

# Valuing Employee Stock Options

## An Emerging Risk for Corporate Boards and Senior Management

Many corporations have discovered that their executive compensation practices can expose them to serious risk. Golden parachutes and nine-figure pay packages granted to senior executives have become the focal point of a number of high-profile shareholder lawsuits. Employee stock options (ESOs) often emerge as a central element in these suits. A company that is overly generous in granting options may create unforeseen exposures for its senior executives and its board of directors.

*By Cindy W. Ma*

Although ESOs have become an important means of motivating executives and employees and aligning their interest with those of shareholders, many corporate boards may not fully comprehend the total potential dollar value of the options they are granting. Current accounting standards do not require much precision in this regard. Today, companies may choose to merely disclose an estimate of the fair value of the ESOs they have granted on a pro forma basis in footnotes to their financial statements. ESOs are not currently an expense item on the income statement.

This lack of precision raises serious questions: Are current risk metrics providing senior managers and corporate boards with sufficient information to make informed decisions about options?<sup>1</sup> Do boards truly understand the potential impact on shareholders of their option grants? Are boards and senior managers prepared to take responsibility for the accuracy of their ESO valuations?

### **FASB Makes Option Expensing Mandatory**

The accounting standard for ESOs is about to change. In March 2004, the Financial Accounting Standards Board (FASB) issued its Exposure Draft on Share-Based Payment. Assuming this is formally enacted,<sup>2</sup> the new rule will change the environment in which boards of directors and corporate executives operate. The Exposure Draft requires companies to expense the value of the ESOs they issue, recommends the use of a sophisticated financial “lattice” model for determining an ESO’s value, and even provides guidelines for model construction.<sup>3</sup> Any board of directors that conforms to these guidelines and performs due diligence in valuing ESOs may be able to protect itself against potential allegations of breaching its oversight duties.

<sup>1</sup> According to a 2003 survey of CFOs and CROs of financial services companies in North America and Europe, conducted by Korn/Ferry International and Mercer Oliver Wyman, 90 percent of respondents believe their risk metrics fail to inform boards and shareholders adequately.

<sup>2</sup> The Exposure Draft included a January 1, 2005 effective date for most companies, but on October 13, 2004, the seven board members of FASB decided that the option-expensing rule for publicly traded companies would take effect with financial statements beginning after June 15, 2005. The six-month delay strikes a balance between the concerns of companies and auditors who are already busy because of new regulatory requirements under the Sarbanes-Oxley Act and the needs of investors who want to see option expenses recognized as soon as possible.

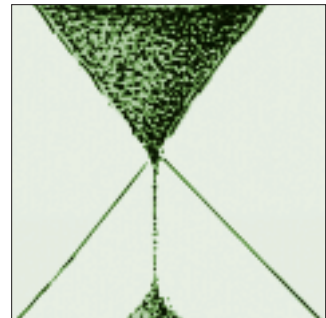
<sup>3</sup> FASB advocates “lattice” models because they are part of “well-established financial economic theory,” and they are capable of capturing employee exercise behavior accurately. It is believed the use of lattice models will address the long-standing criticism that the valuation methodology previously recommended – the Black-Scholes-Merton model – fails to incorporate the full effects of employee early exercise and post-vesting termination behavior. At a September 1, 2004 board meeting, FASB eliminated an explicit preference for the lattice models. Although most board members believe that this type of model is generally preferable to others, they retreated from the “preference” language because of reports that many observers, including the major accounting firms, were interpreting “preference” as “requirement.” The board was concerned that this narrow interpretation would prevent companies from adopting other valuation approaches – including techniques that may be developed in the future – that might provide a better estimate of fair value.

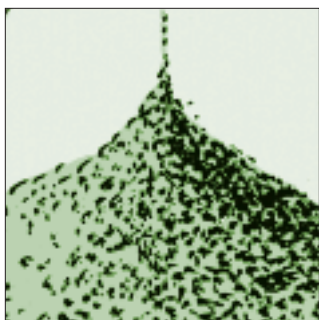
Given the complexities of ESO valuation, it is not surprising that boards are seeking help from independent professionals in fulfilling this new responsibility. Valuation experts can help boards understand the value of the compensation packages being awarded and provide confidence that subsequent litigation may be avoided. Should litigation prove unavoidable, these experts can lay the foundation for a good defense.

### **Not All Valuation Models Are Created Equal**

Unfortunately, reliance on third-party expertise may introduce yet another element of risk for a corporation's board and senior leaders. The development of rigorous and accurate options valuation models requires investments in intellectual capital. Quite a few ESO valuation firms have recently sprung up, and not all have the skills and made the necessary investments to derive defensible valuations. Some, in fact, tout models that appear to have been designed primarily to generate the lowest possible stock option valuations.

A low expense figure for a company's options may be flattering to its profit and loss statement, but such a figure is fraught with pitfalls. Under the terms of the Sarbanes-Oxley Act, a company's CEO and CFO must attest to the accuracy of the numbers that appear on its financial statements. Should a company's valuation estimates prove inaccurate or unfounded, its senior managers or corporate board could be held responsible (or jointly liable with the hired valuation professionals) for any resulting lawsuit over earnings misstatements.





## Some Valuation Pitfalls to Avoid

To avoid potential litigation, it is important for boards and senior management to retain valuation professionals who will proceed with both integrity and rigor. To do so, boards and senior managers must be aware of the many points in the valuation process where shortcuts *could* be taken.

For example, the Exposure Draft recognizes that appropriate ESO valuations will incorporate the tendency of employees to exercise their options early, thereby lowering the options' value. But the Exposure Draft prudently does not specify how to incorporate employee exercise behavior. Instead, since different companies will have different resources available to them, the draft requires that an option pricing model and its input parameters be based on "available information." FASB requests that ESO-issuing companies prove their assumptions regarding exercise behavior by using hard data, such as past histories of ESO exercise, employee demographic information, and empirical analysis. Not all valuation professionals have sufficient econometrics experience to adhere to these recommendations.

There are also valuation elements that are susceptible to oversimplification by valuation professionals. For example, instead of using one constant interest rate, as in the Black-Scholes-Merton model, the Exposure Draft recommends the use of a term structure of interest rates based on zero-coupon U.S. Treasury bonds with different maturities. Yet not all models being marketed take this into account.

Similarly, the Exposure Draft requires that blackout periods – the times when ESOs cannot be exercised – be taken into account. Some existing models, however, do not consider these at all. Such errors, when embedded in valuation equations, can be difficult to discern, especially when valuations are not well documented.

The issue of perspective is yet another potential pitfall that boards and managers should understand. Each item on a corporation's financial statement must be measured from the standpoint of the company – the *fair value* of an ESO, in other

words, is the fair value to the *employer*. This is generally not the same as the fair value to the employee, who is subject to various restrictions.<sup>4</sup> Valuation estimates based on the employee's perspective will definitely result in lower – and less accurate – numbers than those based on the employer's perspective.

Unfortunately, this confusion of perspectives is a large problem lurking in some of the valuation models currently on the market. A number of models that purport to measure the company value in fact adopt the employee's perspective by applying a discount to reflect various contractual restrictions such as “non-transferability” and “non-exercisability.”

Some valuation firms have created one-size-fits-all models designed for all companies. This approach is doomed to inaccuracy. Option pricing models need to be customized for each company because each company has unique data and employee-specific information. Designing and implementing an appropriate option pricing model is more than an exercise in technical programming. It is no simple matter to use a pool of cross-sectional and time series company- and employee-specific data to develop an economically sound, statistically stable, and operationally feasible approach to deriving input parameters. The process also encompasses estimating parameters and making assumptions about the exercise patterns of employees. This is an art easily subject to manipulations that lead to inaccurate valuations. It is a significant challenge for a company's auditors to verify the reliability of this estimation approach.

More generally, in fact, if statistical results have been intentionally manipulated, few auditors, if any, will be consistently able to identify the distortion. Bear in mind that any statistical flaws or inefficiencies, whether accidental or deliberate, may make board members and senior management vulnerable to shareholder criticism and lawsuits.



<sup>4</sup> ESOs are less valuable to employees than exchange-traded options because of a number of restrictions: lack of transferability, vesting requirements, blackout periods, forfeiture provisions, claw backs, and some other non-standard features.

## Balancing Costs and Benefits

The objective of financial accounting is to present fairly the financial position of the company to shareholders and potential investors. FASB's new option expensing guidelines attempt to do just that. Yet the fundamental complexity of financial valuation techniques and FASB's prudent decision not to impose strict modeling guidelines have created a new market for valuation tools. Those currently available vary widely in sophistication, accuracy, and appropriateness.



The issues discussed above lead to significant differences in value, especially in relation to executive compensation awards. Models that at first glance all seem to satisfy FASB's requirements may actually generate option values that differ by tens of millions of dollars.

The fact that the FASB option expensing proposal has inspired thousands of responses indicates how passionately employees and executives feel about the potential effect of expensing on their company's valuation. Many of the responses have been triggered by concern over how the expensing of options will affect their bottom line. In the end, however, litigation risk may turn out to be an equally serious concern. Senior managers and board members should not take the option valuation exercise lightly or fail to scrutinize the valuations placed on their company's financial statements. Selecting the wrong model may expose them to undue and unexpected risk. Truly, let the buyer beware!

## Conclusion

If structured correctly, executive compensation design can reinforce company business imperatives and create a competitive advantage in attracting and retaining key executives. At the same time, however, the recent compensation scandals and the ever-changing legal and regulatory environment have shone a spotlight on executive compensation design, which, in turn, have heightened companies' risk of exposure to shareholder litigation. A company should choose an executive

compensation package that fits into its overall risk management structure and that optimizes the varied economic and stakeholder considerations unique to its organization. To value this package accurately, a company's board and senior managers need to select a methodology that is both rigorous and unbiased.

---

*Dr. Ma, a vice president of NERA Economic Consulting, concentrates on derivatives, securities, commodities, risk management, valuation, and corporate governance. A certified public accountant and chartered financial analyst, she is a member of the Financial Accounting Standards Board's Option Valuation Group, focusing on valuation issues related to equity-based compensation.*

