Boards, Compensation Committees, and CFO's in the Spotlight

Increased Scrutiny of Executive Pay Poses New Challenges

Media attention, shareholder activism, and new regulations pose fresh challenges for compensation committees.

Executive Compensation: The Challenge

Pick up **The Wall Street Journal** or the **Financial Times** on any given day and you are likely to find a front-page article dealing with either a Board of Directors or Compensation Committee which has come under fire from shareholders or the press over an issue of the alleged misconduct or the compensation of a senior executive. In a *post-ENRON* world, both shareholders and the media are more attentive than ever before to both the actions and the compensation of corporate executives.

What is more, the **Wall Street Reform and Consumer Protection Act of 2010**, commonly known as **The Dodd-Frank Act**, contains a number of provisions on executive compensation and corporate governance which affect all U.S. public companies. One notable provision is **"Say on Pay,"** which requires a non-binding shareholder vote on executive compensation policies no less frequently than once every three years. The regulatory landscape is dynamic, as new rules only broadly outlined in the Act are officially promulgated and implemented.

Shareholder activism, once the province of a few "gadfly" shareholders and organized labor, has now become common practice among large institutional shareholders such as mutual funds, pension funds, and hedge funds. These new, powerful activists are criticizing lavish pay packages, voting down company policies, and calling the performance of Boards into question. In some cases, large institutional investors have supported proposals to unseat Directors in broad ranging reforms of corporate boards.

> *Boards and Compensation Committees must be prepared to demonstrate that pay and bonus policies not only attract and motivate highly qualified executives, but also align the incentives of these executives with the expectations and demands of investors. In order to effectively discharge their responsibilities, boards and compensation committees often find it advisable to call upon recognized professionals to assist in the design of effective executive compensation structures which will withstand the scrutiny of independent auditors and meet the expectations of shareholders.*

A well-designed Relative Total Shareholder Return Plan aligns the incentives of your management team with the expectations of institutions and other rational investors.

An effective incentive compensation plan must do more that meet the basic requirements. In order to provide value to the enterprise, the plan must be readily understood by participants and by those responsible for implementation and review. One approach to the incentive compensation issue is a plan based upon **Total Shareholder Return (TSR).** Participants in a TSR plan have a clear and direct view of the nature of their rewards and of the performance required to earn them. Human Resources executives will find implementation to be a straightforward and unequivocal process. Below, we examine the design and implementation of a plan based upon TSR.

Total Shareholder Return: The Foundation

Total Shareholder Return (TSR) is a measure of the performance of the stock of a company over a period of time. TSR includes both the change in the market value of a share as well as the total dividend payout of that share over the performance period. This metric is an easily computed, universally recognized standard for the measurement of creation of value.

The **Relative TSR Plan**, in which the TSR of the subject company is considered in comparison to the TSRs of a **peer** or **comparative** *group* of selected companies, has been identified by Richard Breeden, former SEC Chairman, as an excellent performance metric upon which to base incentive compensation for executives.[1]The use of Relative TSR compensation structures is well-established in the United Kingdom and is gaining favor in the United States. **The Association of British Insurers (ABI)**has published a document entitled **Principles of Remuneration**[2]which provides a useful framework for the implementation of Relative TSR incentive plans within US public companies. We shall refer to this document frequently in this article.

Benefits of Relative TSR Incentive Compensation

- Simplicity and transparency of valuation builds confidence in both executives and shareholders.
- Incentive compensation is aligned to performance and insulated from cyclical variation in economic conditions and equity markets.
- Performance objectives align the interests of the company executives with the interests of the shareholders.
- Under a Relative TSR plan, the target award can be tailored to fit the circumstances of the company and current economic conditions
- Executive compensation levels may be justified by hard data during economic downturns as well as in periods of growth.
- Administration of performance awards is a straightforward quantitative process.

Relative TSR: Basic Implementation

TSR is computed as follows:

$$TSR = (S_e + D - S_s)/S_s$$

S_s = Average stock price at the start of the performance period

S_e = Average stock price at the end of the performance period

D = Dividends paid throughout the performance period

The Average stock price is calculated for a specific interval, such as 10 trading days, at the start and the end of the performance period. The use of an average stock price tends to minimize the effects of market volatility. This practice is specifically recommended by the ABI as follows:

> *The calculation of starting and finishing values for TSR should be made by reference to average share prices over a short period of time at the beginning and end of the performance period. Lengthy averaging periods should be avoided.[3]*

In addition to the subject company, TSRs must be calculated for the members of a peer or comparative group comprising a number of companies against which the performance of the plan participants will be benchmarked. Selection of this group is an important factor in both the nature of the incentive to be offered to the plan participants and the valuation of the award according to the standards and procedures set forth in ASC Topic 718. The selection of the peer group also has a significant influence upon the degree of isolation of the calculated TSR from the effects of broad market movements. Clearly, selection of an appropriate peer group is an issue which requires careful planning and analysis.

The use of TSRs in the determination of incentive awards may be based on a *ranking* process or upon the *outperformance* of the subject company when measured against an *absolute* target or the behavior of an *index*. In the following discussion, the *ranking* process will be described. A closely related approach is used when *outperformance* is desired.

Once the peer group has been identified, the individual TSR of the subject company and the TSRs of all the members of the peer group for a given performance period are then determined from public data. The TSRs are ranked in order, and the position of each company in the group is determined by percentile, decile, quintile, or any other convenient measure. The standing of the subject company within the peer group is then used to determine the individual awards for all participants in the plan. In the next section, the determination of individual awards is explained in detail.

Relative TSR: Design of the Performance Incentive

Relative TSR Plans offer great flexibility and may be tailored to the specific situation of any company and the degree of incentive desired by the Compensation Committee.

Let us imagine that you are designing the compensation plan for a hypothetical company. Once you have determined that a Relative TSR plan is appropriate to your needs, you determine your peer group. The group may include your competitors in a chosen market segment or industry classification. At the end of the performance period, the TSR of each company is determined from stock price and dividend data. As previously stated, the individual TSRs are then ranked. For this example, we will use quintiles. Each of the five quintiles would have a specific award associated with it. Each participant in the plan is initially granted a number of *contracts*, or award units. The value of a contract is then determined as the *baseline award* times the *percentage earned*. The baseline award is typically stated as an amount representing a given number of shares of common stock, although other structures, such as equity participation rights, may be used. The percentage earned is defined for each TSR performance quintile as in the following example.

Relative TSR Plan Payoff

Quintile Rank	Percent Earned
1st	200%
2nd	150%
3rd	100%
4th	50%
5th	0%

In this example, if the company ranks at the top, the award is twice the baseline per contract. If the company ranks in the middle, the award is 100% of the baseline. In the event that the company ranks in the bottom fifth of the peer group, there is no award. There is a clear incentive here for executives to behave in such a way that their company outperforms its peer group. The result is that shareholders are pleased, and executives earn larger awards.

It is also evident that the company has the flexibility to structure the baseline award, distribution of contracts, and payoff table in a variety of different ways. This allows plan to be tailored to fit the circumstances of the company, the expense budget, and the intensity of the message the Board and Compensation Committee wish to send to plan participants.

Estimation of Fair Value

The FASB Accounting Standards Codification™ Topic 718[4] (formerly FASB Statement 123R[5]) calls for the recording of equity-based compensation as an expense at the time the award is made at a fair value determined according to guidelines which vary from highly specific to general in nature. The valuation of a Relative TSR award revolves around the same principles as the valuation of a stock option, with one important difference. The value of a Relative TSR award is dependent not only on the value of the stock of the subject company, but also upon the value of the stocks of all the firms in the peer group.

Although the applicable regulations give little specific guidance as to the method to be used to perform the *a priori* valuation of an award, it is clearly stated that the valuation must be founded on data and techniques which are *reasonable, supportable, and consistent.* In any case, the valuation of a Relative TSR award under the standards requires the following information:

1. *The estimated volatilities for all companies in the peer group.*
2. *The estimated risk-free interest rate for the time period beginning at the Grant date and ending at the Performance end date.*
3. *The estimated correlation matrix for the equity returns of all companies in the peer group.*
4. *The estimated dividends to be distributed by all companies in the peer group during the Performance period.*

Each of the parameters above may be estimated using a number of assumptions. Great care must be exercised to assure that these estimates and the resulting estimate of the value of a Relative TSR award will withstand the scrutiny of independent auditors and will be considered *reasonable, supportable, and consistent.*

Volatility

The estimated stock price volatilities of the companies in the peer group may be either historical or implied. Estimates of volatility using historical data are definitive, but are not forward looking. Also, the historical data may contain outliers caused by unforeseen events which affect either equity markets in the aggregate or the perception of a specific company as reflected in its equity price.

For those companies with listed equity options, the implied volatility of the stock price may be calculated from actual option prices using a number of different models. In most cases, we find that the ***Binomial***[6] method is appropriate, because it allows the incorporation of discrete dividend payments made at various times during the option life, as well as a variable risk-free interest rate. The implied volatilities thus calculated are forward-looking in nature, as they represent an assessment of future conditions by market participants.

Interest Rate

For US companies, the traditional risk-free interest rate is considered to be the 13-week Treasury Bill rate. For companies whose operations encompass multiple currencies, appropriate adjustments may be made. For example, the risk-free rate in the country where the shares are registered may be used in some cases. As before, adequate support must be provided for the choice of any specific benchmark interest rate, either constant or variable with time.

Correlation Matrix

A matrix of correlation coefficients for the stock prices of companies within a peer group may be calculated from historical data. Each element in the matrix is a number between -1.00 and +1.00 which reflects the strength of the relationship between movements in the price of one stock to movements in the price of the other. A correlation of 0.00 indicates no relationship, while a correlation of +1.00 indicates a strong relationship (the prices of both stocks move upward or downward together). Similarly, a correlation of -1.00 indicates a strong inverse relationship (when the price of one stock rises, the price of the other stock falls).

There is a unique correlation coefficient for each pair of stocks in the peer group. For example, if the peer group (including the subject company) contains five different stocks, there will be 10 correlation coefficients. For a peer group of 10 different stocks, there will be 45 correlation coefficients. For a peer group of 20 stocks, there will be 190 correlation coefficients. The correlation coefficients are used in the estimation of the behavior of all the different stocks in the peer group.

Dividend Distributions

Dividends are an important component of TSR for the investor, but may be treated in a variety of ways in a Relative TSR incentive compensation plan.

Since dividends are considered as part of total return from the investor's point of view, it is appropriate to consider dividend distributions during the performance period as a component in the total shareholder return for each company in the peer group. In the example formula given in the section on **Basic Implementation**, dividends are accumulated during the performance period and paid out without interest at the end. Other calculations of TSR may be based on the assumption that the dividends are either invested in a cash account paying the risk-free rate and distributed at the end of the performance period, or reinvested in additional shares on the date of dividend payment. In this case, the total return reflects both the increase or decrease in share price and any increase in the base number of shares resulting from reinvestment of dividends. In each case, the formula for calculation of TSR is appropriately modified.

A separate issue is posed by the treatment of dividends as a component in the structure of a TSR award. Some TSR plans do not pay any dividends distributed during the performance period. Other plans add a cash grant equivalent to the dividends distributed on the shares awarded at the end of the program. There are also plans which provide for the reinvestment of dividends in additional shares at the stock value on the dividend payment date. The treatment of dividends as a component of the award affects both the administration of the plan and the determination of the Fair Value. The MITI Working Paper *TSR Reinvestment of Dividend Distributions*[7] presents a detailed description of the impact of dividends upon the estimate of Fair Value.

Tying It All Together - The Monte Carlo Simulation

Monte Carlo simulation provides an estimate of the range of possible outcomes of a TSR program with an acceptable level of effort.

Once all the parameters of the peer group of stocks have been estimated as outlined above, it remains to determine the actual Fair Value of the plan. Since the number of variables may be large and the computations complex, the Monte Carlo Simulation technique is a realistic approach to generating a tangible result with a sufficient degree of accuracy while expending a reasonable amount of effort.

The performance period is divided into a number of discrete time intervals. Starting at the beginning of the period, at which all stock prices are known, the prices of all stocks for each successive interval are modeled by a statistical process constrained by the estimated volatilities and correlations, driven by a set of computer-generated pseudorandom numbers.

The path of each stock price is then simulated over the entire performance period, after which the TSRs for all companies in the peer group are calculated and ranked. The payoff of the plan is then determined according to the prearranged conditions. This process is repeated thousands of times. The Fair Value of the plan is the net present value of the average payoff over all the iterations, discounted by the risk-free interest rate. The standard error of the estimate is calculated as a measure of the statistical quality of the valuation.

This process can be complex and computationally intensive, but it yields a realistic view of the range of expected payoffs to be expected if the initial assumptions are reasonable. We do not have the proverbial "crystal ball" which allows us to see into the future with respect to the performance of our own common stock or the common shares of the companies in our peer group, but a well-designed Monte Carlo simulation with realistic assumptions will meet the criteria for a reasonable, supportable, and consistent estimate of the value of a TSR plan, which is subject not only to the performance of company management, but also to the vagaries of the equity markets and global macroeconomic forces.

Design and Implementation of a Compensation Plan

Montgomery Investment Technology is your experienced partner in all phases of the design and implementation of an equity-based incentive compensation program.

The selection, design, and implementation of a successful equity compensation plan is a complex undertaking. The discussion of Relative TSR plans presented here serves to illustrate some of the issues which will be encountered. You may choose to complete the entire process internally, outsource the task, or follow an intermediate path. No matter what course you choose, **Montgomery Investment Technology** can provide you with proven resources which will maximize your likelihood of success.

For those who choose to develop and implement their program internally MITI offers a series of **Working Papers** which are located on our website. We also can provide training seminars tailored to your specific needs, with subject matter spanning ASC Topic 718 accounting requirements, alternative awards, the characteristics of options, futures and other derivative instruments, the nature of volatility, hedging the cost of your equity compensation plan, and many other areas. We can also offer assistance in screening and selection of candidates for your peer group, preparation of modeling equations, preparation of justification for your underlying assumptions, and the valuation of exotic and complex instruments.

If you decide to outsource the process, MITI has the experience, expertise, and other resources to deliver a complete solution. We have designed and implemented equity compensation programs, including tools for the constant review of progress during the performance period and for the support of your accounting function. We will also develop the appropriate footnotes for your financial statements which will keep you compliant with all regulatory requirements. Furthermore, our highly skilled and credentialed team can answer all your questions regarding compliance, and will work with your independent auditors to explain your valuation methodology and support the underlying assumptions.

Please Contact Us

We invite you to explore the resources on our website and to read our staff biographies. These resources include our **Best Practice Series, Working Papers, White Papers, and Publications**. This material is augmented by a set of **Online Calculators** which illustrates the range of analytical techniques we can bring to bear upon your individual problems. Should you have specific questions regarding any issue related to equity compensation, valuation of complex instruments, or any other subject in our scope of expertise, we invite you to either email or telephone us to arrange an appointment with a member of our staff.

Montgomery Investment Technology provides analytical tools which assist in fair and independent valuation and financial reporting. We are industry leaders in the valuation of options and derivative securities, and provide state-of-the-art software applications, consulting services, and training seminars to Fortune 100 firms, IPO companies, accounting professionals, derivatives traders, consultants, banks and other investment and financial practitioners.

Montgomery Investment Technology, Inc.
200 Federal Street, Suite 245
Camden, NJ 08103

Phone: 610-688-8111
Fax: 610-688-5084
Web: *www.fintools.com*
Email: *miti@fintools.com*

Our services are tailored to the specific needs of each and every client.

Your satisfaction is our goal.

---

[1] *http://www.sec.gov/Archives/edgar/data/853665/000090342307000070/breedensc13daex99c_0126.htm*
[2] *ABI Principles of Remuneration, Association of British Insurers,29 September 2011*
[3] *ABI, op. cit., Appendix 1*
[4] *Financial Accounting Standards Board, Topic 718, as updated January 2010, No. 2010-05*
[5] *Financial Accounting Standards Board, Financial Accounting Series No. 263-C, December 2004*
[6] *Cox, J.C., Ross, S.A., and Rubinstein, M., Journal of Financial Economics 7(1979) 229-263*
[7] *SBP Valuation- TSR Reinvestment of Dividend Distributions, Montgomery Investment Technology, Inc.*