How To Determine If An Executive Compensation Is 'Fair'

Law360, New York (March 22, 2013, 12:26 PM ET) -- When is an executive fairly paid? From an economic perspective, it depends on the answers to several questions. For example, what other executives' pay constitutes an appropriate benchmark? Do those benchmark executives perform some different functions or bear some additional risks? Do they manage a larger or smaller, more complex or simpler organization? What is their experience, and how long have they been with their organization? How has the organization performed under their leadership?

Since it would be unusual for a set of executives to work in exactly the same positions with perfectly comparable companies, these and other questions may significantly affect the conclusions regarding whether an executive is fairly compensated relative to peers.

Consider, for example, the CEOs of some of the largest banks in the U.S. It may be tempting to assume that they hold the same job and are directly comparable. However, in answering some of the questions above, we find that there are indeed differences among them.

For example, the difference in assets among the 20 largest companies is substantial, and the number of employees and branches varies widely, indicating that some organizations are not only larger but also potentially more complex. Also, the share of the CEO's compensation that is base pay, cash bonus, deferred or stock-based is markedly different, meaning that some CEOs have less guaranteed compensation (base salary) than others and are therefore likely taking more risk.

The natural question is then: How can we compare the compensation of these individuals when there are all these differences? One answer is to apply econometrics — the application of statistics to economic questions. Specifically, if there are sufficient useful data, it may be possible to use multiple regression analysis to rigorously adjust for differences in the functions and risks associated with the different CEO positions.

To illustrate how multiple regression analysis can be used, I present a simple example describing how one could analyze the compensation of a hypothetical set of bank CEOs.

First, we would collect data on the factors that are likely to affect their compensation, likely including those from the list of questions above. This step is critical because important variables that are missing or poorly measured can adversely affect the reliability and interpretation of the results.

In this case, suppose the relevant variables are: years of experience, tenure at the company, educational attainment, total assets, number of employees, the ratio of base to total compensation and the average of the company's last three years of earnings per share.

Given the appropriate data, multiple regression analysis would allow us to make inferences about the effect each of these factors (or variables) has on compensation, holding the other factors constant. We could use the model to test the hypothesis that the CEO of a given bank is fairly paid, relative to his peers. In this case, suppose the regression equation is appropriately specified as follows:

The influence of each of these variables on compensation is represented by the "coefficients" (the βs) in this equation. Using the specified equation and the data collected, we obtain the following results from our hypothetical regression analysis, with the coefficient estimates replacing the alpha and betas.

These coefficients provide an estimate of the influence of each of the variables on compensation. For example, the coefficient on "experience," holding all other factors constant, indicates that the return to an additional year of experience is 1.69 percent, meaning that more seasoned CEOs tend to earn slightly higher compensation.

Similarly, the coefficient on "employees," with other factors equal, shows that the correlation between CEO pay and the number of employees in the organization is negative, perhaps indicating higher pay for managing a more efficient organization.

Furthermore, we can test whether the effects of those variables are "statistically significant," meaning that there is, for example, a 95-percent chance that those influences are not equal to zero across all CEOs, given that observed correlations are based on only a sample.

In the formula above, the coefficients that are in bold are statistically significant at the 95-percent level of confidence. Thus, although the return to education is positive, it does not have a statistically significant effect on compensation in this case.

Using the model and the actual characteristics of any given CEO, we could then "predict" the value for that CEO's compensation, based on the averages observed across the sample. In addition, because there is bound to be variation in compensation due to random or nonjob-related issues (e.g., differences in corporate governance), we can calculate a "confidence interval" to provide a potentially reasonable upper (and lower) bound on the CEO's compensation.

For example, suppose we wish to test the compensation of a CEO who earned $11.8 million and has the following characteristics: 25 years of experience, 10 years of tenure, an MBA, a bank with $2 billion in assets and 150,000 employees, a base compensation of 12 percent of total compensation and bank average earnings per share of $3.21. In this case, the regression equation predicts that on average, such an executive would receive $9.5 million in compensation, with a 95-percent confidence interval of $6.4 million to $12.6 million.

Although the CEO's actual compensation is above the predicted level, since his compensation still lies within the upper and lower bounds, the regression analysis provides evidence to support the conclusion that the CEO's pay is reasonable compared to his peers.

Since no two positions are exactly comparable, simple head-to-head comparisons may provide misleading results and fail to capture important factors that increase one executive's pay relative to another executive's pay. Multiple regression analysis, however, can be a powerful tool for making inferences about the level of compensation paid to executives.

As discussed in the example above, this econometric tool can be used to provide a rigorous, defensible and objective test of whether the empirical analysis supports or opposes the hypothesis that an executive is fairly paid relative to peers.

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