

VALUATION OF EMPLOYEE STOCK OPTIONS UNDER FASB STATEMENT 123

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The granting of equity incentives is a commonplace and valuable tool for rewarding employees for their performance and tying employee motivation to the interests of shareholders. However, accounting for equity compensation, particularly employee stock options, has become an increasingly controversial and complex issue.

BACKGROUND

In 1995, the Financial Accounting Standards Board (FASB) released Statement No. 123, Accounting for Stock-Based Compensation, encouraging, but not requiring, that a compensation expense for employee stock options be recorded on a company's income statement based on a "fair value" method. The FASB had voted to add the stock compensation project to its agenda in March, 1984 because of the perceived weaknesses of APB Opinion No. 25, Accounting for Stock Issued to Employees, and consideration of advancements in stock compensation and option pricing models. Opinion 25, issued in 1972, requires that compensation costs for awards of employee options be measured at their "intrinsic value", which is defined as the amount by which the value of an option's underlying shares exceeds the exercise price of the option. Accordingly, issuing stock options exercisable at fair market value or less does not have any impact on the profit and loss statements under Opinion 25.

In contrast, the objective of Statement 123 is to recognize the cost of employee services that are received in exchange for valuable equity instruments issued as an expense against earnings in an entity's financial statement. Fair value for employee stock options is to be determined as of the grant date using an option pricing model that takes into account the underlying stock price, the option exercise price, the expected life of the option, the volatility of the underlying stock and the expected dividends on it, and the risk-free interest rate over the life of the option. The most popular option-pricing model is the Black-Scholes model.

Initially, it was the FASB's intention that Statement 123 supersede Opinion 25 in its entirety. However, when ultimately issued, Statement 123 permitted entities to continue applying Opinion 25 to stock-based compensation involving employees. Accordingly, the FASB currently allows companies to elect one of two standards to account for equity grants to employees. It is common for technology companies selecting Opinion 25 to grant options to employees at all levels in the company because they are essentially "free" and can have important motivational value.

MANDATORY EXPENSING OF EMPLOYEE STOCK OPTIONS

To date approximately 500 public companies have voluntarily adopted, or announced their intention to adopt, the fair value based method. In March 2004, the FASB issued a proposed statement, Share-Based Payment, that would amend Statement 123 and require stock-based compensation transactions to be accounted for only using the fair value based method. The FASB strongly felt that eliminating Opinion 25's intrinsic value method would improve the comparability of reported financial information, simplify GAAP accounting, and, most importantly, address concerns of users of financial statements who believe that Opinion 25 does not faithfully represent the economics of transactions involving employee stock options. However, the FASB's decision rekindled a heated debate that dates back over 20 years, when the stock compensation project was originally added to the Board's agenda. Yielding to pressure from securities regulators and corporate executives, the FASB recently announced a six-month delay in its plan to require companies to treat employee stock-options as an expense. The SEC has recently recommended a further delay.

Proponents of expensing stock options, including Warren Buffet and other members of the investment community, argue that employee stock options represent a form of compensation that should be expensed like any other form of compensation. Opponents, ranging from top executives at Intel, Cisco, and Qualcomm to members of Congress and well known economist Burton Malkiel, have argued that employee stock options, which require no cash outlay, are not the equivalent of cash wages, and that forcing companies to expense stock options will needlessly damage the profitability of numerous companies and deter the use of employee stock options. Setting aside a discussion of the validity of these concerns, an erroneous argument against expensing stock options is that there is no way to value options with reasonable precision. The problem for many companies is that management and their auditors will oftentimes overstate the value of stock options by mechanically applying inputs to the Black-Scholes model.

DETERMINATION OF FAIR VALUE FOR EMPLOYEE STOCK OPTIONS

The intention of Statement 123 is to develop a real world estimation of value for option grants rather than to define a formulaic approach for the determination of costs. The fair value standard is defined under Statement 123 as the "amount at which an asset could be bought or sold in a current transaction between willing parties, that is, other than in a forced or liquidation sale." Quoted market prices of similar actively traded investments, if available, are considered to be the best evidence of fair value. In the absence of observable market prices, Black-Scholes and other option pricing models are considered acceptable valuation techniques for determining the fair value of employee stock options. As required by FASB 123, these models take into account the unique investment characteristics of option securities and are based on established principals of economic theory generally accepted by valuation experts. The FASB also recognizes that the valuation technique utilized should be applied in a manner consistent with the fair value measurement objective, and that a model such as Black-Scholes should be adjusted to account for the specific characteristics inherent in share options and similar instruments granted to employees.

The Black-Scholes model tends to overstate the value of an option that is near or in the money and has a long time to expiration and, as a result, modifications should be considered to determine fair value utilizing the model. In addition, Black-Scholes assumes that options are transferable or marketable. Since it is rarely economically advantageous to exercise, rather than sell, a freely traded option before the end of its contractual term, the value of short-term marketable options generally reflects the full term of the option. This is due to the fact that a tradable option will reflect option value, sometimes referred to as "time value", in excess of the option's underlying intrinsic value.

Unlike publicly traded options, employee stock options are not transferable and can only be monetized through exercise. Nonvested employee stock options can neither be sold nor exercised. The holder of a nontransferable option can only receive the intrinsic value of an option at any point in time and, thus, will be incentivized to exercise early should the underlying stock price reach an attractive price level. As a result, the estimated value of an employee stock option is based on its expected life which is likely much shorter than its maximum term. Because of Black-Scholes' extreme sensitivity to variations in time to expiration, it is extremely important for this input to be carefully analyzed in applying the model. Factors that should be considered in determining the expected term of an option include the vesting period, employees' past exercise and termination behavior, the volatility of share price, and any other factors that would trigger early exercise of options.

Another important input to the Black-Scholes model is the volatility of the underlying shares of stock, a factor that can add significant value to an option. Option holders benefit from volatility because they do not bear the risk of loss when stock prices decrease while retaining the ability to capture price increases during the term of the option. The selected volatility measure used in the Black-Scholes option-pricing model must be reasonably determined and based on supportable evidence.

In order to determine the fair value of an option, the objective of the option pricing model is to approximate market expectations that likely would be reflected in a current negotiated exchange price for the option. Expectations about the future are often based on past experience; however, historical volatility is not the only indicator of expected volatility and, in many circumstances, unadjusted historical experience is a relatively poor predictor of future expectations. In the case of a new public company, historical volatility may not be determinable. Accordingly, in addition to an analysis of historical volatility computed over the expected term, factors to be considered in determining expected volatility include the implied volatility inferred by the market prices of traded options, the length of time the company has been public, whether or not historical volatility included a time period of unusual volatility, and the entity's corporate structure. It is not only appropriate, but necessary, to consider modifying observed historical volatility to reflect available information that would indicate whether the future is expected to differ from the past.

CONCLUSIONS

Following decades of heated and often divisive debate and despite strong opposition, the FASB appears determined to make it a requirement that companies record compensation expenses against earnings for employee stock option grants. While easy to utilize, the Black-Scholes option-pricing model can severely miscalculate the fair value of employee stock options under FASB 123 if improperly applied. A reasonable and supportable fair value conclusion requires a careful consideration of the inputs to the Black-Scholes model that is based on economically sound analysis and professional expertise.