



# Policy Brief

Stanford Institute for Economic Policy Research

## How to Account for Stock Options<sup>1</sup>

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### The Expensing Debate

The March 31, 2004, Financial Accounting Standards Board (FASB) proposal for expensing stock options is reigniting an already heated battle. Companies like AIG, Citigroup, Coca-Cola, General Electric, and Wal-Mart are already expensing or planning to expense employee stock options. Warren Buffett and Alan Greenspan argue options create a real expense to shareholders that should be recognized. Perhaps even more important, Bill Donaldson, chairman of the Securities and Exchange Commission, takes that position. Some of the leading executives of Silicon Valley including Craig Barrett, John Chambers, and Scott McNealy claim that none of the current proposals manages to provide an accurate measure of options costs, and it would be better to not expense at all.

Both sides have some legitimate points. As Buffett says, he would be happy to sell CEOs carpeting, insurance, or other Berkshire Hathaway products in return for options. But proposals such as the recently announced FASB method are deeply flawed. For example, under the FASB standard Intel would currently be expensing \$3.36 billion in “fair value” of virtually worthless options issued in 2001. If it lays off a worker before he or she vests in \$100,000 of accounting value worth of these economically irrelevant options, Intel will report an accounting profit that is \$80,000 higher than if it retains the employee who contributes \$20,000 toward the profit of the firm. The firm thus has an accounting incentive to lay off a productive worker who contributes to the profit of the firm. Clearly, the FASB proposal fails to meet the primary goal of modern accounting, namely, to provide decision makers with relevant and reliable information.

The proposal promoted by a number of Silicon Valley firms, HR 3574 (Stock Option Accounting Reform Act), is also flawed. Options have value for two reasons. First, they give the holder the right to defer paying for the stock until the date of exercise. Second, they give the holder the right to defer the decision about whether to buy until that same date. For many

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<sup>1</sup> A more detailed version of this appears as SIEPR Discussion Paper No. 03-007 available at [http://siepr.stanford.edu/papers/papers\\_num.html](http://siepr.stanford.edu/papers/papers_num.html).

options, particularly short-term ones for which the stock and exercise prices are relatively close, the right to defer the decision is more important. HR 3574 proposes to value options to the top five employees in the firm as if the right to defer the decision has no value,<sup>2</sup> and completely ignores the cost of options issued to all but the top five executives. For example, it would value the Intel options issued when the stock was at \$89 as though the employees were required to exercise the option regardless of what happened to the stock price. If this were true, then the employees who are vesting today when the stock is at \$27 would be at risk of a \$62 per option loss. Clearly, this approach does not accord with economic reality. Under HR 3574 firms would report higher profits if they paid workers in options than if they paid the workers in cash and sold the equivalent options in the market.

The Silicon Valley argument that options are an important engine of economic growth that will be destroyed if they must be recognized as an expense is also questionable. Would CEOs and sophisticated professional investors take actions that destroy billions of shareholder wealth as a response to the accounting change? If options create tremendous value, then putting them on the same accounting footing as all other forms of compensation will not eliminate them. It is only if options are a marginal form of compensation that creates little or no value that a change in accounting rules that has no cash flow effect will cause their elimination.

## **The Bulow-Shoven Options Pricing Approach**

Is there a third way that can achieve the goals of the FASB while addressing the legitimate concerns of its critics? Yes. The problem with the current proposals of both the FASB and the International Accounting Standards Board is that they fail to adequately recognize the two key features of employee options—generally speaking, options are forfeited if employment is terminated for any reason prior to vesting, and vested options must typically be exercised within 90 days of employment termination. While companies may appear to be granting 10-year options, the only asset that employees ever securely possess (in that they get to keep it whether they stay with the firm or not) is a 90-day option. Thus, at any given time the

employee with a vested option owns a 90-day option, and that option is extended for another three months by each additional quarter of work.

A better way to account for stock options would be to recognize these economic realities. Vested options should be treated as three-month options, with the expense each quarter equivalent to the cost of allowing the employee to defer the exercise decision by another three months. The expense of a 90-day extension could be calculated on the first day of the quarter, based on the stock price at that time. For options where the stock price and exercise price are relatively close, the extension has real value and would therefore result in meaningful expense charges. For options that are deeply in or out of the money, the extension would have little economic value and would thus impose little accounting cost.

This approach would be consistent with the way we account for the biggest component of compensation expense, namely, salary. When an employee gets a \$10,000 raise, the firm records an extra expense of \$2,500 in the first quarter in which the extra money is paid. Then, as employment is extended, the firm recognizes the ongoing cost of retaining the employee quarter by quarter. Perhaps a more comprehensive approach would have the firm estimate on day one the value of all the worker's projected future services to the firm, net of all his future wages, but in the real world we rightfully avoid that complicated and problematic calculation. Furthermore, we do not remove salary expense from the income statement and consign it to the footnotes simply because of the difficulty of implementing such a procedure.

The current approach to salary accounting is accepted by all because it provides a reliable, comparable, and objective number. And even if one might believe that the salary approach misallocates costs over time, over the course of employment it clearly gets both the total amount paid and the present value of total compensation right. Applying a similar approach to options compensation yields essentially the same virtues.

For options that vest gradually over time, firms could recognize and expense each non-vested option as equivalent to either a constant or increasing fraction of a similar vested option,

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<sup>2</sup> Technically, the bill mandates that option values be determined on the assumption that there is no volatility in stock prices, so that all stocks will earn the riskless rate of interest and the right to not exercise will have no value.

with companies given significant flexibility in choosing the time pattern of recognition. By the time the options vest, they would have to be completely recognized on the books. The important qualification would be that whenever options are recognized during the vesting period, the expense of the newly recognized options would be based on the market value of a 90-day option at the time of recognition. For example, if the company chose to recognize all granted but unvested options on the grant date and if the exercise price was equal to the current stock price (which is typical for employee stock options), the initial expense charge would be for an at-the-money 90-day option. By requiring that whenever options are recognized the expense be based on the current stock price (and not the grant day stock price), we can offer firms flexibility in their recognition schedule and retain all the benefits of the salary approach. Of course, detailed footnote disclosure should be provided to allow investors to easily calculate the consequence of different expense recognition patterns.

## Implementation Examples for Market-Based Expensing

Assume a firm issued options on the first day of a quarter, with an exercise price equal to the current stock price of \$50 per share. Under our basic expensing alternative, firms would estimate the value of a 90-day option and multiply by the number of options expected to vest to get the first quarter cost. For example, if the company projected that 1 million options would vest and the 90-day value was \$4, then the first quarter expense would be \$4 million.

Say the stock rose to \$60 by the end of the quarter, but employee turnover was higher than projected, and so now the firm only expects 900,000 options to vest. Say the value of a 90-day option was \$10.60. Then the firm would have a gross second period expense of \$9,540,000. Offsetting that, however, would be the value of the options expensed in the previous quarter, which in this case would be worth \$10 each, or \$10 million in total. Thus the net expense for the second quarter would be  $\$9,540,000 - \$10,000,000 = -\$460,000$ .

Calculations would be similar in the post-vesting period. Assume that in fact 1 million options had vested and during the next quarter 300,000 were exercised. If the stock price ended the quarter at \$60, then the firm would have a gross

expense of 700,000 times \$10.60, or \$7,420,000, but this would be offset by the \$7 million value of the 700,000 vested options that had previously been expensed and not exercised. So the net expense would be \$420,000.

We also give firms an alternative of initially expensing fewer options than are expected to ultimately vest, but accounts must be “trued up” by the vesting date. Expensing fewer options initially will defer expenses, but the risk-adjusted present value of the amount expensed will be unaffected. Furthermore, net expenses may become more volatile if expensing is deferred.

A company just going public, which did not care about its accounting earnings prior to its IPO date but does care about subsequent reported earnings, could do well under this system by using conservative projections about attrition. A company that issued unvested options at \$5 and expensed them before going public would have a negligible ongoing net expense if the number of options that vest equals the expected number, unless the stock fell back close to \$5. On the other hand, the firm would receive a credit equal to the intrinsic value (stock price minus exercise price) for every option that had been expensed and then did not vest.

This market-based approach to expensing options averts a variety of problems. Expenses for public companies would largely be based on the market price of 90-day traded options. Firms would not have to base estimates of value on projections of long-term stock volatility, dividend policy, employment, and employees’ option exercise behavior. Accounting and economic incentives would be aligned, so there would be no incentive for uneconomic layoffs. Because expenses could be closely estimated on the first day of each quarter, there should be no big earnings surprises.

By using an objective, market-based method that determines quarterly expense based on what the employee really receives for staying on the job, we can have a system that meets the legitimate objections of firms while achieving the goals of modern accounting.

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