealth leverage. For the average S&P 1500 executive, stock and option holdings make an even bigger contribution to value wealth leverage. For the average S&P 1500 top 5 executive, total wealth is approximately 16% in stock, 15% in options, 5% in current year incentive compensation, 42% in the present value of expected future incentive compensation and 22% in the present value of expected future non-performance pay (including the current year non-performance pay). Because option leverage averages 1.6, stock and option holdings contribute 0.40 (= 16% x 1.0 + 15% x 1.6) to the mean executive's overall value leverage of 0.44, or greater than 90%. For the median top 5 executive, stock and option holdings account for 88% of total value leverage. This means that pay policies that affect holdings such as vesting, the percent of bonus paid in stock, retention requirements and stock ownership guidelines will often have a much bigger impact than current year pay on the strength of top management incentives. Unfortunately, in our view, compensation committees tend to

spend much less time on these policies than they do on the determination of current year pay.

Measuring management's incentive for value-destroying growth

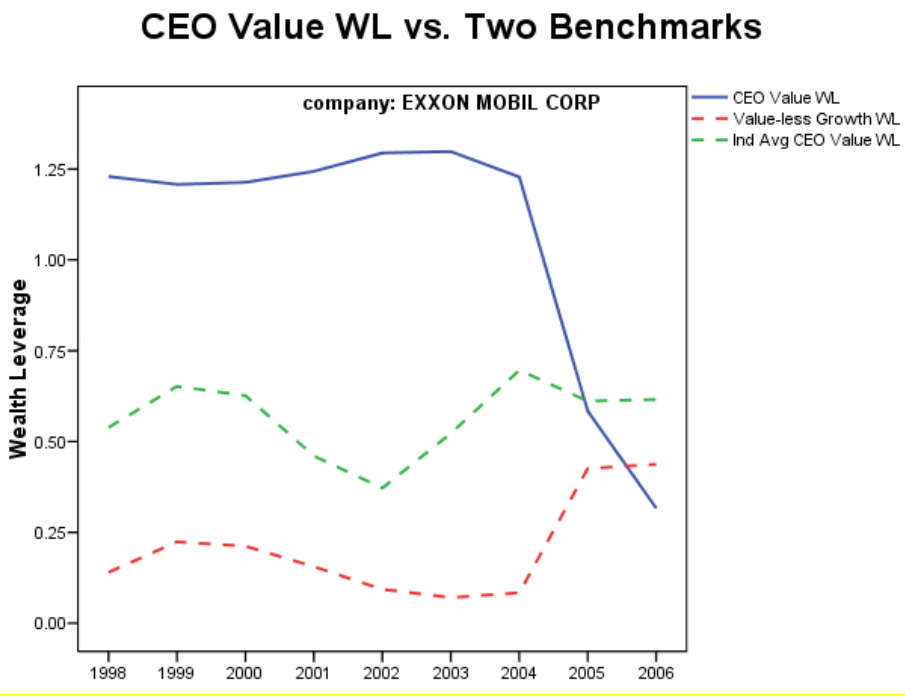
We've shown how an analyst can answer the first two of the four questions posed at the beginning of this article: how strong is management's incentive to create shareholder value, and what is management's incentive to grow revenue? We will now address the third question: Does management have an incentive to pursue value-destroying revenue growth? Our analysis above shows that Tillerson's value wealth leverage is 0.35 and his revenue wealth leverage is 0.30. This means that a 10% decline in shareholder wealth reduces his wealth by 3.5% while a 10% increase in sales increases his wealth by 3.0%. He therefore has a slight incentive to reject an acquisition that increases revenue by 10%, but reduces shareholder wealth by 10%.

A realistic analysis of value-destroying growth incentives should start with an estimate of feasible revenue growth (organically or through acquisition) and then ask if management has an incentive to pursue this growth even when it causes a material decline in shareholder wealth. Our test of whether or not there is an incentive to pursue value-destroying growth is whether management has an incentive to make an acquisition that increases revenue by 25% but reduces shareholder wealth by 15%.

With this test, Tillerson does have an incentive to pursue value-destroying growth. The 25% revenue gain increases his wealth by 0.30 x 25% = 7.5%, while the 15% decline in shareholder wealth reduces his wealth by only 0.35 x 15% = 5.3%. To make this acquisition unattractive, Tillerson needs wealth leverage of at least 0.50. At this level of wealth leverage, the gain in wealth from the revenue gain will be exactly offset by the loss in wealth from the decline in shareholder wealth. As value wealth leverage increases even further, the incentive to reject a value destroying investment also increases.

Exhibit 3 shows the value wealth leverage of ExxonMobil's CEO for the years 1998 to 2006 against two benchmarks: industry average CEO value wealth leverage and the wealth leverage needed to neutralize the incentive for value-less growth ("Value-less Growth WL"). The graph shows clearly that the transition from Lee Raymond to Rex Tillerson greatly reduced CEO value wealth leverage, dropping it below the industry average and even below value-less growth wealth leverage.

Exhibit 3



One easy way to increase Tillerson's wealth leverage from 0.35 to 0.50 would be to use fixed share grants for 25% of his incentive compensation. The value leverage of his current year incentive compensation would increase from 0.62 to 0.72 and the value leverage of his future incentive compensation from 0.06 to 0.29, raising total value wealth leverage to 0.51.

Based on our +25%/-15% test, incentives for value-destroying growth are widespread. Over the period 1998 to 2007 for S&P 1500 companies, 37% of CEOs and 70% of other top five executives have incentives for such growth.

Value wealth leverage and company performance

Our analysis of the impact of value wealth leverage on company performance starts with wealth leverage estimates for all companies in the S&P 1500 over the period 1998 to 2006. We then limit the sample to company years with sufficient data to calculate wealth leverage for the CEO and at least one other top 5 executive. Our estimate of company value wealth leverage is (20% x CEO wealth leverage) + (80% x the average wealth leverage of the other top 5 executives). These estimates give us two explanatory variables: the level of value wealth leverage for each year from 1998 to 2006, and the change in value wealth leverage for the years 1999 to 2006. We relate these variables and a measure of compensation cost (i.e., percent from market total compensation) to company performance measured by excess return (i.e., return net of the average return for the company's GICS industry group) for the subsequent 1- and 3-year periods ending in 2007 or earlier.

A change in value wealth leverage has a positive effect on both one- and three-year excess returns. A value wealth leverage increase of 0.1 increases the subsequent one-year return by 0.9% and the subsequent three-year return by 2.2%. High compensation cost has a negative effect on both one- and three-year excess returns. A 10% premium over market compensation reduces the subsequent one-year return by -0.5% and the subsequent three year return by -1.4%. The samples for these regressions are 8,990 cases for one-year returns and 6,568 cases for three-year returns. Each case is a one- or three-year return for one company. To limit the impact of extreme cases, all variables are truncated at the 1st and 99th percentiles.

Analysis of value wealth leverage level presents a more nuanced picture. The level by itself does not have a statistically significant impact on either one- or three-year excess returns, but if we distinguish between value and growth companies, level has a highly significant effect. Our measure of value vs. growth is "percent current value," where current value is the

greater of book equity or 10x earnings, and percent current value is current value as a percent of market equity value. High percent current value companies are companies where book value or current earnings account for a large percentage of market value.

Our explanatory variables for one- and three-year excess returns are value wealth leverage × percent current value, percent from market total compensation and percent current value. All three of these variables are statistically significant in the one-year model, but percent current value is not significant in the three-year model. The coefficients of wealth leverage and percent from market are 0.170 × percent current value and -0.045 in the one-year model and 0.502 × percent current value and -0.118 in the three-year model. The samples for these regressions are 10,359 cases for one-year returns and 7,962 cases for three-year returns. As before, all variables are truncated at the 1st and 99th percentiles.

Percent current value was 0.22 for Google, 0.70 for Exxon and 0.99 for Morgan Stanley at the end of 2006, and hence, the coefficient of wealth leverage in the three year model was 0.110 for Google, 0.351 for Exxon and 0.497 for Morgan Stanley. This means that the difference between Tillerson's and Raymond's value wealth leverage, -0.9, is associated, on average, with a three-year excess return of -9.9% for companies like Google, -31.6% for companies like Exxon and -44.7% for companies like Morgan Stanley.

We have two theories as to why wealth leverage has a bigger impact on value companies than on growth companies. First, distribution vs. re-investment is a close call for value companies and, hence, financial incentives can have a big impact in tilting the balance to shareholder value. Conversely, high growth companies have made a strategic decision to maximize investment for growth and, hence, financial incentives may have little impact on the level of investment. Our second theory is that growth companies use equity compensation at least partly for financing, not incentive, reasons. In

such cases, high wealth leverage may have little or no impact on company performance.

A note on the incentive problems behind the financial crisis

In measuring value wealth leverage, we assume that the shareholder wealth change involves no change in stock volatility. This means that a decline in the stock price always reduces the value of an executive's stock options. It is possible, however, that managers with stock options will choose strategies that increase volatility (and option value) even at the cost of a decline in shareholder value. This could be a danger in financial institutions especially because it is relatively easy for a financial institution to increase earnings volatility by acquiring assets with higher current yields but also higher probabilities of future default. For a company designing its management incentives, it is therefore vital to measure wealth leverage across a wide range of scenarios to ensure that wealth leverage does not go negative when volatility is increasing and shareholder wealth is decreasing.

Interestingly, we find little evidence that *top* management incentives to take excessive risk, i.e., to increase volatility at the expense of shareholder value, were a contributing factor to the financial crisis. Even if we assume a huge increase in volatility (0.15 to 0.70) and a modest stock price decline (-25%), the CEOs of Bear Stearns and Lehman Brothers had no incentive to increase volatility at the expense of shareholder value because the gain on their options was more than offset by the loss on their stock holdings.

But business unit incentives to take excessive risk may have contributed to the collapse. If business unit managers are given a fixed percentage of business unit profit, but do not share in losses, they will have an incentive to acquire higher yielding assets with higher default probabilities even when the expected value of the assets to the shareholders is negative. The problem is particularly acute when managers are building up a new business because there are few current period default losses on older assets

to offset the benefit of the high yields on newer assets. In these situations, the managers have *negative* wealth leverage because their wealth increases when shareholder wealth declines.

There are two basic solutions to this problem. One is to create an incentive structure, such as a bonus bank, that forces business unit managers to participate in the default losses at the same rate they participate in the high yield earnings. A second is better profit accounting with more accurate loan loss reserves and a risk-adjusted charge for equity capital. The common practice of paying part of the bonus in corporate stock forces business unit managers to share in 100% of the default loss but does not eliminate the negative wealth leverage because their stock holding percentage is far lower than their share of business unit profit.

Conclusions

This article provides several key tools and insights for investors who seek to understand the impact of top management incentives on management decision making and company performance: Value wealth leverage provides a comprehensive measure of top management's incentive to increase shareholder wealth, capturing the combined incentive effects of current year pay, changes in expected future pay, and stock and option holdings. Revenue wealth leverage provides a comprehensive measure of top management's incentive to pursue value-destroying revenue growth. About 40% of CEOs in the S&P 1500 and nearly 75% of other top five executives have incentives to pursue value-destroying growth because value wealth leverage is not high enough to offset the incentives provided by revenue wealth leverage.

Finally, analysts can identify compensation related investment opportunities by (1) seeking out companies that are strengthening value wealth leverage, (2) looking for the adoption (or abandonment) of pay policies that tie future compensation opportunity to current performance

(such as fixed share equity compensation) and (3) testing the strength of management's incentive for profitless growth.

Appendix

The leverage of stock and option holdings

The value wealth leverage of Tillerson's option holdings is 1.91. This means that a 10% change in ExxonMobil stock price causes a 19.1% change in the value of Tillerson's options. We've calculated the value wealth leverage of his option holdings using the Black-Scholes model. We first calculate the Black-Scholes value of his options at the end of 2006 ($14.7 million). We then assume a 25% stock price increase over the next year and calculate the percentage change in the Black-Scholes value of his options over the year. The value wealth leverage of the options is the percentage change in the Black-Scholes value divided by the 25% change in the stock price. Tillerson's option leverage is higher than the median option leverage for all S&P 1500 executives (1.6) because ExxonMobil has low stock volatility and a high dividend yield. Since a number of option features (low stock volatility, high dividend yield, a low ratio of market price to exercise price and a short option term) can produce very high leverages that are unlikely to have a proportional effect on managerial motivation, we truncate option leverage at 2.0 in our estimates of public company wealth leverage.

The leverage of current year incentive compensation

Current year incentive compensation includes annual bonus, new stock and option grants, new awards under multi-year cash incentive plans (what we call "performance cash" plans), new awards under multi-year performance stock plans and the change in the value of outstanding performance cash and performance stock plans. We use regressions on historical pay and performance to estimate the leverage of the annual bonus and new long-term incentive awards (i.e., restricted stock grants, stock option grants,

performance stock grants and performance cash awards). Since our regressions use logarithms, we use total compensation including non-performance pay as our dependent variable to eliminate zero pay values. Once we estimate the leverage of total compensation, we divide by [1 – percent of pay at risk] to calculate incentive compensation leverage.

We use five years of historical data to estimate current year total compensation value leverage. For each year and for each executive in the top five, we calculate relative pay and relative performance. Relative pay is the executive's total compensation for the year divided by our estimate of market total compensation for the executive. Our estimate of market total compensation is based on a revenue trend line for the company's industry group and the executive's position (CEO) or pay rank (2-5). Relative performance is ending shareholder wealth for the company divided by ending shareholder wealth assuming the industry average return. Our initial estimate of current year pay leverage is the slope of the regression trendline relating the natural log of relative pay to the natural log of relative performance. Our final estimate combines this estimate with industry average pay leverage, as we explain below.

We use a similar approach to estimate current year total compensation revenue leverage. For each year and for each executive in the top five, we calculate relative pay and relative size. Relative pay, for the revenue leverage regressions, is the executive's total compensation for the year divided by the industry geometric mean total compensation for the executive's position or pay rank. Relative size is the company's revenue for the year divided by the industry geometric mean revenue for the executive's position or pay rank. Our estimate of revenue leverage is the slope of the regression trendline relating the natural log of relative pay to the natural log of relative size.

The leverage of future incentive compensation

The future compensation leverage is more difficult to estimate than current compensation leverage because future compensation has sub-components that go out to retirement and beyond: year [+1] pay, year [+2] pay, …, pension, and we need to estimate the sensitivity of each element to current performance. It might seem impossible to estimate pay leverage for year [+1] pay because that pay is unknown at the time we are estimating the executive's wealth leverage. However, we can reasonably assume that the sensitivity of year [+1] pay to current year performance is the same as the sensitivity of current year pay to year [-1] performance, that the sensitivity of year [+2] pay to current year performance is the same as the sensitivity of current year pay to year [-2] performance, etc. Similarly, we can reasonably assume that the sensitivity of year [+1] pay to current year revenue is the same as the sensitivity of current year pay to year [-1] revenue, that the sensitivity of year [+2] pay to current year revenue is the same as the sensitivity of current year pay to year [-2] revenue, etc.

We make three adjustments to the total compensation figures reported in the proxy and use industry regression data to get more reliable estimates of individual company value and revenue leverage. We include the full value of the equity grants made during the year rather than the Financial Accounting Standard 123R expense allocation that is reported in the Summary Compensation Table because the former measure reflects the compensation decisions made during the year. We exclude increases in pension benefits (first reported in 2006) in order to have a consistent total compensation measure for all history years. We test, for each company in each five year history period, whether equity compensation is more closely related to current or prior year performance. When equity compensation is more closely related to prior year performance, we estimate pay leverage using a total compensation measure that includes the equity compensation grants made in the following fiscal year. We use the slope and standard error of an industry regression together with the slope and standard error of the

individual company regression to get more reliable estimates of individual company value and revenue leverage. These last two adjustments are explained in more detail below.

Determining the performance year for equity compensation

Our initial calculation (the "normal calculation") of total compensation for a year is the sum of non-performance pay (i.e., salary and "other" compensation which includes perquisites and non-qualified benefits), the cash bonus earned for the year (which may be paid in the following year), new performance cash awards (i.e., cash bonuses based on multi-year performance) and new equity awards (i.e., restricted stock grants, performance stock grants and stock option grants) valued at the stock or option value at the date of grant.

However, including equity compensation in total compensation based on the date of grant can easily distort pay leverage estimates because the equity compensation may have been granted on the basis of prior year performance. When companies make equity grants early in the year, they typically reflect (to the extent performance has any impact on the equity grant amount) prior year performance. Almost all published pay for performance analyses match current year equity compensation to current year performance without making any effort to determine if grant decisions were guided by current or prior year performance. We address this problem by computing two different measures of total compensation: our normal calculation above which includes the equity grants made in the year and an alternative calculation ("total compensation – next year's equity") that drops out current year equity grants and substitutes in the next year's equity grants. We then test, using five years of historical data for each company, which total compensation measure is more sensitive to performance. For about half of the companies, total compensation is more sensitive to performance when we use next year's equity grants. For ExxonMobil, total compensation – next year's

equity is more sensitive to performance than "normal" total compensation for every five-year period in our database (i.e., for each of the nine five-year periods ending in 1998-2006). This is a very important refinement – it increases current year pay leverage for the median S&P 1500 company in 2006 by a factor of 3X from 0.16 to 0.55.

Using industry data to get better estimates of individual company pay leverage

Our individual company pay leverage regressions have only 25 cases and often the slope of the regression trendline is not statistically significant. For the 2006 value pay leverage regressions, 65% of S&P 1500 companies have current year value leverage that is not statistically significant at a 95% confidence level. But the lack of statistical significance is due more to small samples than poor pay practices. The same regression is statistically significant at a 95% confidence level for every one of the Global Industry Classification Standard industry groups, but the 2006 industry group samples range in size from 259 to 2,488 cases. To get more reliable estimates of individual company pay leverage, we combine the industry and individual company regressions in the following way: We first use the industry regression to set five possible pay leverage values for each year: adjusted industry pay leverage, adjusted industry pay leverage + 1 standard deviation (SD), adjusted industry pay leverage + 2 SD, adjusted industry pay leverage – 1 SD and adjusted industry pay leverage – 2 SD. For the value pay leverage regressions, adjusted industry pay leverage is actual industry pay leverage x [company average percent of pay at risk/industry average percent of pay at risk]; for the revenue pay leverage regressions, adjusted industry pay leverage is actual industry pay leverage. If the 5th percentile confidence level for the individual company regression is above the adjusted industry pay leverage + 2 SD, we assign the company pay leverage of the adjusted industry pay leverage + 2 SD. If the 5th percentile confidence level is below

the adjusted industry pay leverage + 2 SD, but greater than the adjusted industry pay leverage + 1 SD, we assign the company pay leverage of the adjusted industry pay leverage + 1 SD. If the 95th percentile confidence level is below the adjusted industry pay leverage – 2 SD, we assign the company pay leverage of the adjusted industry pay leverage – 2 SD. If the 95th percentile confidence level is above adjusted the industry pay leverage – 2 SD, but below the adjusted industry pay leverage – 1 SD, we assign the company pay leverage of the adjusted industry pay leverage – 1 SD. If none of these conditions hold, we assign the company pay leverage equal to the adjusted industry pay leverage.

Estimating the present value of expected future compensation

Once we get current- and future-year pay leverages for a company, we can calculate a weighted average of these pay leverages to get the wealth leverage of the present value of expected future compensation for each executive. The weight for each year's pay leverage is the percentage of the present value of expected future compensation attributable to that year. Our estimate of the present value of expected future compensation starts with an estimate of normalized total compensation for the current year. That estimate is equal to current base salary times one plus a three year average of each pay component as a percent of base salary. Tillerson's 2006 base salary was $1.5 million and his three year average percentages of salary were 133% for bonus, 65% for long-term incentive cash payouts, 786% for stock grants and 20% for other non-performance pay, a total of 1,004% of salary. With these percentages, his normalized total compensation for 2006 was $16.6 million. To estimate the present value of Tillerson's expected future compensation at the end of 2006, we project his future compensation to retirement at age 65, a total of ten years from his current age of 55, and then discount it to a present value.

Our future compensation projections use normalized total compensation as a base and assume that total compensation grows at 3% above the 20 year U.S. government bond rate. For the years 1993-2005, the median total compensation increase for the executives reported in Execucomp averaged 3.2% more than the 20 year bond rate. At year end 2006, when the 20 year bond rate was 4.9%, our projected total compensation increase was 7.9%. To discount projected future compensation, we use a 3% risk premium over the 20 year bond rate. We believe that a low risk premium is appropriate because there is little performance risk associated with future compensation. Most companies have competitive pay policies that make future compensation opportunity independent of performance, and there is little use of fixed share grant policies that would add equity risk to future compensation opportunity.