THE STOCK OPTIONS CONTROVERSY AND THE NEW ECONOMY

JAMES V. DELONG
SENIOR FELLOW

JUNE 2002
EXECUTIVE SUMMARY

Pressure is growing on companies to treat grants of stock options to employees as compensation expenses for purposes of financial accounting.

This idea is a bad one. Proposals to expense options ignore: (1) The rising importance of intellectual property and other intangible assets as determinants of corporate value; and (2) The role of options in neutralizing problems of information asymmetry in technologically complex industries.

These proposals also assume away significant problems in valuing stock options and raise serious concerns about tax accounting and tax rates. Nor are the proposals necessary, because legitimate issues presented by option grants can easily be remedied by improved disclosure, a change already underway.

The pressure to require that stock options be accounted for as expenses seems motivated as much by political as by accounting concerns. Those exerting it are aware that the proposed changes would discourage grants of stock options to broad classes of employees, and this is the result they wish to achieve. They also demonstrate a rigidity of thought reminiscent of the New Deal Era: There is labor and there is capital, and never the twain shall meet. The ambiguities of those categories in the Information Age get no attention.

As was recently noted, “Without institutions to bring together people with resources and people with ideas, new ventures can be launched only by the narrow circle of people who have both.” Options are just such an institution, and an important one, and the proposals to treat them as expenses would meddle destructively with a complex financial and entrepreneurial ecosystem.
INTRODUCTION

The Senate Finance Committee recently held hearings on S. 1940, a bill sponsored by Senators Carl Levin (D-Mich.) and John McCain (R-Ariz.) that would: (1) Force companies to treat grants of stock options to employees as expenses for financial accounting purposes; and (2) Reduce the tax deduction allowed the company when the employee exercises the option.¹ Venture capitalists and corporate managers, especially those in the information and communications industries, contend that the bill would discourage grants of stock options to employees. They particularly fear the impact of the proposal on broadly inclusive plans that are growing in number and importance as the intangible assets created by employees’ intellects become crucial determinants of corporate value.²

Different groups are taking polar opposite positions on the issue. The Teachers Insurance and Annuity Association/College Retirement Equities Fund Institute (TIAA/CREF), which handles $275 billion worth of pensions and other financial products for the education and non-profit sector, favors treating options as an expense.³ So does the Council of Institutional Investors, a coalition composed primarily of pension funds for public employees and unions.⁴ TechNet, an association of high tech companies, is opposed, as are the trade associations for venture capitalists (the National Venture Capital Association) and corporate financial executives (Financial Executives International).⁵ Many other combatants have joined in, including such prominent businessmen and economists as Alan Greenspan, Warren

¹ The provisions of S.1940 are described on page 12.
² Compensation expert Frederic W. Cook thinks that, historically, the “run rate” for stock options — the number of options granted each year as a percentage of outstanding shares — was around one percent, but that “with the rise of the importance of human capital and a decrease in the importance to success of financial capital,” the average run rate is now two percent. Financial Executives Institute, Stock Options: How to Measure and Manage Dilution: Teleconference Transcript, May 31, 2000, p. 3, www.fei.org/download/May_31_teleconf_transcript.pdf.
Beyond the merits or demerits of this particular bill lies a deeper issue: whether the basic concept that options should be treated as expenses in calculating corporate earnings is correct. It is possible to reject S. 1940 as mischievous but still endorse this underlying purpose, and indeed, some participants in the debate seem to be doing exactly this. They support the concept, but do not actually mention the bill. So even if S. 1940 goes nowhere, its idea remains alive. Congress or the Securities and Exchange Commission (SEC) might well goad the Financial Accounting Standards Board (FASB), the body that establishes the authoritative standards for U.S. companies, to issue new directives on stock options.\textsuperscript{7}

This is a bad idea for the reasons set forth below.

THE ROLE OF STOCK OPTIONS IN THE NEW ECONOMY

Knowledge as Capital

The classic rationale for giving stock options to managers is to ensure their incentives remain aligned with those of their shareholders. The theory is that managers who stand to benefit if their stock increases in value will work to make this increase come about, and will be less likely to fritter away money on high corporate living. Option holders will also have an incentive to work for the good of the organization as a whole, not just for their particular subpart of it. And managers motivated by options should be more devoted to the long-term health of their company than managers rewarded by bonuses based on short-term earnings reports. Investors should, at least in time, notice any attempt to juice up short-term earnings at the expense of long-term growth, and knock the stock price down accordingly.\textsuperscript{8}


\textsuperscript{7} Current FASB rules are described at pages 10-11. These were created in 1995, after a 1993 FASB proposal to require that options be expensed met intense opposition from the corporate community.

This “align the incentives” rationale remains valid. But it has been given a powerful new twist because the factors that determine corporate value have changed over the past two decades. Knowledge, and the intangible assets it produces, has become an important determinant of corporate value, and this is changing the relationship between shareholders and knowledge workers.

Professor Baruch Lev, a leading thinker on the valuation of intangibles, concludes that “intangible assets (e.g., discoveries, patents, brands, unique organizational designs and processes, etc.)” currently constitute 60 to 75 percent of corporate value, on average.9 Scholars at the Brookings Institution agree, noting that, as of 1978, approximately 83 percent of the value of the debt and equity of non-financial publicly traded companies was represented by the book value of their tangible assets. By 1998, these tangible assets represented only 31 percent of their capital value. Some of the remaining 69 percent might be attributed to increases in the value of hard assets that are not included in book value, but most of it by far comes from intangible assets: copyrights, patents, trade secrets, customer lists, know-how, research in progress, market knowledge, employees’ contact lists, and the synergies of a functioning team.10 Economist Leonard Nakamura estimates that U.S. companies invest at least $1 trillion annually in producing intangible assets, which is almost as much as they invest in plants and equipment.11

Note that these estimates are for all companies, not just those commonly regarded as “high tech.” This means two things: (1) The percentage of intangible value for the subset of companies that are most dependent on this type of asset is even higher, perhaps approaching 100 percent in some cases; and (2) The digital revolution is spreading throughout the economy and there is almost no such thing as an “old economy.”

Understanding these changes, assessing their importance, and developing new methods of accounting for them is an extraordinarily difficult task. In January 2002, FASB noted, “Hundreds of recent articles, studies and consultants’ reports have decried what they consider accounting’s failures to respond to recent fundamental changes in the economy,” and added to its technical agenda a project on Disclosure of Information About Intangible Assets Not Recognized in Financial Statements.12

---

12 FASB, Project Description: Disclosure About Intangible Assets Not Recognized in Financial Statements (Last Updated: March 7, 2002), www.fasb.org/project/intangibles.html. The material includes a background report by a member of the Board’s staff, Wayne S. Upton, Jr., Business and Financial Reporting, Challenges from the New Economy, FASB 2001.
The change documented by these analysts is a tectonic shift in the way businesses are valued. Two prominent economists recently noted: “Back in the [late 19th Century] intellectual capital as such was not such an important factor. Industrial success was based on knowledge, but on knowledge crystallized in dedicated capital. Many people knew organic chemistry. Few companies — those that had made massive investments — could make organic chemicals. Today, it appears that intellectual property is rapidly becoming a much more important source of value.”

If intellectual assets provide most of the assets of the contemporary corporation, then obviously the relationship between the various participants in the company must evolve away from the old categories of “capital” and “labor” with a layer of management to mediate between them. The financier of an organic chemical plant can hire engineers and chemists to design and build a plant, and at the end of the day he has captured their knowledge — crystallized it into a factory. The people supplying the money still need knowledge workers, but not necessarily the same ones, since any chemist of equivalent training can carry on the process.

If the knowledge workers are producing an intellectual rather than a physical structure, the situation is different. Their knowledge can be crystallized to some extent in a patent, a trade secret, or a roster of customers, but the completeness of the capture of knowledge is much less. The worker is still needed to produce improvements on the product, or to keep the customer happy. And it may be that workers of equivalent training are not fungible. The product may owe much to an individual’s spark of creativity, or its creators may have acquired considerable product-specific expertise in the course of the development process. Much of the capital value of the company may reside in the brains of the workers, not in identifiable physical capital. To maintain the value of the company, investors may need the same workers who developed the process.

A logical response to this evolution of corporate value is to make intellectual workers into partners in their businesses by giving them stock. This lets them share in the rewards. Options to buy stock are an important tool in such a strategy because, almost always, they come with restrictions. Many options are not exercisable for a period such as five years, and may run ten years or more if the firm retains the employee (allowing him to speculate in the stock at no risk). They provide important glue to stick the employee to the firm.

Options are also a useful tool for scouting out prospective employees. They distinguish prospects who really believe in the firm’s technology and business.

---


model from those who do not with much greater reliability than any number of interviews. Belief and commitment are powerful correlates of success, so the use of options can be an important contribution to the firm’s growth.\textsuperscript{15}

\textit{Asymmetric Information}

Options play a subtler role as well, one crucial to venture capitalists (VC). They are a response to problems of asymmetric information that might otherwise present high barriers to capital investment.\textsuperscript{16} It is the importance of this function that makes the VCs into vigorous defenders of options.

“Asymmetric information” is a term used to describe the common situation in which one party to a business deal knows things of which the other is ignorant, a state of affairs that creates problems for both sides. How does the person who has the information capitalize on it without revealing it, thus diminishing its value? For the person not in the loop, how does he know what the information is worth when the other party will not reveal it until he is paid?

For high-tech companies, especially startups, such problems take on further subtleties. Suppose a group of technical experts wants a venture capitalist to support a new company based on what they believe is superior technology. By definition, the tech experts will understand the technology and its possibilities better than the VC. But those making the pitch will know another crucial fact: namely, whether they really believe what they are saying.

So how does the VC offset his informational disadvantages in such a scenario? VCs spend their lives dealing with people who try to sell them perpetual motion machines, so they must develop sorting devices. A reasonable solution is to set up a company that pays its technical experts a modest wage and then adds stock options. If the technology works, then the experts reap a big reward. If it fails, they do not. Obviously, an expert who believes his own pitch will find such a deal attractive; a snake oil salesman will not.

The mechanism of stock options also addresses information issues even trickier than whether experts are telling VCs the truth about their personal beliefs concerning a technology. Experts may know more than anyone else, but their knowledge remains partial and, of course, biased. We all love our own creations. Their technology may fail at any stage — in the laboratory, during the transition to industrial production, or in the marketplace. And, given the winner-take-all nature of many current tech markets, the better the technology, the more it may cost in the end. As any poker player knows, nothing is more expensive than having the second best full house.

\textsuperscript{15} This point is different from the argument that stock options keep individual incentives aligned with the corporate good. The point here is that in the context of technical products and uncertainty, a process that pre-selects employees for belief is a good thing for the financiers.

Because they are not fools, both technical experts and VCs know all this. So, as the experts work on a technology, they make a continuing and complicated assessment of their probability of success, and of the relationship between this probability, their pay, their possible long-term pay-off, and their opportunity cost in terms of foregoing alternative employment. For example, dozens of companies are now working on technologies for digital rights management. All must think they have a shot at success, or they would not invest money, time, and energy. Few will be right.

In this context of uncertainty, stock options provide continuing signals to financiers about a technical staff’s assessment of its prospects. When staffers no longer consider their gamble a good one, they let the financiers know, either by demanding cash or by leaving and forfeiting their options. This is not an assessment VCs can get from people collecting cushy salaries, who have incentives to convey optimism no matter what.

It should also be noted that many similar issues of information asymmetry occur in established companies as well as new ventures. The importance of intangibles permeates the entire economy, and financiers of automobile companies and retail chains face the same information problems as the VCs of Silicon Valley.

OPTIONS AND ACCOUNTING

Expansion

The use of options has exploded over the past decade, at the same time that intangible intellectual property has become a more important component of corporate value. The National Center for Employee Ownership (NCEO) estimates that in 1990 about one million employees held unexercised options under “broad” plans. (A broad plan is one that grants options to at least 50 percent of employees.) By 2001, the figure was somewhere between eight and 10 million.¹⁷

Options, once thought of as a perquisite for top executives, are percolating down throughout the entire corporate organization. Between 1994 and 1997, two-thirds of options went to employees who were not among the top five managers in their companies, and in 1999, 86 percent of options were so allotted. And as one might expect from the above analysis of the advantages of options, small firms grant more options than large ones, and technology firms grant more than non-tech firms.¹⁸

A study conducted by the NCEO concludes that broad stock option plans are indeed worthwhile. As of 1997, companies with such plans exhibited 28 percent more employee productivity than the average publicly traded company, and 31 percent more than paired peers. However, as might be expected in such a controversial area, the results of studies on this issue are mixed.

**Current Accounting and Tax Treatment**

Occasionally, but rarely, stock options are granted with an exercise price below the current market value of the stock. These are treated as a bargain sale to an employee. For both financial accounting and tax purposes, the employee records the value of the bargain as income and the company deducts it as an expense.

The stock options that are the subject of current debate are those carrying an exercise price at or near (but above) the current market price of the stock. Usually, they cannot be exercised for a period of years, and they expire after some additional time. For example, Microsoft’s current policy is to grant stock options that vest over a period of 4.5 years and expire after 10.

At this point, one must distinguish between two types of options that are treated differently for tax purposes. An Incentive Stock Option (ISO) is one that meets the tests of section 422 of the Internal Revenue Code. A Non-Qualified Stock Option (NQSO) is one that does not meet the tests. Both types are used by companies, but good data does not exist on the breakdown between them. Thus, when someone reports that “88% of information technology companies grant stock options to all employees,” information on the breakdown between ISOs and NQSOs is not available.

Their tax treatment differs as follows:

**ISO.** No tax consequences attach at the time the option is granted. Furthermore, when the employee exercises the option, no tax is paid as long as the stock is held for at least one year after the date of the exercise, and at least two years after the date of the grant. If the stock is disposed of after that, any profit is treated as a capital gain. The employer does not take any deduction from its income unless the employee disposes of the stock prematurely and must pay taxes on it as ordinary income; if this happens, the employer can take a deduction equal to the employee’s gain. An additional problem is the Alternative Minimum Tax (AMT), which can be triggered by the exercise of an ISO for the year of the exercise.

---

19 NCEO, *Stock Options, Corporate Performance, and Organizational Change*, www.nceo.org/pubs/optionperformance.html. Productivity was measured by capital intensity and employment.


NQSO. No tax consequences attach at the time the option is granted. When the employee exercises the option, he or she pays taxes at ordinary income rates on the difference between the market value and the exercise price. The employer gets a deduction equal to the employee's gain, taken in the year in which the option is exercised.

Knowledgeable observers estimate that the great bulk of options granted by companies are NQSOs. These are favored by large public companies because participating companies get a tax deduction and because some requirements for attaining ISO status can be difficult to meet. ISOs have received disproportionate publicity because they were used heavily by Internet startups that had no earnings anyway, and thus had no use for tax deductions. Also, in 2000 and 2001, many holders of ISOs got nailed by huge AMT bills for stocks that had been worth a great deal when the option was exercised but had declined sharply by the time taxes were due. This attracted considerable publicity. However, NCEO estimates that as of 2000 only one to two million employees held ISOs.24

Tax accounting and financial accounting are not the same thing, since they have different purposes. Taxes are intended to raise revenue while minimizing complaints from taxpayers — the “most feathers with the least squawk” is the classic phrase. Financial accounting is designed to provide an accurate picture of a business and its operations to investors, managers, and the public. As these goals differ, so do the rules.25

For financial accounting purposes, the same rules apply to both ISOs and NQSOs. The Financial Accounting Standards Board (FASB) gives companies a choice concerning options. They can deduct the “fair value” of an option as an expense at the time the option is granted, allocating the cost over the vesting period of the option. Fair value is estimated by using the Black-Scholes method (a standard model used for valuing options). The alternative is to calculate the “intrinsic value” of the option, and then to insert a footnote into the company’s financial statements that estimates its Black-Scholes “fair market value.” Intrinsic value is the difference between the current market price and the option’s exercise price.26

The FASB strongly urges companies to use the fair market value method, but almost no one does. Instead, they use intrinsic value. But this is almost always zero, given that options are priced at the market value at the time of the grant and that intrinsic value is the difference between the grant price and the market price. The Black-Scholes fair market value is then put into a footnote.27

In addition, financial statements must disclose earnings per share (EPS) on a “fully diluted” basis — a figure must be shown for EPS taking into account all outstanding options that are “in the money,” which means that their exercise price is lower than the current market price of the stock.

Options are reflected in the company balance sheet when they are exercised, where the number of shares outstanding is increased to reflect the shares granted pursuant to the option, and the capital accounts are adjusted to reflect the payments. Future reports of EPS reflect the new number of shares if the company met the option by issuing new shares. Companies sometimes do this, and sometimes buy shares on the market to issue to option exercisers.

A number of gaps in this disclosure scheme have been identified.

1. Since the current FASB rule has only been in effect since 1997, a company may have options granted before 1997 that are not in the money and that need not be disclosed in its dilution statement. These nevertheless overhang the market, at least in theory. But time will cure this as pre-1997 options expire.

2. The required FASB disclosure is made in the SEC Form 10K filed at the end of the company’s fiscal year. The disclosure could be made more timely.

3. While ISOs must be approved by the shareholders, NQSOs need the approval of only the Board of Directors, which means the grant need not show up in a timely fashion in the firm’s disclosure materials.

4. Options are not shown on the balance sheet. A recent article argues that many problems would be eliminated if the value of outstanding options were carried on the balance sheet and marked to market.28

Standard & Poor’s (S&P) recently noted the importance of options, which can, it said, reduce a company’s “Core Earnings” by as much as 10 percent. S&P strongly recommended that information on options be disclosed quarterly, and “provide all data necessary for an analyst to review the calculation of stock option expenses.” It also expressed an intention to “compile and report options-adjusted Core Earnings for its indices and its company coverage universe,” though it did not specify a methodology by which the adjustment would be made.29 The S&P statement is somewhat ambiguous, however, because it also says that the organization “takes no position on questions of how employee stock options should be taxed, related questions of how to account for options, or issues of when they should or should not be used.” (Emphasis added). So S&P does not endorse either S. 1940 or the 1993 FASB proposal.

---

Proposals That Stock Options Be Expensed for Accounting Purposes

Under S. 1940, an employee’s taxes would remain the same. For an NQSO, he would report the difference between the exercise price and the market price as ordinary income in the year in which the option was exercised. The company would also take its tax deduction at that time. For an ISO, he would pay no tax as long as he held it for the necessary period and the company would get no deduction.

However, the amount of any tax deduction given a company for NQSO would change under S. 1940. It could not be greater than the amount it had treated as an expense in preparing its financial statements. Thus, a company that used the method of “intrinsic value,” plus a footnote, could deduct nothing.

As a result, any company that wanted the benefit of a tax deduction — which means almost all companies — would be forced to use the “fair market value” method. Under this scenario, several possibilities would arise:

1. If the company’s estimate of the value of an employee’s options had been greater than the actual gain the employee realized upon exercise, the deduction would be limited to the amount of the employee’s gain.
2. If the company’s estimate of the value of an employee’s options had been less than the actual gain the employee realized upon exercise, the deduction would be limited to the estimate.
3. If an employee’s options were not exercised for any reason, the company would get no tax deduction even though it had deducted the option’s value from its earnings for accounting purposes.

S. 1940 would increase corporate taxes, sub rosa, because it would limit the deduction to the lesser of the predicted or actual cost associated with the exercise of the option. This is regarded as both unfair and contrary to the usual tax policy of relying on actual numbers, not estimates and predictions. S. 1940 would increase corporate taxes, sub rosa, because it would limit the deduction to the lesser of the predicted or actual cost associated with the exercise of the option.30 This is regarded as both unfair and contrary to the usual tax policy of relying on actual numbers, not estimates and predictions. It would also disconnect the amount the employee reports as income from the amount the employer deducts from taxes. This makes no sense: If employees have ordinary income, it is coming out of somebody’s pocket and that somebody should be able to deduct it from their own taxes. That is why it is called an income tax; a tax on gross receipts is a different thing altogether.

Even if S. 1940 is rejected, it would still be possible to require that options be treated as expenses for purposes of financial accounting, but not to change existing tax accounting. The FASB proposed such a change in 1993, and was bludgeoned back to its current position by massive opposition from the corporate community. The International Accounting Standards Board (IASB) is moving in this direction; its tentative proposals would require that firms account for options by making a Black-Scholes estimate at the time the option vests.31 These proposals say nothing about taxes, leaving that issue to the tax code and the IRS.

31 International Accounting Standards Board, Accounting for Share-Based Payment: Project Background (Latest Revision: March 27, 2002), http://www.iasc.org.uk/docs/projects/sbp-ps.pdf; International Accounting Standards Committee, G4+1 Position Paper: Accounting for Share-Based Payment, Staff Discussion Paper, 2000, www.iasc.org.uk/docs/g4sp00/g4sp00.pdf.
Neither S. 1940 nor alternative proposals provide for re-stating earnings in light of experience. If an option were given a high value at the time of its grant and this value had been deducted from revenues in calculating earnings, and if in fact the company’s stock price did not go up — thus leaving the option worthless — the company would not go back and raise its earnings for the year of the grant to reflect that ultimate value. Nor would it restate past earnings if the stock went up like a rocket and the option turned out to be much more valuable than the original estimate.

**OBJECTIONS TO THE PROPOSED CHANGES**

Supporters of stock options have numerous reservations about these proposals, ranging from political concerns to questions about the mechanics of valuation to differing philosophies about the new economy.

*Taxes*

The potential tax implications of the above mentioned changes are important. As described above, S. 1940 carries unfavorable tax consequences that have roused the corporate community. Other financial accounting proposals, such as those contemplated by the FASB or the IASB, do not themselves affect taxes, but they certainly lay a foundation for future changes. If options were given a formal valuation as of the time of the grant for the purpose of treating them as corporate expenses, it would be a short step for the IRS to insist that they also be treated as expenses for tax purposes at that time.

Companies do not usually object to being told to accelerate tax deductions, but in this case it would cause several problems. It would force employers to perform a series of complicated calculations on the value of stock options, and would trigger heavy IRS involvement in options accounting, adding a new area of confusion to the 9,500 pages of “gibberish” that constitutes the current tax code. The requirement would also introduce an additional element of uncertainty into tax law, which is supposed to be based on actual numbers. The one certainty is that the deduction for the value of the options could be either too much or too little. And the more successful the company, the more the deduction would be understated, because it would not reflect the true increase in the value of the stock.

Some commentators on the “expense the options” side argue that other tax numbers, such as the lifespan of machinery, are also based on estimates that can be quite wrong. But this misses the fundamental point that, at some point, reality is plugged back into the calculation. The actual cost of the machinery is, ultimately, written off, though perhaps over an incorrect time period. Expenses for stock options based on a model would never be subjected to

---

*The term was applied by Paul H. O’Neill, Secretary of the Treasury. See Editorial, *Cincinnati Post*, April 19, 2002.*
correction in the light of real experience. Also, depreciation schedules are based on general rules, and can be hashed out between taxpayers and the IRS. Option values depend on highly individualized factors and the level of uncertainty would remain high.

Yet another tax problem is that the IRS and Department of Labor (DOL) would be likely to insist that employees treat the value of options as income for purposes of employment taxes. This imposition would inhibit the use of stock options because it would force employees to pay out cash when they have received none. It would also affect Social Security and Medicaid payments, overtime, and other issues, vastly increasing the level of accounting complexity for employers.

This concern is not imaginary. In 1999, DOL issued an advisory letter to require employers to make individualized calculations of the current profit each employee was deriving from unexercised options when calculating overtime pay. The calculations required would have been so complicated and fraught with error that they would have substantially discouraged stock options. DOL refused to change the advisory, but was overruled by the Worker Economic Opportunity Act.33 Since DOL is widely regarded as a strong ally of the union movement, and since unions tend to be hostile to stock options, a continuation of this institutional enmity is expected.34

The concern is reinforced by a recent IRS move to impose payroll taxes on grants of qualified incentive stock options (ISOs) and employee stock purchase plans (ESPP) effective in 2003. Employer groups estimate first-year accounting costs at $279 million and fear a disincentive for employers to create broad plans. Legislation to forestall the IRS plan has been introduced in both houses of Congress.35

Politics

Another major issue involves politics on a larger scale. Economic conservatives favor expanded stock ownership because they believe that a populace that owns stock will be skeptical of expansions in government regulation and expenditure. They think political activists on the other side, those who favor expanding state power, want to discourage stock ownership, or at least channel it into pension funds and away from direct ownership. For example, the

---


35 Jennifer Corbett Dooren, “Employers Urge IRS To Drop Stock Option Tax Plan,” Wall Street Journal Online, May 14, 2002; Financial Executives International, “Withholding on Stock Options” (2002), www.fei.org/gr/download/WithholdingStockOptions.pdf. The National Center for Employee Ownership estimates that 15 million employees are in ESPPs and one to two million have ISOs. As described on pages 9-10, these are different from the Non-Qualified Stock Options that are the focus of the controversy over expensing.
Council of Institutional Investors, which favors expensing the cost of options, is dominated by pension funds for public employees and unions, groups that are major pillars of an expanding state.

**Difficulties of Valuation**

Many press reports on the options controversy convey an impression that valuation is a simple matter of plugging in a well-accepted model. It is not that straightforward.

The Black-Scholes option pricing model, for which its originators won a Nobel Prize in 1997, is indeed a powerful and useful tool. It values options according to six factors. Four are known: the exercise price, the market price, the current market rate of interest, and the term of the option. One is more-or-less known: dividends. For high tech companies, dividends can be safely set at zero. The last factor is the most difficult: the expected volatility of the shares.

The following comment to the IASB from a prominent accounting firm describes some of the problems:

A second practical issue is the valuation methodology itself. Standard setters in general have tended to gloss over the issue, and this [IASB] paper is no exception. Market behaviour frequently is less than perfect. A quoted market price often is just a crude approximation of ‘true’ value. We do not question the theoretical validity of the option pricing formulae: the problem is that they depend on several market-related inputs and the result is much less reliable than observable market prices. Extending the use of the pricing formula to employee options will involve additional inputs and raises additional reliability (and verifiability) issues. In many cases, moreover, the historical data on which the formula depends will simply not be there: the specific volatility of shares that have been listed only recently is only one example.36

An analysis by a TIAA/CREF Institute executive, who is quite neutral in his conclusions, points out some additional issues:

Options pricing models are designed to value exchange traded options, not employee stock options. Employee stock options typically have a much longer maturity than exchange traded options, vesting restrictions, non-transferability features, and other characteristics that may imply different valuations relative to exchange-traded options. Moreover, there is evidence that employees tend to exercise options early, sacrificing a significant

---

portion of the value. On the other hand, many employee stock options used in practice have value enhancing features not captured by standard option pricing models. For example, employee stock options are American options (which permit exercise before the expiration date), whereas the standard Black-Scholes model is designed to value European options (which can be exercised only on the expiration date). Some employee stock options may also have reload features or may ultimately be repriced, which enhances their value relative to estimates using standard option pricing models. Similarly, at least for some employees, informational advantages may add substantial value by permitting ‘fortuitous’ timing of options grants and exercises.37

Nor does the standard options pricing model have an answer for the fact that participants in the option game might themselves have a large impact on the value of their options. The position of a knowledge worker receiving an option on the future capital value of the results of his own efforts is different from the position of an outside investor. Similarly, neither the VCs financing a company in partnership with its employees nor the managers running the company and deciding on the level and prices of options are in the same position as outside investors.

Brian Hall of the Harvard Business School and Kevin Murphy of the University of Southern California sum it up:

Compensation consultants, practitioners, and academic researchers have routinely used Black-Scholes or similar methodologies to value executive stock options. However, while the assumptions underlying option-pricing methodologies reasonably describe the situation faced by sophisticated investors holding freely traded options, they do not describe the situation faced by executives (and other employees) holding options on their own company’s stock. In contrast to outside investors, company executives cannot trade or sell their options, and are also forbidden from hedging the risks by short-selling company stock; such actions would obviously defeat a primary purpose of the option grants, which is to align the financial interests of the managers with those of the shareholders. In addition, while outside investors tend to be well diversified . . . company executives are inherently undiversified, with their physical as well as human capital invested disproportionately in their company. These substantive violations of the underlying assumptions suggest that traditional methodologies are not appropriate in determining the value of executive stock options. [Footnotes omitted]38

Clearly, the notion currently bruited about that Black-Scholes provides a plug-
n-play valuation model is chimeric. Nor will anyone who rode the NASDAQ
roller coaster regard valuing companies or their volatility as a straightforward
task, especially when appraisals must be based on intangible assets. A recent
*Wall Street Journal* headline summed it up: “The Rise and Fall of Intangible
Assets Leads to Shorter Company Life Spans: Why High-Fliers Like Telecom
Winstar, Built on Big Ideas, Tumble So Quickly.”

The Nature of the Transaction

The primary purpose of an income statement is to create a temporal match
between revenues and the expenses incurred in producing them.

As noted earlier, the new economy involves partnerships between providers
of tangible and intangible capital. Part of the payments made to employees
should in fact be allocated toward investment, not toward current operations.
At present, this is not done. The internal salary costs of producing intangible
assets are expensed. This is misleading — indeed, it is one of the fundamental
problems recognized by the “hundreds of articles” mentioned by the FASB to
justify its project on intangible assets.

It is by no means certain or even likely that the Black-Scholes assessment of
the value of employee stock options would correspond with the amount that
should be allocated to investment rather than expense; it could well be that
much regular salary should also be treated as a capital item. (This is certainly
true of startups, before they put a product on the market.) But it is highly
probable that requiring that stock options be expensed would move firms in the
wrong direction, increasing the mismatch between revenues and the expenses
that produced them, and result in greater understatement of earnings.

For example, T.J. Rodgers of Cypress Semiconductor is a vociferous opponent
of the proposals to expense options. His company’s original capital consisted
of an idea for manufacturing transistors faster than the competition, a 15-
page business plan, and six founders. VCs funded it for $3.5 million, and
the capitalization grew to $1 billion by 1998. Cypress’ financial statements
show that in 2001 it acquired several companies, and that in each case its basic
purpose was to acquire intangible property of various kinds. The cost of
these acquisitions now goes onto the company’s capital accounts, where it
will be deducted against future revenues as prescribed by Generally Accepted
Accounting Practices. But the cost of the internal production of intellectual
property is expensed, which means that Cypress’ books now fail to reflect
the correct cost of producing its intangible property, because they reflect the
external acquisitions but not the internal production. Also, Cypress’ earnings
have, in fact, been understated, not overstated. It is not surprising that Rodgers
does not want to see these problems made worse.

---

[T]he new economy involves partnerships between providers of tangible and intangible capital. Part of the payments made to employees should in fact be allocated toward investment, not toward current operations. At present, this is not done.

---

Yet another concern is the possible conflict between various types of financiers and between sources of capital in the form of finance and sources of capital in the form of knowledge.

Venture capitalists and knowledge workers have good reason to like employee stock options for reasons already described. Other financiers, such as TIAA or CII, could view themselves as having good reason to be less favorable. They might regard a mechanism that helps knowledge workers and venture capitalists as one that transfers money from conventional investors to these new groups. They might also believe that an accounting standard that has the effect of discouraging stock options would favor traditional sources of capital. It would be as if capitalists got together and agreed to outlaw grants of stock options to employees (an agreement that would certainly arouse the interests of antitrust authorities).

These conventional financiers might be wrong — options are not a zero sum game — but their statements are interesting because of their lack of reference to issues regarding the creation and valuation of intangible assets, issues that cannot possibly have escaped their notice. Such a gap leaves the impression that something has deliberately been left out, and, while one hates to sound too Marxist, the omission could be the perceived class interests of the conventional capitalists.

The VCs’ view is expressed by Mark Heesen, President of the National Venture Capital Association:

First, it takes stock options to lure the kind of managerial talent that is highly prized in any business to the risky, intense, and volatile experience of the start-up. Second, it takes stock options to bring the focused, highly motivated sense of shared purpose that is critical to the success of an innovative new venture. Venture capitalists are investors who affirmatively give up part of their stake in the company because they believe that there is no better way to recruit talent, motivate employees, and grow a company.42

High tech entrepreneur T.J. Rodgers says: “Silicon Valley knows that the adage money makes money is false. We know that people make money, and money makes money only when it is invested in the right people.” Frederic Cook, an expert on executive compensation, applies this principle generally, not just to what is usually regarded as high tech. He notes, “Capital, per se, doesn’t produce a return. It’s a partnership between . . . financial capital and human capital to produce the return.” He makes the point that investors who want

42 Heesen, supra Note 5, p. 14.
43 Rodgers, Note 41, p. 8.
to grab all the returns from an increase in share prices are short-sighted; the question is, “What is the . . . optimum sharing rate that maximizes the returns for all people?”

**Limits on Salary Deductions**

In 1993, Congress enacted a law mandating that companies cannot take deductions for executive salaries in excess of $1 million. Not many salaries in corporate America reach that level, except at the very top. The average CEO in 2000 was paid $1.3 million in salary, bonus, and exercised stock options combined. Not surprisingly, the limitation on deducting salaries creates an incentive to pay lower salaries than would otherwise be the case and make up the difference with generous options.

In this situation, generous options do indeed look like compensation. But the solution is not to revamp accounting for all public companies; it is to repeal the provision so that companies can decide for themselves how much to pay their CEOs.

**Expensing Stock Options Would Hurt, Not Help, Investors**

Opponents of the proposal to expense options also argue that even if their other concerns were eliminated, changing the accounting rules for options would not really help investors. Indeed, it would make their lives more difficult. Unless one endorses one of the political or self-interested motives given above, or attributes the whole movement to the current fad for bumper sticker politics, it is a bit of a mystery why so many people are so in favor of forcing stock options to be treated as expenses.

The argument that such treatment is necessary because companies are overstating EPS, and that this tends to inflate stock prices, is unpersuasive. Disclosures of outstanding options and their terms are contained in corporate reports readily available on the website of the Securities and Exchange Commission, and to the extent that disclosure is now deficient, it could quickly be brought up to snuff, as proposed by S&P. Untold numbers of analysts and investment services slice and dice the numbers. One of the great dilemmas of the bull market of the past decade has been understanding the relationship between earnings and stock prices, especially in light of the importance of intangibles and the speed with which corporate fortunes can reverse.

Besides, considering the number and difficulty of the issues involving valuation and accounting for intangible property generally, the stock option issue seems
like small beer to be spending this much energy on. Most estimates by which earnings have supposedly been understated are around three or four percent for the S&P 500, less than a couple of digits on the current price/earnings multiple, which is in the low 40s. Thousands of smart people are laboring to develop better metrics, and to calculate what corporate earnings would be if they properly reflected the capital value of the intangibles created by items that are treated as “expenses.” Focusing so hard on an area in which relevant information is already available to anyone who wants it is a strange use of time, money, and energy.

The S&P proposal described on page 11 expressed an intent to adjust Core Earnings not only for options but for certain other corporate transactions. The possibility that companies’ stated earnings might suddenly be decreased by significant magnitudes did not result in any sudden market revaluation. This undercuts the argument that investors are seriously misled by current practices.

Investors would, however, be misled by any requirement that options be treated as compensation expenses.

To illustrate this, start with a simple fact situation. Suppose a company has 1,000 shares outstanding, and it grants options at current market value on another 20 shares. Suppose further its earnings for the year are $10,000, so earnings per share, fully diluted for the options, are $9.80. Suppose the stock sells at 40 times earnings, or $392 per share, and the Black-Scholes value is 30 percent of the stock price, which would equal $118 per option, or $2,360 for all 20 outstanding options. Deducting this value from earnings for the year of the grant would reduce them to $7,640, and would cut reported earnings per share to $7.49.

Superficially, this seems to run afoul of the fact that the shareholders are richer by $9.80 per share as a result of the company’s operations for the year — were the company to liquidate, which is the amount of additional cash they would get. Nonetheless, those who argue in favor of expensing the options argue that a $7.49 earnings per share is the correct result. Their theory is that the company could have sold the options for $118 each ($2,360 total). Instead it transferred this amount to employees as an addition to their compensation. In this view, had the options been sold on the open market and not given to employees, then equivalent direct compensation to employees would have been necessary, which would have lowered earnings to $7.49 per share. However, the shareholders would have profited from the sale of the options. Thus, in this pro-expense view, the reported earnings of $9.80 per share should be viewed as containing two components: (1) Earnings from operations of $7.49 per share, and (2) A share of the receipts from the sale of options of $2.30 per share. These add up to the $9.80.
But suppose this additional accounting treatment were required. A number of problems would immediately arise. As noted above, accountants do not believe that Black-Scholes provides an accurate estimate of the value of stock options granted to employees, but they have no alternative model that would reflect the special conditions that attach to employee options. Furthermore, for the reasons pointed out by Brian Hall and Kevin Murphy, the value of an option to an outside investor does not precisely correspond to its value to an employee. So even if a value were calculated according to a model, the calculation would require adjustment to reflect the value to the employee.

Also, if all of the option's value were deducted as an expense in the year of the grant, it would play hob with the reported earnings. In the example given above, suppose that in the year after this option grant the company's earnings increase by 10 percent, to $10.78 per share, and it issues no options. The appearance would be that its earnings had increased by almost 50 percent, and only the investor who carefully read the footnotes explaining the options would understand the true situation with respect to earnings. This is not an advancement over the current system.

Obviously, the problem of earnings that bounce like yo-yos from year to year could be avoided if the value of the option were expensed over the entire vesting period or over the entire life of the option, which may be 10 years or so. Indeed, the Financial Accounting Standards Board (FASB) recommendation that options be treated as an expense mentions that the cost should be spread over the life of the option, a refinement that is being totally ignored in the current debate.

But caution is necessary, because spreading the cost over several years would create other problems. The option value would be established in the year of the grant, then expensed over a period of five to ten years. What method would be used? Would it be straight-line? Is it better to load more of the cost onto the early years? These will obviously be questions for debate.

More fundamentally, as time passes, more information will be available about the actual value of the option. It will certainly be more or less valuable than the initial projection, and the revised values will be known to all parties. Suppose that a company has done very well and the option has vastly increased in value. If so, then in fact the company will be compensating its employees at a far higher rate than appears from the “compensation” line item in its expense budget. Or, if the value has fallen, at a lower rate. In either case, the actual cost of the company’s operations would not be accurately reflected by the new requirement that the initial projection be assessed over several years. So, should the “options expense” line item be revised in the light of experience, or should it be carried at the initially estimated value even when this has become demonstrably wrong?

---

This conundrum illustrates, again, the fundamental conceptual difficulty of treating options as expenses. The value of the option depends on the market’s estimates of the worth of a stream of corporate earnings extending far into the future, and the purpose of the option is to induce employees to make efforts that will increase this indefinite earnings stream. Whatever the value of the option may be, the earnings that produce that value are always in the future—that is the nature of stock valuations. Present and past earnings are relevant only insofar as they shed light on future earnings. So, assessing as a deduction against present earnings the value of an option that depends totally on estimates of future earnings is basically wrong.

If one truly wants to match the value of the option with the revenue it produces, one would have to expense it against earnings into the indefinite future, not the present. However, “expenses” of this nature are not really expenses, but capital contributions, which brings us back to the earlier point that options reflect the value of intangible property, and are not properly treated as expenses at all.

CONCLUSION

The “don’t expense” side seems to have the better of this argument. There are no compelling reasons to make the change, and a number of strong reasons not to.

To the extent that stock options present accounting challenges, these seem to have much in common with other problems of valuing companies in an era of intellectual capital and intangible assets. The obvious solution is to consider them in that context, not to impose a single change of uncertain impact. Furthermore, proposals to treat them as expenses do not adequately consider the problems of timing and would create many difficult problems of interpretation.

To the extent that some corporate officers use options to divert resources into their own pockets, this discovery ranks right up there with the famous scene in Casablanca in which a policeman says he is “shocked, shocked to find that gambling is going on here.” The issue can be addressed without engaging in a wholesale attack on all options. For example, Craig Barrett, CEO of Intel, suggests that option grants to non-executive employees not be expensed, but that options given to the top five officers could be treated as expense. This would, he notes, “minimize abuse at the top,” without interfering with a company such as Intel that gives 90 percent of its options to non-executives.49

Intel is a large and mature company, however. Barrett’s compromise would not meet the needs of the entrepreneurial start-up company, in which the top management and the intellectual firepower are the same people.

To the extent options present tax issues, they illustrate once again the thoroughgoing disgrace of the tax code, the unwarranted degree to which American life is being ordered according to its dictates, and the need to move toward a simplified system, such as a flat tax.

To the extent that adequate information about options has not been made available, or has been laggard, the solution is better disclosure. S&P’s recommendation that information on options be made available with quarterly earnings reports, and that it include all the information necessary for analysts to make the Black-Scholes calculations if they so desire, is an obvious solution.\(^{50}\)

To the extent the proposals are intended to help investors, they will fail, and will probably have the opposite effect.

One is pushed inexorably to the conclusion that pressure to change accounting for stock options is motivated by political rather than accounting concerns. Those exerting it are well aware that the proposed changes would discourage the use of broad grants of stock options, and this is the result they wish to achieve. The critics also demonstrate a surprising rigidity of thought, reminiscent of the New Deal Era of the 1930s: There is labor and there is capital, and never the twain shall meet. The ambiguities of those categories in the Information Age get no attention. At their root, these proposals seem to be the product of either neglect of the new Information Age or hostility to it, combined with a desire to inhibit a continuation in the rise of direct ownership of stock by the public that has occurred over the past decade.

Neither S. 1940 specifically nor new accounting standards generally should be adopted at this time. “Without institutions to bring together people with resources and people with ideas, new ventures can be launched only by the narrow circle of people who have both,”\(^{51}\) one observer has noted. These proposals would meddle destructively in a complex financial and entrepreneurial ecosystem.

---


ABOUT THE AUTHOR

James V. DeLong is a Senior Fellow in CEI’s Project on Technology & Innovation.

His prior professional positions include Vice President and General Counsel of the National Legal Center for the Public Interest; Research Director of the Administrative Conference of the United States; Assistant Director for Special Projects in the Bureau of Consumer Protection of the U.S. Federal Trade Commission; Senior Analyst in the Office of Program Evaluation of the U.S. Bureau of the Budget; and independent consultant and lawyer.

Mr. DeLong is a magna cum laude graduate of Harvard Law School, where he was Book Review Editor of the Harvard Law Review, and a cum laude graduate of Harvard College. He is a member of the bars of the District of Columbia, the State of California, and the Supreme Court of the United States, and has served on the Committee on Scholarship of the Administrative Law Section of the American Bar Association.