Equity-Based Executive Compensation

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Equity-based executive compensation has received a lot of attention both in the press and the academic literature. The empirical evidence has questioned the efficacy of such compensation to align top management and shareholder wants. The literature has focused both on agency and behavioral motivation principals. While we briefly discuss behavioral views on equity-based executive compensation schemes, or focus is on the more traditional agency theory view. In this paper we focus on incentive structures and the consequent modes that are most likely to be effective in motivating managers to maximize shareholder wants. We investigate the traditional, relative, and absolute modeling principals for both option and restricted stock grants. Example models are constructed and the strengths and weaknesses of each model are analyzed. Overall we conclude that the absolute model, employing restricted stock as the awarded asset, is most likely to lead to the maximizing outcome for which equity-based executive compensation strategy is intended.

INTRODUCTION

Curious things are happening in the world of executive compensation. Changes in financial statement reporting requirements and scandals; including the backdating of option grants and huge option payouts, have raised eyebrows and have stoked activist shareholder groups and policy-makers into greater vigilance.

It is one of the more interesting conundrums in financial theory to observe the reaction of executive compensation committees to recent events. Most academics believe that option grants create an expense to current shareholders and should be valued as such in financial statements. Still most academics see this as a housekeeping problem since University educated and CFA branded security analysts and portfolio managers are expected to fully account for Executive Stock Option (ESO) grants in their company valuations even if firms do not include them in the body of their financial statements. Alternatively, the professional community seems to feel that going from disclosure in footnotes to incorporating the expense into the financial statements has the potential to create harm to company valuations. Their view is either that issuing executive

stock options, which have value only because executives expect to be able to purchase company stock at a discount in the future, does not create an expense for shareholders or creates such an unclear expense as to not deserve "in-statement" consideration. The academic community, then, expected that the result of reporting option expense would have no impact on firm value, unless, of course, analysts were not very good at their jobs, and apparently many professionals expected a stock value disaster, especially with respect to start-up companies who are particularly keen on executive stock option compensation.

What we have seen is that firms are turning away from ESO use, as professionals had forecast, however, it is not clear if that is because of accounting rule changes or the exposure of questionable practices such as backdating option awards. We have not, however, seen a massive decline in stock valuations.

Equity-based compensation is designed to replace cash wages, be an effective recruiting mechanism, be an effective retention tool, to better align management goals with that of shareholders, or some combination of the four objectives. It is not clear that traditional executive stock option and restricted stock grants have met any of these objectives satisfactorily.

Start-up companies often have cash flow issues that are more difficult than are those of mature companies. As a result executive stock option and restricted stock grants are sometimes viewed as substitutes for taking below market wages. Vanilla or Traditional option and/or restricted stock grants ***may*** be appropriate in such circumstances (i.e. it is arguable). However, it is important to shareholders that compensation leads to results consistent with their wants.

Most of the interest around equity-based compensation has centered on aligning management goals with those of shareholders. The majority of this paper focuses on that issue as well. Still it is important to keep in mind that the other three objectives can be quite important to firms.

We argue here that equity-based compensation awards, at least those dedicated to a purpose beyond wage substitution, need to be strengthened with a Relative, Absolute, or Combination granting methodology.

In what follows we categorize and evaluate Traditional, Relative, and Absolute compensation models with respect to both restricted stock and executive stock options. The favored methodology will depend on the talent being compensated, the general market conditions, and the risk/return preferences of shareholders.

Section I views the current literature on the executive compensation issue. Section II is a brief section defining terms. In section III we discuss the point of equity-based employee compensation. In section IV we analyze restricted stock grants. Section V analyzes executive stock option grants. Section VI summarizes the paper. Throughout the paper we include suggestions for implementing the strategies suggested.

LITERATURE REVIEW

The recent literature pertaining to Equity-Based executive compensation has focused on two issues; what has actually happened to executive compensation and are the equity-based compensation schemes efficient. The data indicates that executive compensation, including equity-based compensation, is not consistent with performance. Bebchuk and Grinstein investigated the growth of pay for the Standard and Poor's 1500 firms during the period running from 1993 to 2003.[2] Their analysis indicated that pay growth could not be explained by changes in firm size (growth), performance, or industry mix. They also found that while equity-based compensation grew substantially, lowering the cash to non-cash compensation ratio, cash

compensation also grew beyond what could be explained by changes in firm size, performance and industry mix. That is, the large increase in equity-based executive compensation did not appear to rely on a substitution of equity-based compensation for cash-based compensation. They did find that while the prevalence of equity-based compensation was much greater in 2003 then in 1993, its role was reduced substantially when the equity market performed poorly in the latter part of their study. Cash compensation did not experience the same fall off. The implication, not surprisingly, is that equity-based compensation is relatively (to cash) less attractive in down markets. Of course, other factors, such as compensation scandals could also be at play. In addition, A.J. Vogl reported on the Glass Lewis pay-for-performance model in which the relationship between performance and compensation appears to be quite poor.[3]

Two other recent papers focus on the appropriate modeling to better align management and shareholder interests. Abrams, Cohen, and Suzman argue, along traditional agency theory lines, that better alignment [between management and shareholder wants] is possible by restructuring awards along Relative or Absolute performance goals rather than through the traditional granting process. They point out that with respect to restricted stock awards; this implies changing the number of shares awarded based on some measure of performance. That in turn allows the firm to choose a relatively flat allocation (meaning that the number of shares increases (and decreases) by small amounts as performance changes), or a steep allocation. A flat allocation creates a "service-friendly" outcome, whereas the steep allocation creates more of an "option" type outcome.[4] Alternatively, Deya-Tortella et. al. employ a behavioral finance approach to analyze the benefit of executive stock options and find it wanting. They argue that due to loss aversion managers tend to become more, not less, conservative when holding executive stock options. They also analyze out-of-the-money executive option grants and index (relative) option grants and conclude that these too have particular problems. Finally, they find that the restricted stock alternative also has a significant ability to lead to conservative management behavior relative to shareholder wants. Unfortunately, they do not provide an alternative scheme.[5]

Overall the literature does provide the insight that traditional executive stock option grants have not been effective in aligning management and shareholder wants or at least have not been as effective as possible. While we will briefly address the behavioral school arguments, our emphasis is based on the agency theoretic model.[6,7]

TERMS

In this paper we will investigate both restricted stock and executive stock options. Both instruments are part of a class of equity-based compensation instruments. Restricted stock is stock that is not readily tradable. Typically, restricted stock cannot be traded for six-months after its issue. Of course, firms can set their own restrictions on management trading of gifted stock that is more restrictive. Once the restriction is lifted, the holder holds the publicly traded stock. There is large disagreement about valuing restricted stock, once vesting has taken place, since the stock can be collared to create a basically risk free return off of the publicly traded price (transactions costs aside). Executive stock options, alternatively, are an option to purchase the stock over a specified time at a specified price (called the exercise or striking price).

Since these are executive compensation awards, there are usually vesting issues at hand. Both assets lend themselves to a variety of configurations. However, these configurations differ by the nature of the asset type. We define three types of configurations: Traditional, Relative, and Absolute.

Traditional grants of restricted stock often appear to be somewhat haphazardly awarded. The general procedure is to have the Board of Directors decide, typically based on the Compensation Committee's recommendation, the quantity of restricted stock that should be granted. These grants are to be used either as a substitute for wages, an incentive to align shareholder and manager wants, as a tool to recruit or retain talent, or some combination of objectives. In the case of executive stock options, the Traditional model also suffers from the quantity issue. In the Traditional model, executive stock options are issued at-the-money. That means that when the options are issued the exercise price is set equal to the current stock price. It is, of course, possible to issue in-the-money or out-of-the-money stock options as well, but that, heretofore, has been atypical. A key point is the difficulty of issuing the ***right*** number of restricted shares or options. The issue is universal and the problem applies to the Relative and Absolute models as well. The theoretically correct number is the number of shares (and no more) that induces the executive to do exactly what the Board wishes them to do with respect to shareholder wants. If the number required exceeds the benefit, then the Board should not offer such compensation.

Relative grants mean that the grants depend on the performance of the firm's managers relative to the performance of some group. This group could be an industry index, or a broader index such as the Standard and Poor's 500. In the case of restricted stock, the number of shares granted would rise from a base amount if the firm outperformed its "relative" group and fall if it underperformed the relative group. In the case of executive stock options, however, one model would allow the exercise price to change with respect to the relative group performance. If the firm outperformed the relative group, executives would receive in-the-money options and if the firm underperformed the group, executives would receive out-of-the-money options. Of course, a similar model to restricted stock could be created. In that case executive stock options would still be issued at-the-money but a greater number of at-the-money options would be issued for relatively good performance and fewer or no at-the-money options would be issued for relatively poorer performance.

In the case of Absolute modeling, the number of restricted stock shares issued would be determined by the firm's performance relative to an absolute measure. For example, if the required rate of return on equity was 12 percent, performance below 12 percent would lead to fewer restricted shares being issued (compared to the Traditional case) and if the performance was above 12 percent would lead to more shares being issued. In the case of options one model would allow the exercise price to follow a known path as the required rate of return would be adjusted for the necessary capital growth. Alternatively, the number of options could increase with strong absolute performance or decrease with poor absolute performance.

WHAT ARE FIRMS TRYING TO ACCOMPLISH?

As noted earlier there are four basic reasons why firms have turned to equity-based compensation. The least controversial reason is to substitute equity-based compensation for wage-based compensation. While many firms might find this tool interesting or even seductive, start-up firms find it particularly appealing, since cash flow issues make it difficult to compete with more mature firms in the cash wage market. Unfortunately, although we are sure there are exceptions to the rule, the empirical data noted earlier does not appear to have found a link between either equity-based compensation and reduced cash-based compensation or between equity-based compensation and performance. Further, substituting equity-based instruments for

cash wages does not necessarily mean that such financing should follow a Traditional based methodology rather than a Relative or Absolute modeling methodology.

The agency theoretic model highlights the problem that is generated by having undiversified wage earners represent the bidding of well-diversified capitalists. Based on standard risk aversion principals, it is clear that undiversified managers have more at risk from poor firm performance than do the firm's well-diversified shareholders. The result that follows, according to traditional theory, is that managers will direct a firm along a less risky path than the path desired by shareholders. Equity-based compensation is a tool to align managers' well-being with that of capitalists. The notion is that by granting an equity stake in the company, managers will realign their views with those of shareholders and create policies more in line with the risk-reward wants of shareholders.

Behavioralists argue that equity-based plans simply do not work to align management and shareholder goals, in part because managers are likely to be loss averse rather than risk averse. Loss aversion means that managers are not reckoning their financial position on expected values alone, but account for their current position as well. For example, imagine that a manager has 10,000 executive stock options and that 5,000 have vested and are in-the-money. According to prospect theory, the manager may be "too" conservative in order to protect the earnings of her or his 5,000 vested options.

Another problem that exists is the relationship of the value of equity-based compensation relative to the value of money wages. For the incentive model to work, several variables are in play. First, the managers need to actually be capable of changing firm value in a significant way. Second, equity-based compensation would need to rival wage-based compensation in order to align the manager's wants with those of shareholders. Third aggregate movements of the market need to be small enough so that they do not swamp management performance (a problem the Relative model attempts to overcome).

Alternatively, little attention has been paid to the ethical make-up and the inherent nature of top managers. Management is hired to maximize shareholder value. The assumption of both agency and prospect theory is that maximizing shareholder value is a distant second goal, from the point of view of managers, compared to maximizing the manager's own financial position. Even if we grant that managers will not ethically do that for which they are being paid, there is the heroic assumption that maximizing shareholder value is contrary to maximizing their own position. For example, success in maximizing shareholder value may well lead to better and better management positions in their own firm or in other firms and consequently lead to greater wealth. Further, top flight managers may well have a tendency to insist on excellence both in themselves and those around them. It may well be that the best managers wish to ***win*** in the shareholder performance game. Of course, in either of these latter two cases, there may be little need to employ equity-based executive compensation to gain maximum shareholder results.

Clearly there is a lot of work still be done on the linkage between management performance and shareholder value. However, we recognize that generally speaking stock prices go up over time and that the Traditional model rewards managers for average or even below average performance. In this work, we continue to labor under the assumption that equity-based compensation can, in fact, lead to better outcomes for shareholders through an incentive structure that aligns manager and shareholder wants. While we accept that managers do not wish to lose the equity-based compensation in hand, we believe that the nature of top managers is to drive for high performance and that the desire to enhance their in-hand equity values and create additional value in upcoming equity-based awards is strong and valuable to passive shareholders.

The use of equity-based compensation to recruit and maintain high quality managers is in some sense seen as a subset of the agency argument. If the lure to move to a company is, in a significant way, their equity-based compensation component, then the only way the manager can gain from that agreement is to make shareholders better off. Similarly, if a quality manager remains with a company in order to gain their equity-based compensation, they again must work to the benefit of shareholders to make that happen. Although the agency theoretic model should work in analyzing the entry/exit issue, the basic argument remains that firms should offer no more than is necessary for recruitment and retention, and should shape their equity-based compensation package to maximize shareholder outcomes.

Finally note that while equity-based compensation packages can become more sophisticated, as we are arguing for here, unless the manager understands what she or he has agreed to, little benefit is likely to be gained. Any plan should be easily assessable by any executive covered by the plan.

In what follows below the focus is on equity-based compensation designed to align shareholder and executive wants.

RESTRICTED STOCK

As noted above, restricted stock is stock that is not readily tradable. The restriction period is typically six months; however, restricted stock awards are likely to have a vesting period underneath the restriction effectively lengthening the time period before the stock can be traded. In the case of equity-based compensation, restricted stock is granted by the Board of Directors to eligible executives based on whatever system the Board chooses. In the Traditional model there is not a specific attachment of award to outcome. This does not mean that the Board does not use performance as a tool to decide how much stock to award, but rather that there is not a formal system for doing so. This might be viewed as a service based system, where the quantity of the award is effectively dictated by job level and/or seniority, but not based on a specific performance system. As noted earlier, the quantity of shares gifted should reflect the benefit shareholders are likely to gain from the award. The Board then should consider:

1.) The extent to which the award replaces cash wages.
2.) The current cash wage level of the awardee.
3.) The extent to which the Board wants to link performance to the award.

An alternative to the Traditional model is to link the award systematically and quite publicly to a performance measure. In the case of Relative awards, the quantity of shares awarded would depend on the relative performance of the firm using a chosen metric, such as return on equity, in comparison to some group of firms. The most obvious choices of comparison are the firms in the same industry classification or firms in general. The thinking is that the awards should be based on comparative performance. It is well known that markets are driven by many factors and general market movements might swamp the specific performance of management. The Relative compensation model considers how the firm did in comparison to some relevant group of other firms. Generally, investors interested in the relative performance of managers are more likely to be interested in comparing management's performance to those of its competitors. The process is to form and ex ante award model in which the allocation of restricted shares is altered by the firm's relative performance. For example, a firm practicing equity-based compensation, employing restricted stock, would construct a base allocation. If the firm underperforms the

average return of the competitor composite, executives would receive fewer than the base number shares. If the firm performed to the competitor average, executives would receive the base allocation, and if they outperformed the competitor average they would receive additional shares.

Several tasks need to be accomplished. These include:

1.) Determining the key metric for the award. (We suggest Return on Market Value Equity or Free Cash Flow to Market Value Equity).
2.) Determining the comparison group. (In this context we suggest the firm's most important competitors or a broad index of firms within the same capitalization level (nano, small, medium, or large)).
3.) Determine the base award level.
4.) Determine the number of steps or deviations from average that will earn different award quantities
5.) Determine the deviation of award size.

Example: The K Financial Consulting Group Compensation Committee recommends to the Board of Directors the following equity based reward systems employing restricted stock. They wish to create a base reward of one million shares to executives predicated on the Group having a return on equity equal to that of a group of 10 competitors. The competitors are chosen based on both industry and capitalization characteristics.

The Compensation Committee presents the following four possible allocation systems to the Board.

1.) IF $ROE_K = ROE_C$ + 6% or more Reward = 1,210,000 shares
IF $ROE_K = ROE_C$ + 2.1to +5.9% Reward = 1,100,000 shares
IF $ROE_K = ROE_C$ -2% to +2% Reward = 1,000,000 shares
IF $ROE_K = ROE_C$ -2.1 to -5.9% Reward = 900,000 shares
IF $ROE_K = ROE_C$ - 6% or less Reward = 800,000 shares

2.) IF $ROE_K = ROE_C$ + 6% or more Reward = 2,250,000 shares
IF $ROE_K = ROE_C$ + 2.1to +5.9% Reward = 1,500,000 shares
IF $ROE_K = ROE_C$ -2% to +2% Reward = 1,000,000 shares
IF $ROE_K = ROE_C$ -2.1 to -5.9% Reward = 500,000 shares
IF $ROE_K = ROE_C$ - 6% or less Reward = 250,000 shares

3.) Reward = (Base Amount)$[1 + (ROE_K - ROE_C)]$
When $[1 + (ROE_K - ROE_C)] > 0$ and 0 otherwise

4.) Reward = (Base Amount)$[1 + 10(ROE_K - ROE_C)]$
When $[1 + 10(ROE_K - ROE_C)] > 0$ and 0 otherwise
Where ROE is expressed as a percentage (e.g. .15)

Where: ROE_K = The return on Equity to the K Financial Consulting Group
ROE_C= The average return on Equity to the competitor group
Base Amount = 1,000,000 shares

Note how the systems differ. Methodologies 1 and 2 have a minimal number of possible outcomes while methodologies 3 and 4 are open ended. That is, there is a potential for any

amount of shares to be awarded if the performance is superior enough. Methodologies 1 and 3 are commonly thought of as relatively service oriented. While the reward for above average performance is smaller compared to Methodologies 2 and 4 the penalty for poorer performance than the competitor group is also smaller. That is the risk of poor performance is lower. Methodologies 2 and 4 are more risky. They yield greater rewards for performance and greater penalties for poor performance. The latter type of reward scheme is often thought of as being similar to the executive stock option model. Note also that, in this example, the formulas employed for Models 1 and 2 result in some positive awarding of shares. Naturally, a model in which no rewards are granted for some level of poor performance can easily be constructed.

For example assume Firm K has a return 3% greater than that of the competitor group. Model 1 yields an allocation of 1,100,000 shares model 2 yields 1,500,000 shares, Model 3 yields 1,030,000 shares and model 4 yields 1,300,000 shares. If Firm K returns 3% less than its competitors then model 1 yields 900,000 shares, model 2 500,000 shares, model 3 970,000 shares and model 4 yields 700,000 shares.

In sum, the relative compensation model assumes that equity-based compensation should reflect comparative performance. It requires, however, a number of complicated decisions that should reflect the benefit shareholders seek from equity-based compensation awards.

The Absolute compensation model differs fundamentally from the Relative compensation model. Specifically, the Absolute compensation model focuses less on managements' performance and more on shareholder wants. The concept is that shareholders have a required rate of return and that failure to reach that rate of return should be reflected in less compensation irrespective of how the overall market has performed while generating returns above the required rate of return should be rewarded. Once again the Compensation Committee would create a model to generate restricted stock awards based on performance ***relative*** to what is required. In the case of restricted stock the metric should be the total return to equity or cash flow to equity not simply the movement of the stock price. The movement of the stock price only reflects the capital gain component of total return. The models built for the relative return examples can be applied to the absolute model as well except that the required return on equity replaces the actual return on equity of the competitor group.

1.) IF $ROE_K = ROE_R$ + 6% or more — Reward = 1,210,000 shares
IF $ROE_K = ROE_R$ + 2.1to +5.9% — Reward = 1,100,000 shares
IF $ROE_K = ROE_R$ -2% to +2% — Reward = 1,000,000 shares
IF $ROE_K = ROE_R$ -2.1 to -5.9% — Reward = 900,000 shares
IF $ROE_K = ROE_R$ - 6% or less — Reward = 800,000 shares

2.) IF $ROE_K = ROE_R$ + 6% or more — Reward = 2,250,000 shares
IF $ROE_K = ROE_R$ + 2.1to +5.9% — Reward = 1,500,000 shares
IF $ROE_K = ROE_R$ -2% to +2% — Reward = 1,000,000 shares
IF $ROE_K = ROE_R$ -2.1 to -5.9% — Reward = 500,000 shares
IF $ROE_K = ROE_R$ - 6% or less — Reward = 250,000 shares

3.) Reward = (Base Amount)$[1 + (ROE_K - ROE_R)]$
When $[1 + (ROE_K - ROE_R)] > 0$ and 0 Otherwise

4.) Reward = (Base Amount)$[1 + 10(ROE_K - ROE_R)]$
When $[1 + 10(ROE_K - ROE_R)] > 0$ and 0 Otherwise

Where ROE_K = The return on Equity to the K Financial Consulting Group
ROE_R= The required rate of return on Equity by the firm's shareholders Base Amount = 1,000,000 shares

Note that the Compensation Committee is again faced with many of the same questions that they would need to answer in the Relative compensation model. The key difference is that the Relative compensation model strives to reward managers based on their performance relative to other managers in similar circumstances while the Absolute model rewards managers with respect to how they fulfill the requirements of their shareholders.

A combination of Relative and Absolute methodologies can also be constructed. The most intuitive concept is to set one methodology as a base and then consider what happens in the other arena as well. So for example, if the firm performed well compared to its competitors and also earned high absolute returns the reward to managers would be greater than if they performed comparatively well, but did not meet shareholder requirements.

For example, employing models 1 and 4 above; imagine that firm K earned a return on equity three percentage points greater than its competitors but also earned three percent less than the required rate of return. Model 1 yields an allocation of 1,100,000 shares based on the relative model but 900,000 shares based on the absolute model. Combining yields a result of 1,000,000 shares allocated. Model 4 yields a result of 1,300,000 shares based on relative modeling and 700,000 based on the absolute allocation also yielding a net value of 1,000,000 shares.

EXECUTIVE STOCK OPTIONS

In the Traditional executive stock option model the Board, in consultation with the Compensation Committee, will determine the number of option awards to offer. These options are typically offered at-the-money, have a vesting period, and expire in ten years. While start-up success is likely to be low, in the case of mature companies, the likelihood that the option will end up in the money over ten years is quite high. That is, there is virtually no risk that the option will expire worthless. Of course, how much in the money is subject to wide variation. However, due to issues of liquidity and diversification most executive stock options are exercised early. Note also that a key difference between restricted stock and options is that the latter capture only price growth not total return.

The fact that, at least for mature companies, the likelihood of options paying off some positive sum, coupled with the empirical evidence sited earlier that indicates that equity-based compensation does not appear to substitute for cash compensation, means that the power of the incentive to take more risk (and therefore, align management policies with the welfare of shareholders) is likely to be muted. As a result it is worthwhile analyzing other executive stock option models. One possibility is simply to offer out-of-the-money (the stock price is lower than the exercise price) options. Such options are more likely to align shareholder and management policy views because a greater degree of stock price growth is required for the options to come into the money. In addition, the optics are good from the point of view of potential investors and creditors since greater value growth is a prerequisite for managerial compensation success.

While the out-of-the-money model is an improvement, the view here is that even greater strides can be made by including Relative or Absolute modeling. In the case of Relative modeling, as noted earlier, the performance of the firm is compared to that of its competitors. New options are issued with respect to the average performance of the group. There are at least two interesting ways to account for relative performance in option granting. One model determines the ***number*** of at-the-money-options awarded based on relative performance. A base number of options are offered for average performance. If for example, the average price increase of competitors' stock is eight percent, but the focus firm price grows by only six percent, fewer options than the base amount are granted. When the focus firm price growth is the same as that of their competitors, then the base number of executive stock options are granted. The scheme continues in which, if the price growth is greater for the focus firm than that of the competitors, then more than the base number of at-the-money options are granted. Alternatively, a base number of options can be allocated, but the exercise price can be altered. For example, if the average price increase of competitors' stock is eight percent and the focus firm grew by only 6 percent, new options would be issued with an exercise price 8 percent greater than last period's options. That is they would be issued out-of-the-money. If alternatively, the average price increase of competitors was eight percent and the focus firm's price increased by ten percent, the new options would be issued in-the-money. In short new options are issued with exercise prices equal to the average price growth of competitors. The model could be adapted to the out-of-the-money ideology discussed earlier by adding some amount of increase to the average performance. Therefore:

Policy 1: New Executive Stock options are to be issued with an exercise price equal to one plus the average increase or decrease in percentage terms of the price movement of a cohort of competitors multiplied by the stock price of the focus company one period earlier.

$$X_0 = (1 + r_c)\, S_{t-1}$$

Where: X_0 = the new exercise value

r_c = the average rate of stock price increase of a competitor cohort

S_{t-1} = The firm's stock price one year earlier.

For example if firm K had a stock price one year ago of $50.00 and the average increase in competitor prices was 8 percent then new stock options would be issued at an exercise price of $54.00.

Policy 2: New Executive Stock options are to be issued with an exercise price equal to one plus (the average increase or decrease in percentage terms of the price movement of a cohort of competitors plus 2 percent (for example)) multiplied by the stock price of the focus company one period earlier.

$$X_0 = (1 + r_c + .02)\, S_{t-1}$$

Alternative structures might include longer periods of assessment (say every two years). If the firm performs poorly enough, option grants could be suspended altogether. Also additional bonuses of at-the-money options could be added if the firm performs extraordinarily well compared to its competitors.

The Absolute executive option pricing model has an equivalent set of alternatives. Assuming a firm has a required rate of return of 12 percent and has typically paid a 4 percent dividend, then the firm could base its executive stock option awards based on price growth of 8 percent. A base number of executive stock options is announced. If the firm's price grows by less than 8 percent fewer than the base number of at-the-money stock options are issued. If the firm stock price

grows by 8 percent than the base number of at-the-money options are issued, and if the stock price grows by more than 8 percent than more than the base number of at-the-money options are issued.

An alternative model allows the exercise price to grow at the required rate of growth that shareholders demand. If a firm is required by shareholder to return 12 percent a year and the firm typically pays a 4 percent dividend return then the required capital gain is 8 percent. One model would begin by issuing option out of the money.

$$X_0 = (1 + .08)\, S_0$$
$$X_1 = (1 + .08)^2 S_0$$

Or generally: $$X_T = (1 + .08)^{T+1} S_0$$

There are some interesting differences between the Relative and Absolute models. First, in the Relative model new options may be issued in, at, or out-of-the money depending on the firm's relative performance in the previous year to the date upon which the new options will be issued. Since that might lead to some unsavory choices, it might be good to implement the policy one year into the future. In the case of the Absolute model, the notion is that managers must grow the stock by eight percent each year (for example) just to meet their basic obligation. The model presented above means that managers will not make money on their options unless they can exceed the required amount of stock growth. Of course, in the case of the Absolute model, the original options could be issue at-the-money with new option grants issued at the required growth rate. That is, move the exercise price growth back one-period.

In that case: $X_0 = S_0$

$$X_1 = (1 + .08)S_0$$

Or generally: $X_T = (1 + .08)^T S_0$

Such a policy, of course, increases the likelihood of in the money performance and creates an initial allocation that does not require meeting the required outcome. In both the Relative and Absolute models real world problems exist. Like the Traditional model, these models do not help the Compensation Committee or the Board effectively determines the maximizing quantity of equity-based compensation assets that should be allocated to executives. The quantity is important since the rewards dilute cash flow and earnings per share. In addition to the quantity problem, as noted above, there are many models one can employ under each methodology. The goal is to maximize shareholder value so the model that gets closest to that goal should be chosen. However, many factors are at play including:

1.) Is one method better than the other at creating shareholder value buy-in? Should a combination of the two models or three models be employed?
2.) If the Relative model is employed, how is the best competitor grouping found?
3.) If the Absolute model is employed, what is the proper required rate of price growth?
4.) Given the choice of Relative or Absolute methodology, which sub-model works best?
5.) Is it best to use restricted stock, executive stock options, or a combination of the two?
6.) What is the proper balance between reward for service and reward for performance?

SUMMARY

The use of equity-based compensation continues to come under legal, empirical, and theoretical scrutiny. There is little proof that, heretofore, the agency problem has been alleviated by current compensation schemes. The failure to reach the objective likely means that either the basic principal of linking management behavior to shareholders' wants through equity-based compensation is flawed, or that current compensation models are inefficient. Both positions have their advocates.

In this paper we continue to explore equity-based compensation as a possible tool to align management and shareholder wants. Specifically, we develop and analyze both the Relative and Absolute models as alternatives to the Traditional model. We also consider these models in the context of restricted stock and executive stock option awards.

While we create taxonomy for modeling and thinking about the maximizing strategy, the importance of ***management art*** should not be underestimated. For example, there does not appear to be strong empirical evidence linking the quantity of awards to performance. That is, the amount of the base award is difficult to assess. In addition, the rate at which restricted stock awards should grow or decline is also difficult to determine. Nevertheless we do offer a conceptual lead to the problems. We note that the base award should be large enough to align manager maximization with shareholder maximization, but also not larger than is necessary. Similarly, the ***steepness*** at which a restricted stock award grows or declines should be dictated by the Board's desire to mix the reward for performance with a reward for service. That is, the steeper is the increase or the decrease in the number of restricted shares awarded based on performance, the more linked to performance and the less linked to service is the award.

Which model is best? The key difference between the Relative and Absolute models is that the former focuses on management performance relative to other firms' (management) performance, while the latter model focuses on the required rate of return of shareholders. One suspects that managers would prefer the Relative model, but there is much to be said for the Absolute model since it is shareholder value and utility which is the maximizing target. Overall, we would argue that it is the Absolute model that is more likely to meet shareholder wants, and, therefore, we suggest either employing the Absolute model or perhaps a combination of the Absolute and Relative strategies. We also note that the option model depends on price growth only, while the restricted stock model depends on total return. Shareholders are interested in their total real after-tax return. Therefore, employing restricted stock rather than options might be the more efficient methodology from the shareholder perspective. Finally, note that if the methodology chosen is too complicated, it is unlikely to have the desired effect on managers. If the methodology is hard to decipher, the manager may see equity-based compensation as little more than a potential bonus that they may or may not receive rather than a maximizing goal.

ENDNOTES:

1.) Walt Schubert is Professor of Finance at La Salle University in Philadelphia. Les Barenbaum is Professor of Finance at La Salle University and a Managing Director at Financial Research Associates in Philadelphia.

2.) Bebchuk, L., and Grinstein, Y., (2005). The Growth of Executive Pay. Oxford Review of Economic Policy, 21, (2), 283-303.

3.) Vogl, A., J., (2006). The Good the Bad and the Ugly. The Conference Board Review. 43, Nov/Dec, (6), 26.

4.) Abrams, D., Cohen, A., Suzman, P., (2006). Restricted Stock: The Case for Total Shareholder Return. Financial Executive, December.

5.) Deya-Tortella, B., Gomez-Mejia, L., R., De Castro, J., O., Wiseman, R., M., (2005). Incentive Alignment or Perverse Incentives: A Behavioral View of Stock Options. Management Research, 3, (2), 109-120.

6.) For Prospect Theory, See for example: Kahneman, D., and Taversky, A., (1979). Prospect Theory: an Analysis of Decisions under Risk. Econometrica, 47, (2), 262-291.

7.) For Agency Theory, See for example: Jensen, M., C., and Murphy, K., J., (1990). Performance Pay and Top Management Incentives. The Journal of Political Economy, 98, (2), 225-264.