

CEGMARK

INTERNATIONAL, INC. / 45 ROCKEFELLER PLAZA / SUITE 2916 / NEW YORK, N.Y. 10111 / VOICE: (212) 541-7010 / FAX: (212) 581-9819
EMAIL: CEGMARKINTRM@AOL.COM

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Financial Accounting Standards Board
of the Financial Accounting Foundation
401 Merritt 7
P.O. Box 5116
Norwalk, Connecticut 06856-5116
director@fasb.org

File Reference 1102-100: Comments on Share-Based Statement exposure draft

For your consideration, I would like to offer a few comments to FASB's stock option cost suggestions. The reason to expense stock options is to more accurately present the financial position of the company by including them as expenses against earnings. It may also help restore public trust in securities markets, corporations and accountants. FASB's new rules should be as specific as possible. It is our opinion that the proposed FASB Statement does not provide sufficient guidance to ensure that the fair value measurement objective is applied with reasonable consistency. I suggest three areas that might be clarified:

1. Expected life or expected term instead of contractual life
2. Implied volatility instead of historical volatility
3. Companies' leading interest rates to fairly value stock options

Expected Term or Life of Employee Share Options

FASB indicates in its draft how to replace contractual life with expected term of life of employee share options: "For example, an entity's experience might indicate that option holders tend to exercise those options when the share price reaches 200 percent of the exercise price. If so, that entity might use a lattice model that assumes exercise of the option at each node along each share price path in a lattice at which the early exercise expectation is met, provided that the option is vested and exercisable at that point. Moreover, such a model would assume exercise at the end of the contractual term on price paths along which the exercise expectation is not met but the options are in-the-money at the end of the contractual term." This is a description of the lattice model with a fixed and constant upper barrier. In this model, when share price hits the upper barrier, exercise of the option is compulsory and an American call formula is used to value the option.

For employee stock options, the relationship between employees' stock option exercise behavior and the underlying share price (the trigger multiple or multiple) is neither compulsory nor certain: it is a stochastic relationship. Let us suppose past history analysis shows that its distribution of multiples can be represented by a statistical distribution. That distribution is probably correlated with the distribution of share price returns. Good science requires that the statistical distribution of multiples should be introduced in the calculation of the stock option cost to estimating it correctly. The right mathematical tool is the

family of lattice models with Monte-Carlo simulations of multiples according to their distribution. So putting aside contractual life for expected life creates technical valuation problems to be taken in account. Another problem is the risk of manipulations in trigger multiples analysis to achieve cost reductions. To sum up, the use of expected life or term instead of contractual life might trigger criticism from those opposing stock option accounting without necessarily generating real cost reduction of stock options if calculations are done properly.

Implied volatility instead of historical volatility

FASB supports in its draft the "implied volatility concept": "The implied volatility of the share price is determined from the market prices of traded options. Additionally, the term structure of the implied volatility of the share price over the most recent period that is generally commensurate with (1) the contractual term of the option if a lattice model is being used to estimate fair value or (2) the expected term of the option if a closed-form model is being used." That statement is questionable. Traded options are usually short term while stock options have long maturity, up to 10 years. To be consistent, implied volatility should be derived for long-term corporation equity instruments like equity linked bond pricing. An analysis for the first semester of 2003 shows that their implied volatility was substantially lower (from 30% to 50%) than their 5 year historical volatility. For these shares, there seemed no special events justifying that expected volatility should differ from the historical volatility.

The implied volatility is a pragmatic concept, a vernacular, a language, and not a scientific fact that is statistically measurable. It derives from the company's use of the risk-free interest rate to assess the cost of its options. Of course companies are free to use the risk-free interest rate to price their options, short and long term. Cost and price of options are different matters.

There is an alternative way to analyze short-term traded option prices: assessing expected share return volatility using quantitative forecasting techniques and calculating the implied interest rate. Volatility expectations are treated as statistical facts, which are not dependent of traded options prices. As a consequence, when markets price options they indirectly price interest rates.

Similarly, to reconcile long-term option market prices (derived from equity linked bonds) and long-term expected volatility established by quantitative forecasting techniques, one has to use an implied corporate interest rate (ICIR), set by the market, quite different from the risk-free interest rate (RFIR). When the bond equity-linked option is a put, ICIR is higher than RFIR, when it is a call, it is lower than RFIR when it is not nil.

Expected volatility should be estimated by applying to historical volatility the adequate quantitative forecasting techniques, especially when long-term options costs are calculated.

Rate of capital employed versus risk-free interest rate

A key question not discussed by FASB's draft is the rate Corporations should use to more accurately reflect the reality of stock options expenses. For FASB the matter seems settled: it is the risk free interest rate (RFIR). The theory of efficient markets states that the rate should be the rate of capital employed (ROCE), with assets at market. ROCE is usually two to three times higher than the risk free interest rate (RFIR).

So, to estimate their stock option cost, corporations should use future expected volatility (derived from quantitative analysis of their long term share history) and ROCE, with assets at market. It leads to a much higher cost estimate of stock options than RFIR. Depending on volatility, that cost could be substantially higher when ROCE is substantially higher than RFIR.

For instance, with the same pricing parameters as above: strike and spot USD 100, maturity 10 years, dividend yield 2%, long term volatility 30%, strike and spot of USD100, no vesting period,

10-year stock option cost:

Interest rate	Cost per stock option (USD)
RFIR: 4,5%	37,49
ROCE: 12%	55,52

The Company's true cost for one stock option is USD55.52 with a ROCE of 12%. There is a difference or hidden loss of USD18.03 per stock option. The Company's earnings would accordingly be overstated by not using the stock option true cost.

As a consequence, a Company with a good credit standing and high ROCE would advantageously compensate participating employees with non-traded put options, which are far cheaper. Participating employees would borrow from banks to buy shares. Put exercise price would increase in time to cover bank loan interest.

To conclude our comments, FASB's draft supports an under-valuation of stock options on at least three counts (expected life or term, implied volatility and leading interest rate). We believe that more solid guidance is needed.

In this long march of the market system to fairness, it seems advisable to give corporations as few opportunities as possible to overstate earnings.

I would be pleased to hear your reaction to my views or discuss any of the points outlined. In this regard, my e-mail address is cegmarkintrm@aol.com and the New York office number is (212)541-7010.

Yours truly,



Nicolas Steinberg