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## Running Out of Options: An Investigation of Stock-Based Compensation

Mark A. Powell

Western Michigan University, mysoop@aol.com

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Mark A. Powell, having been admitted to the Carl and Winifred Lee Honors College in Fall 2002 successfully presented the Lee Honors College Thesis on April 21, 2005.

The title of the paper is:

Running Out of Options: An Investigation of Stock-Based Compensation

A handwritten signature in cursive script, reading 'Sheldon Langsam', written over a horizontal line.

Dr. Sheldon Langsam, Accountancy Department

A handwritten signature in cursive script, reading 'Jerry Kreuze', written over a horizontal line.

Dr. Jerry Kreuze, Accountancy Department

A handwritten signature in cursive script, reading 'Mimi Coleman', written over a horizontal line.

Dr. Mimi Coleman, Department of Business Information Systems

**Running Out of Options: An Investigation of Stock-Based Compensation**

**Mark A. Powell  
Haworth College of Business  
Department of Accountancy  
Western Michigan University  
Lee Honors College Thesis  
21 April 2005**

**Faculty Committee Members:**

**Mimi Coleman, Ed.D  
Department of Business Communications**

**Jerry Kreuze, Ph.D, CPA  
Department of Accountancy**

**Sheldon Langsam, Ph.D, CPA  
Department of Accountancy**

# **Running Out of Options: An Investigation of Stock-Based Compensation**

## **UNDERPINNINGS OF STOCK-BASED COMPENSATION**

The financial statements of the high tech firm Broadcom displayed a cumulative net loss of \$5.9 billion between 2001 and 2003. One might wonder how a steady player in a relatively booming semi-conductor industry of the 1990s could have such substantial losses. The first answer is obviously that the bubble of overpriced tech stocks eventually burst. How were the shareholders repaid for their investments in Broadcom? They were rewarded by knowing that had the firm expensed its stock options instead of valuing them using the intrinsic value method, the three year loss would have increased by an additional \$1.8 billion. In other words, \$1.8 billion in shareholder wealth was given to the employees of a firm during a time in which they did nothing short of negatively affect existing stockholders. A failing company managed to avoid expensing this substantial amount, which would have obviously alarmed investors, with the defense that the information was always in the footnotes, and generally accepted accounting principles APB Opinion No. 25, *Accounting for Stock Issued to Employees*, allowed them to do so.

Thus, one of the most heated debates witnessed by the accounting industry was rekindled at the dawn of the new millennium, a resurgence of an issue discussed from the early 1990s. Brought to new light, in part by the corporate debacles of Enron and WorldCom (among others), the concern of expensing employee stock options has taken a forefront in the halls of the Financial Accounting Standards Board (FASB). Not only is the accounting profession facing a difficult polarization of ideas as to how to appropriately account for stock options, but Congress has also joined in the discussion and has threatened intervention if necessary. The different interest groups pitted against

each other include the tech lobby and certain Congressional members representing one side against the vast majority of independent accounting organizations, the Big Four accounting firms, and institutional investors.

Mainly, arguments exist concerning the use of stock-based compensation as a reasonable means of paying employees for high performance. In theory, if employees work diligently and creatively in the high tech industry, companies will succeed in terms of shareholder wealth. Since the employee's pay is linked to some degree (and many times, a high degree) to the stock price, a successful company will yield considerable gain to employees, shareholders, and investors alike.

The tech firms argue that they cannot afford to expense stock options because stock options are generally used to attract talented employees. Expensing these options would cripple these industries. Since they are primarily startup firms without enough venture capital to pay the demands of high salaried employees, they must instead offer significant options that could become fruitful in future years. This practice, they argue, motivates employees to see that the company becomes successful so that their salaries would be adjusted accordingly through options. Congress is widely swayed by these arguments, in part because of the political contributions of the powerful tech lobby. Furthermore, during the sluggish economy of the early 21<sup>st</sup> century, Congress desperately wants economic growth, perhaps at whatever means necessary.

The other end of the spectrum employs a completely different set of principles. Backed by Chairman of the Federal Reserve Board Alan Greenspan, institutional investor Warren Buffet, and The Big Four, the FASB argues that expensing options is a much more relevant and reliable method of accounting for the economic reality of options.

Logically, no one would want to be compensated with stock options if they were worth nothing, and thus there should be an expense recognized for such options as opposed to none at all. Requiring firms to use a single method of accounting for these transactions is consistent with simplifying the rules, putting every company on the same platform, and providing users with fewer complications in analyzing financial statements. Expensing would also be consistent with international accounting standards at this time.

Those in favor of expensing admit that no single valuation model is inherently perfect, and consequently there will be instances in which the models are ineffective in projecting actual future expenses. However, they argue that the claim of model inefficiency is an invalid reason not to expense stock options. While models provide estimations that are imprecise, almost *all* accounting principles are subject to professional judgment. Principles of depreciation of property, for example, are also somewhat arbitrary estimates. But chances of an imprecise measurement should not permit a complete disregard of such useful estimates. This thesis takes the position that though it is difficult to value stock options, it is not a valid excuse for not recording a reasonably appropriate expense.

### **Forms of Stock-Based Compensation**

There are three main forms of stock-based compensation that are widely used. Stock appreciation rights (SARs) are fairly simple. An employee is given a certain number of rights, and then paid cash (or stock equivalent) depending on the price of the stock at the end of the stated period. For example, assume an employee is given 1,000 SARs when the stock price is \$10. At the end of the year, if the price has risen to \$11 the

employee would receive \$1,000 in the form of cash. This provides incentive for rank-and-file employees to work diligently and efficiently to ensure company growth.

The second form is restricted stock. This type of stock is a predetermined number of shares issued to employees after a certain vesting period (usually 3 to 5 years) in which certain conditions must be met and employment continued. Restricted stock is essentially a bonus, and the employee does not contribute any cash to receive such stock compensation. PepsiCo and Microsoft have both announced their intentions to move from stock options to restricted stock awards in the future (Simon and Lublin 2004). It is termed restricted because of the vesting period requirements as well as certain holding period requirements. The holding period requiring the employee not to sell the stock for a certain length of time is to deter any form of possible manipulation with the stock price. This encourages employees to take ownership of the company, but they may sell their shares at a profit of whatever the stock price was at the sell date.

The type of stock-based compensation that is currently the most controversial is stock-option pay. Employees are granted a certain number of options at a set price (usually the stock price on the day the options are granted) with a set vesting period (usually 3 to 5 years). At the end of the period, the employee has the right to purchase, at his/her own expense, the shares of stock at the grant-date price. For example, assume an employee is issued 1,000 options on the grant date when the stock price is \$10. At the end of the vesting period, the employee has the option to pay \$10,000 to receive 1,000 shares of stock. If the stock price has risen to \$15, the fair value of the compensation received would be \$5,000  $[(\$15 \times 1000) - (\$10 \times 1000)]$ . If the stock price has fallen, the

employee would not purchase the stock as the options are “underwater” and would effectively produce a loss.

### **Accounting for Stock Options**

The FASB currently allows for two methods to account for stock options. The first is using Statement of Financial Accounting Standards (SFAS) No. 123, *Accounting for Stock-Based Compensation*, and requires that firms use a fair-value-based method to account for the expense. As noted in the previous section, the extra \$5,000 the employee receives as the result of the stock price difference would be expensed in equal amounts over the life of the vesting period. Thus, if the requisite service period was five years, the company would have recognized \$1,000 expense in each of the five years.

Because, in practice, companies can not have the foresight to precisely identify what the stock price will be several years in the future, they are allowed to use option-pricing models that take many factors into effect in predicting future stock prices. This approach of accounting for stock options is referred to as the fair value method “because the option value is based on the many factors that determine its underlying value. These factors include the volatility of the underlying stock, the expected life of the options, the risk-free rate during the option life, and expected dividends during the option life” (Kieso, Weygandt, and Warfield 2004). The Black-Scholes-Merton model is the most widely used today. This model as well as other lattice models “looks a bit like a decision tree in which each separate calculation, or node, corresponds to a particular price at a particular time [...] and is based on the equilibrium concept of no arbitrage – that is, at all

times, stock and option prices must be such that no instantaneous and riskless profit is available to traders” (Luehrman 2004).

Both critics and proponents of expensing options often cite the Black-Scholes and other pricing models as imprecise. The pricing models do not take into account transaction costs, specifics of certain industries, and other factors. There are certainly some deficiencies within pricing models that potentially could create an expense amount that is significantly inaccurate (Luehrman 2004). However, the disagreement is whether or not this lack of precision justifies being able to use the intrinsic value method of accounting for stock options under Accounting Principles Board (APB) Opinion No. 25, *Accounting for Stock Issued to Employees*.

Under the intrinsic value method, as opposed to the aforementioned fair market value method, firms are permitted to come up with a compensation cost that is “the difference between the market price of the stock and the exercise price of the options at the grant date” (Kieso, Weygandt, and Warfield 2004). The firm usually sets the exercise price equal to the grant date stock price, which means that no accounting expense would have to be recorded. For example, if the stock price is \$10 on the date the 1,000 options are issued, the exercise price is also usually set at \$10, effectively making the compensation expense zero. Under the intrinsic value method, no prediction of future stock price is used in determining the fair value of the option. If the options are then exercised when the stock price is \$15 in five years, the full \$5,000 extra that the employee receives is still never recognized as a compensation expense. Opponents of the intrinsic value method argue that this expense should be accrued over the life of the requisite service period because if the options were really worth nothing, no one would

want to receive them as part of a compensation package. The intrinsic value method, however, reports no expense during the vesting period, as well as no expense after the options are exercised (unless the option price is greater than the fair market value of the stock on the grant date). The principal proponent for this method is the high tech industry, for reasons which will be examined further in a subsequent section.

### **Analyzing FASB's Proposed Statement**

To address concerns of corporate malfeasance after the Sarbanes-Oxley Act of 2002, the FASB decided to revisit the issue of accounting for stock-based compensation. In October 1995, FASB Statement No. 123 was issued and “established as preferred a fair-value-based method of accounting for share-based payment arrangements with employees, but it permitted the continued use of APB Opinion No. 25” (SFAS No. 123). While use of the intrinsic value method was permitted, companies that employed this method were also required to disclose in the footnotes the full dilutive effects had they used the fair market value (FMV) method.

Elimination of the optional use of APB Opinion No. 25 to account for stock-based compensation was the basis of four critical reasons the FASB has discussed in its exposure draft amending FASB Statement No. 123. First, there has been considerable interest in addressing the concerns of users of financial statements. With the plight of recent corporate scandals, users have demanded less “wobble-room” for company executives to manipulate financial statements and bury pertinent information in the footnotes. Shortly after Sarbanes-Oxley, a large majority of companies began using the FMV method of expensing options “before a new pronouncement required them to do so.

This made a company appear more socially responsible at a time when corporate creditability was being widely questioned” (Beams 2004). In fact, several hundred companies have willingly switched to the FMV method since 2002.

The second reason is to improve comparability of financial information. Giving firms the opportunity to choose between methods makes it more difficult for financial statement users to compare financial data across firms. And while disclosure of the effects of dilutive securities is still required, it is found in the footnotes rather than the financial statements, placing unnecessary difficulty on comparisons. For instance, while Microsoft switched to the FMV method by 2004, Intel did not adopt that method. Thus, \$991 million worth of stock options was included in the footnotes of Intel, but not in the income statement (Beams 2004). Companies using the intrinsic value method still have to show, for example, both regular earnings per share (EPS) and diluted EPS numbers, but using different methods clearly distorts comparability. The FASB believes that “similar economic transactions should be accounted for similarly” (Herz 2003).

The other two principal reasons for the proposed statement are simplifying United States Generally Accepted Accounting Principles (GAAP) and being in conformity with the International Accounting Standards Board (IASB). Essentially, simplifying GAAP is akin to simplifying tax codes and assists users by eliminating alternative methods of accounting for the same transactions. The IASB has already required companies to start expensing options as of January 1, 2005, while the FASB will purportedly not require expensing until June 15. The IASB’s standard is mandatory in all European Union countries, Australia, and others, which means that the American standard will lag behind a half year (Norris 2004).

## CONGRESSIONAL THREAT OF ACTION

Many firms do not believe it is the correct time to require expensing options because of the lack of precision in option pricing models, but there are also a large number of tech firms that support the use of the intrinsic value method for political and economic reasons. Consider a startup firm with very few employees and very little cash. In order for that firm to become successful, they must be able to attract talented employees. Since they cannot afford to pay large amounts of cash compensation, the firm wishes to issue stock options as a compensation incentive. They argue that the options should not be expensed in part because there is no guarantee of the options' future worth. They argue it is the potential of small companies that feed the machine that is the U.S. economy by production growth and creativity.

There are also several practical concerns of not favoring any specific method of accounting for stock-based compensation. If the fear is corporate malfeasance stemming from scandals, the requirement for expensing should be applicable only to high ranking positions and executive officers. Intrinsic value supporters also claim that restricted stock is nowhere near perfect either, and in the 1970s were "maligned by stockholders as 'pay for attendance,' since executives would receive a guaranteed payout no matter what happened to the stock price." Another argument for not *requiring* the FMV method is the ability of firms to institute an antidilution policy. If the firm purchases enough shares to meet the amount of exercised options, it effectively creates a "virtual expense" of options and assures investors that their ownership has not been compromised (Frieswick 2004). Lastly, an unintended consequence of expensing options would be for companies to stop

issuing them altogether. This could unfairly punish millions of rank-and-file employees which made up roughly 90 percent of the value of stock options in 2002 (Stock Option Accounting Reform Act H.R. 3574).

### **The Stock Option Accounting Reform Act (H.R. 3574)**

In June of 2004, before the House Financial Services Committee, U.S. Rep. Michael Oxley held a hearing on The Stock Option Accounting Reform Act (H.R. 3574) to discuss possible congressional intervention in overruling the FASB's proposed mandatory expensing. The FASB is given accounting policy-making authority over public companies by the Securities and Exchange Commission (SEC), but can be superceded by Congress. The FASB, Chaired by Robert Herz, claims their "independence from enterprises, auditors, and the federal government is fundamental to achieving our mission-- to establish and improve standards of financial accounting" (Herz 2003). The tech lobby has generally had the support of the House, however, and aims to thwart the expensing standard through government action.

In response to allegations of compromising FASB's independence, the House meeting clarified that should H.R. 3574 pass; it would not be construed to limit such independence, but that expensing stock options would remain a lone issue. However, it is a fact that overruling FASB's authority with respect to this matter would essentially be the first time Congress limited the authority of establishing financial reporting standards by the FASB.

One issue brought up at the committee hearing by Rep. Sherman is that the FASB requires high tech companies to expense successful research and development

expenditures when they should be capitalized, making the mandatory expensing of options a "double whammy". Dissenters argue that they are two separate issues, and Congress has little business in correcting mistakes as they see fit in order to balance the playing field. The economic reality of stock options should be considered without regard to separate maltreatment of industry accounting issues.

A second issue is the presumed fallacy that options are not reflected in the bottom line. After all, companies that use the intrinsic value method are certainly required to disclose the firm's fully diluted earnings per share (EPS). It is somewhat ridiculous to think that savvy investors will not notice a significant difference between regular and diluted EPS. Furthermore, firm's are also required to report the effects of options had they used the FMV method as well. Excessive benefits given to executives do not constitute a complete overhaul of a rule that has been used for decades. Requiring the expensing of only the top five paid executives circumvents this problem.

Rep. Baker's position purports to be at the heart of the argument, that expensing options of high tech companies will almost completely eradicate startup firms in high tech areas such as Silicon Valley. He claims that entrepreneurs that are required to expense compensation in the form of options would face an impossible hurdle so the FASB can "make sure [they] do not succeed, so we do not have more taxpayers." This would inevitably cause the startups to facilitate moving to countries of low wages, such as China and India. It should be noted that this ideology is backed by a lobbying coalition that includes the Nasdaq Stock Market, the U.S. Chamber of Commerce, and the Business Roundtable. The sluggish economy and the desire for job growth help

explain, at least in part, the motivation of these groups in fighting mandatory expensing of options.

Rep. Sherman agrees that the U.S. will never again be able to compete for human capital with certain Asian countries, but it is a function of their economies and because they can employ "make-up-your-own-statements accounting." He argues that is no basis for disrupting an independent body from making the rules correctly, and that H.R. 3574 would be widely perceived as blatant political interference in the face of economics.

Rep. Gillmore agrees, citing that American companies would not be at a true competitive disadvantage with the passing of the IASB's standard in over 90 countries. Aside from political reasons for allowing the intrinsic value method, Rep. Kanjorski reminds the House that as a part of the Sarbanes-Oxley Act, the FASB was given an independent funding stream with which to tackle sensitive issues. Since the Sarbanes-Oxley Act overwhelmingly passed the House with a vote of 423 to 3, undermining FASB's authority so soon after passage of the Sarbanes-Oxley Act would not enhance such independence in any form.

### **Economic Reality**

The investment industry is on board with the FASB's tug-of-war against the tech lobby. Clifford Asness, an industry commentator, goes as far as to call the tech lobby "lying liars who don't want to expense [options]." He argues that claiming stock options should not be expensed until exercised is a fallacy of human theory. The probability of the options not becoming exercisable is widely misunderstood, and preys upon the notion that if a small percentage of options are worthless, they should never be expensed until

exercised. If someone pays for a utility bill with a credit card, the expense is not deferred. Options are, in fact, a form of promissory note, to which accrual-based accounting recognizes an expense (Asness 2004).

Providing option calculations, Asness ascribes the difficulty in finding a superior option valuation model to the fact that options are a terrible form of compensation. It is not in the best interest of a firm or its shareholders if the firm cannot employ a viable method of calculating compensation costs. Likewise, a firm could theoretically argue that since estimated quarterly tax payments can not be reasonably calculated, no tax payments should be made until the end of the fiscal period.

The argument that all of the information is available in the footnotes is a peculiar one. Basically, this dispute claims that it is adequate for “wrong” numbers to be in the bold financial statements as long as the real truth is buried in the footnotes. Consequently, this is partially the logic claiming that expensing stock options will destroy high tech firms. So what? If that were the consequence, it is a deserved one. It has no basis for deceiving investors so they are tricked into investing in order to inflate the compensation of company executives.

The most prevalent argument tech companies use is that expensing will hurt the rank-and-file employees who will begin to see less and less options in the future. This is why Congress seeks to expense only the top five executives’ options. Again, the compensation expense of the rank-and-file employees is just as much of an expense as the executive’s compensation. What economic sense does it make to say that the stock options of rank-and-file employees are not expenses? Additionally, the little guy that will supposedly be hurt by expensing is not the employee who will simply see different forms

of compensation handed to them. The real little guy, “the investor buying one share of a networking or semiconductor giant because he forgot to read the footnotes containing the real expenses – is forgotten in this pious, pandering, pretend proletarian argument made by tech titans” (Asness 2004).

## CONCLUSION

It is clear to me that the intrinsic value method of accounting for stock options is three parts politics and one part substance. Not recognizing any expense in the 1990s was partially responsible for the eventual burst of the tech bubble. “Stock-price increases had more to do with overall stock market gains than with true increases in a company’s intrinsic value” (Mantzke 2004). In theory, the gains for executives through stock options could be contributed *solely* to the market, and not the individual firm. Even tying stock options to individual performance or changing the vesting periods are not ways to properly divert the effects of the overall market. Thus, to get into a more realistic way of accounting for stock options, I believe options are not an optimal form of compensation at all.

The tech industry is fighting a losing battle, and after Sarbanes-Oxley will no longer be able to be “masterful at marshalling their shareholders own capital against them” (Herz 2003). Lobbying Congress had effectively buried the issue until recent corporate scandals, but now that the public is demanding the end of misleading accounting practices, the scale of power has tipped toward the positions of the FASB on accounting issues.

Auditing concerns are the only reservations I have in relation to expensing options. It is possible that auditing the reported expense could very well be detrimental to the public accounting firms. It is conceded that no valuation model is required because of the fact that no model works best in all industries with all firms. Therefore, there is legitimate unease on how to properly audit the use of specific models and what role legal liability will play. A company may have incentive to shop around for a model that causes their option expense to be significantly lower than it should be, providing the public accounting profession with a new demand for some sort of valuation specialists. Should those expenses prove inaccurate, investors will look to litigation against auditors to retrieve lost shareholder wealth.

Now that establishing a basis for the necessity of expensing options has been formulated, the tech industry has lost the crutch that has let them skate through the last decade with inflated earnings. In early 2005, the FASB formally published Statement of Financial Accounting Standards No. 123R, which will require public companies to start expensing options as of June 15, 2005, barring any further Congressional intervention. Companies who currently use the intrinsic value method will either look to find models with properties that produce a favorable option expense, or they will make the transition to forms of stock-based compensation that are uncontroversial.

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