A scandal involving derivatives has struck again. This time it is the misuse of derivatives in the form of employee stock options to reach back in time and grasp for extra unearned gains.

As the venal character played by Peter Lorre in Beat The Devil said, “time is a cheat,” and there is no more expedient means of cheating than the misuse of derivatives. Executives used derivatives to cheat time by reaching back into the past in order to set the exercise price of their employee stock options to the lowest possible point in the market. In other instances they have reached into the future with “spring loaded” grants that are timed to precede some major positive announcement or event. Not content with being the beneficiaries in what is already extraordinary inequality of income, these executives have shown by their actions why greed is a deadly sin. Even amongst other deadly sins, they have made greed stand out for its limitlessness – after all, the likes of lust and gluttony at least offer the hope of being quenched. This scandal has provoked former SEC chair Arthur Levitt – one of the fathers of derivatives deregulation in 2000 – to lash out, "It is stealing, in effect. It is ripping off shareholders in an unconscionable way." 

1 See Crimmel and Schildkraut (2001). Bureau of Labor Statistics survey showed that average ESO grant to executives in 1999 was 15,533 shares while that for employees earning less than $35,000 was 315 shares and for those making $50,000 to $35,000 was 534. See Schildkraut (2004) for an update, “As previously mentioned, the 2003 survey showed that more highly paid workers had greater access to stock options than less highly paid workers”.

The extent of the problem is wide and still growing. Bloomberg newswire compiled a report showing that over 105 firms were under federal investigation or under their own internal probes regarding the backdating of options grants to their corporate executives. These investigations involve well regarded firms like Microsoft, Apple, Home Depot, UnitedHealth (the second largest health insurer), Cheesecake Factory, Brocade Communication Systems (world’s large manufacturer of switches for computer storage networks), Converse, Monster.com, Cnet.com, Alterna (second largest maker of programmable semiconductors) and Cablevision Systems.

This scandal involving the misuse of derivatives to cheat time is reminiscent of recent episodes in which the derivatives dealer Bank of America conspired with the hedge fund Canary Capital to use customized equity derivatives to capture extra ill gotten gains from late trading mutual funds. It also recalls the use of derivatives by super wealthy tax cheats and KPMG, in schemes such as BLIPS and FLIPS, to fabricate $12 billion in losses and thereby steal over $2.5 billion from US taxpayers. In addition, there are the numerous cases of corporate executives misusing derivatives to move earnings across time so as to smooth their volatility or to front-load them to meet bonuses. The recidivism of the role of derivatives in these financial crimes stands out loud and clear.

There is something different this time. The SEC appears to have gotten its enforcement mechanism in gear. The SEC has filed formal charges against three executives from Converse, and is investigating 80 additional firms. The FBI stated that it was conducting criminal probes of 45 corporations, and the Justice Department and the IRS are also involved. Moreover, seven U.S. attorneys from five different states have commenced similar investigations. This marks a significant change from previous scandals.

Credit for detecting the problem goes to some important policy research by Erik Lie of the University of Iowa. He built upon similar research going back to 1997 by David Yermack of NYU to identify the high level of coincidence of unusually low rates of return proceeding, and unusually high rates of return succeeding, the discretionary granting of employee stock options to executives.

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3 WSJ Online, “Problems With Internal Probes.” The article focuses on UHC’s choice of six tainted directors to lead their internal investigation into the problem – two received the options themselves, two approved the options grants and two are close pals with CEO.
5 Senate Permanent Subcommittee on Investigations found in 2005, “Each of these products generated hundreds of millions of dollars in phony paper losses for taxpayers, using a series of complex, orchestrated transactions, structured finance, and investments with little or no profit potential.” KPMG paid $456 million in penalties for its participation.
6 According to New York Times, August 21, 2006: the CEO of Converse has made $160 million from options – $6.4 million of which from backdating – in addition to $28 million in salary since 1997. He fled federal prosecutors and is now a fugitive in Israel.
7 Bloomberg wire, August 3, 2006.
8 See citations to Lie and Yermack in Sources below.
While the derivatives scandal \textit{de jure} is receiving better federal enforcement attention than previous incarnations, its media attention is nonetheless coming up short. The scandal is being portrayed largely as a matter of corporate fraud, i.e. executives stealing from shareholders. This is indeed part of the case as it does involve a breakdown in corporate governance, sometimes involving the board of directors who also received stock options as non-employee compensation, which allowed corporate leaders to “do themselves a big favor” by further enriching themselves by mispricing employee stock option grants. Yet this is not the larger part of the crime. The grandest of the larceny was the theft from taxpayers caused by the extra gains on the already highly tax-favored employee stock options.

**Here’s How It Worked**

In addition to compensation in the form of cash salary and bonuses, many corporations granted employee stock options to their executives and in some cases their board of directors. The conventional economic justification is that it ties the incentives of the executives to the performance of the corporation and that it also helps newer corporations provide competitive compensation without using scarce cash revenue.

A less talked about economic justification is that employee stock options are also highly favored by the tax laws. It allows executives to convert gains from exercising their statutory options\footnote{Statutory or ‘qualified’ or ‘incentive’ options are a slightly more restricted variety that are described in FPF Primer: Employee Stock Options I and II - www.financialpolicy.org/dsprimers.htm} into capital gains which are taxed at a lower rate than ordinary income. In the case of non-qualified employee stock options,\footnote{See Primer: Employee Stock Options I and II} it allows executives to postpone paying tax on their option grants until the options are profitably exercised – although they are taxed at the rate for ordinary income. More importantly, it allows the corporation to deduct as an expense the gains made by executives on non-qualified options – a deduction in an amount that is unrelated to the actual costs of the firm (see explanation below).

This ability to deduct as an expense the gains to the executive, which are not an actual, cash expense to the corporation, is a major driving force behind the use of employee stock options. The following example should serve to better clarify this point.

Consider the simple case of a corporation which has publicly traded stock (a C corporation) and issues its executives non-qualified employee stock options.\footnote{Assuming an S corporation raises fair market valuation issues, and qualified or incentive stock options raises some more complicated but also more favorable tax issues for the executives.} The non-qualified option (also known as a non-statutory employee stock option) is not only more simple to explain but also more flexible in its use, and it allows the firm to make such grants to non-employee members of the board of directors. Let’s say that the executive is granted options on 10,000 shares at an exercise price (also known as strike price) that is equivalent to the $50 market price of the stock on the date of the option grant. The
exercise price must be set to equal the market price of the stock on the date of the option grant in order for the employee to avoid being taxed for the compensation.\textsuperscript{12} The typical option grant for executives, according to the BLS, is vested in 2 years and is exercisable over 8 years – thus an overall maturity of 10 years.\textsuperscript{13}

This type of option is known as a call option.\textsuperscript{14} The corporation is the writer of the option and the executive is the holder of the option. (The option writer has the 'short' option position because it has the obligation to the holder which has the 'long' option position.) The corporation does not leave itself exposed to this short option position, but rather 'covers' the risk through either of the two following methods. The first and most common method of covering the short call position is to earmark the corporation's own stock, that is stock which is held as treasury stock or stock that has been authorized by filings to the SEC but has not yet been issued. The BLS survey indicates that 2/3 of employee stock grants are underwritten in this manner. The second common method of covering the short option position is to buy back the equivalent amount of shares on the stock market (this stock purchase is sometimes financed by a bank loan or a debt issuance).

The result of covering the call option means that when – and if – the executive exercises the option to buy the stock at $50, then the firm would already possess the stock, which was either purchased at $50 at the time of the option grant or was already owned and was valued at $50 at the time of the grant, and would then be able to sell it to the executive for $50 without losing money. Of course, the corporation would lose the opportunity cost of not selling the stock for the higher market price, but opportunity costs are not actual cash expenses and are thus not generally deducted as such. In addition, the corporation would gain the benefit of the services of the executive, and most of all, the corporation would also pocket a potentially enormous tax advantage.

Next, consider the consequences of the executive exercising the option holder's rights and buying the stock at $50 once the market price hits $150. First off, the capital gain to the executive is $100 per share on 10,000 shares or $1 million. This gain, however, is treated in a special way by the tax code. The federal tax code, in section 83, treats this as compensation that is to be taxed as ordinary income. The tax on this income is assessed at the time the options are exercised. However, if the executive does not sell the stock that is purchased by exercising the option, then any subsequent capital gains on the stock are taxed as capital gains when the stock is sold and these additional gains are realized. In the meantime, the executive must pay ordinary income taxes on the amount of gains captured by exercising the option, and pay it in the tax period in which the option was exercised. The tax rate on ordinary income for executives is usually significantly higher than that on capital gains, and so being assessed for taxes as ordinary income and on the date of exercise is not insignificant. Keep in mind that options can usually be exercised

\textsuperscript{12} Tax federal tax code essentially recognizes only the options intrinsic value, which would be zero if the exercise and market price were equal, and ignores the 'time' value of the option. This is where Warren Buffett's criticism of the treatment of option rests on firm economic footing.

\textsuperscript{13} Crimmel and Schildkraut (2001) from BLS compensation survey.

\textsuperscript{14} See Financial Policy Forum: Primer on Derivatives Instruments at www.financialpolicy.org
for as long as ten years after they are granted, and there are considerable economic incentives, such as the lack of carrying costs, to hold options as long as possible prior to expiration. As a result, the long-dated options offer a considerable benefit of deferring the value of tax obligations.

What are the consequences for the corporation? At the time the option is exercised, the corporation is allowed to deduct, as an expense, an amount equal to the gain made by the executive. Thus, the income attributed to the employee as compensation from the gain on the option becomes a compensation expense that the corporation can deduct from their taxable income. In this case, the corporation deducts $1 million from their taxable income.

This deduction, however, does not reflect any actual expense in the usual sense of a cash outlay. The firm bought the stock for $50 and sold it for $50, and thereby incurred no loss. Alternatively, if it used unissued shares, then the corporation had the chance to sell the stock for $50 but waited and sold it later for $50. This later case may amount to an opportunity cost, but as such it is unlike other opportunity costs in that it can be deducted as a realized expense. In short, the corporation reaps a tremendous gain from the granting of the employee stock option: it obtains the services of the executive and it picks up $1 million in tax deductions. Meanwhile, the worst it suffers is the opportunity costs of selling the stock at a higher price. No wonder that Fortune magazine described these employee stock options as "the next best thing to free money."^{15}

This tax benefit is neither small or rare. Examples from the tax year 2000 show enormous tax deductions:

- Cisco, which had $23 billion in sales and $4.3 billion in net income, but paid no federal taxes due largely to deductions from their stock option program which generated a $2.5 billion tax benefit for Cisco. That benefit was up from $837 million in 1999 and $422 million in 1998, or $3.8 billion over three years.
- Microsoft’s stock option program generated $5.5 billion in tax benefits and exceeded its federal tax obligation for that year.
- Dell Computer had $1 billion in such tax breaks and also avoided paying any federal income taxes.
- Sun received $708 million in tax benefits from their employees exercising stock options (up from $222 million the previous year) eliminating their federal income taxes for 2000.
- The sum of the tax subsidies to these four corporations alone totaled $9.7 billion in 2000.

And with regards to the current backdating issue:

- In the previous 12 years, UnitedHealth’s McGuire – whose option grants are under investigation because they coincided with the lowest points in stock prices for three years – gained $333 million from exercising employee stock options and held another $1.8 billion of unrealized gain (i.e. intrinsic value). President Stephen Hemsley gained $663 million from exercising options and had another

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^{15} Fortune, Justin Fox, July, 1997.
$82 million in unrealized gains on options. That amount to $1 billion in gains to just two executives.

What about the shareholders? How do they fare when executives and the corporation capture such benefits? The shareholders, as owners of the firm, benefit from obtaining (or retaining) the executive's services without cash expenses and from the tax benefits from the tax deductions. The shareholders, however, also suffer dilution of their shares because in delivering on the employee stock options the corporation puts more shares back into the market. Thus, the earnings per share, the book value per share, and ultimately the market value are affected by the dilution. The net effect will depend upon the actual contribution of the executive's services to productivity and the amount of gain on the option (and hence tax deduction) relative to the amount of dilution. Regarding the later point, if the stock price increases considerably, then the tax benefits can easily exceed the costs from dilution. In contrast, a small increase in stock price will result in a proportionally larger dilution than tax benefit. Thus, it is no surprise to see traditional blue chip, large cap corporations opposing the use of employee stock options while hi-tech and growth corporations worship them as golden egg laying hens.

Here’s How It Worked – The Deed

Although shareholders approval is required for employee stock option plans and the board of directors’ compensation committee approves executive compensation (including the amount of employee stock option grants), the executives were in the position to administer the details of their own grants of employee stock options. Specifically, they were able to designate the date on which the options were officially granted. They were able to arbitrarily choose a low exercise price for the options because that would trigger an immediate tax obligation. Some chose dates on which the market price was at its lowest point or dates prior to what they knew would be positive market developments. In other words, they could look back into the past and choose a date on which the market price was at its lowest point. That date would be one that followed a period of market decline or a point that preceded a run-up in the stock price (this is exactly what Erik Lie found in research cited above – below normal returns prior to grant date and above norm returns following grant date). This is known as backdating. Alternatively, the executives could make sure that grants occurred prior to the release of some positive announcement. This is known as ‘spring loading’ option grants.

Again, what about the shareholders? If the options were covered by a stock repurchase, then the corporation would lose money because it could not go back in time to repurchase those shares on the same lowest point in the recent past. These loses would be actual loses (e.g. bought for $50 at grant sold for $44 at exercise) to the corporation and in turn the shareholder. If the options were covered by authorized but un-issued shares, then it would mean greater gains to the executives, greater tax deductions to the corporation and the same amount of dilution to the shareholder. This perhaps explains part of the reason why corporations failed to self-policing this behavior – they were also benefiting from it. It would, however, raise a smaller amount of capital from the stock issuance that would otherwise have been the case had the exercise price been set at the proper (i.e. higher)
market price. In comparison to a proper, legal option grant, the shareholder is made worse off by illegal backdating because it generates less new capital. At the same time the shareholder benefits from greater tax deductions and thereby greater after-tax corporate earnings. The net effect on the shareholder depends on the relative magnitudes of the two effects. If the net effect is positive, then the fraud against the shareholder is truly the smaller crime and enforcement efforts and media attention should shift towards the greater crime of raiding the Treasury.

Of course this example uses the simple version of employee stock options known as non-qualifying or non-statutory. The consequence to the shareholder would be more damaging in the case of employee stock options known synonymously as 'qualified' or 'incentive' stock options. In this case, the consequence of an executive exercising his options does not in itself generate a tax charge for the employee or a deduction for the firm. The employee is not taxed until the stock is sold, and then it is taxed as capital gains instead of ordinary income. The corporation does not receive a deduction for the employee's gain. As a result, the shareholder suffers the dilution and the corporation benefits from the executive's services but does not benefit from a tax deduction. The shareholder, in this case, suffers dilution and from raising relatively less capital, but this is not offset in part or in whole by any tax benefit to the corporation.

The Bigger Crime
As the above discussion explains, the net loss to shareholders from executives backdating their employee stock option grants is likely to be a smaller economic problem that the resulting tax theft.

Shareholders suffer the deceit, the opportunity cost from the backdating, and raising less capital, but they nonetheless benefit from the extra tax deduction generated by falsely increased gains on backdated options and they suffer no more dilution than with legal employee stock option grants.¹⁶

The costs of the fraudulent issuance of stock option grants should be distinguished from the collateral damage from criminal prosecution and civil litigation. These indirect costs, which arise only if the fraud is discovered, include reputation costs, any fines, penalties and additional taxes, costs of restating financial reports and refilling taxes, possible delisting by exchanges, and other related factors that depress the stock price. These may be larger than the direct costs to the shareholder from the undetected fraud. Perhaps that is one reason that corporations have proven inadequate at self-policing themselves on this issue, i.e. they do not have sufficient incentives. And it may also explain why SEC Commissioner Atkins warned so strongly against being too energetic in enforcement while SEC Chair Cox stated that only the cases of “serious” fraud would be pursued.¹⁷

In contrast to the likely losses to shareholders, the loss to taxpayers if these misspricing of options is not corrected is enormous. Executives ended up underpaying taxes on

¹⁶ Except for cases in which it would otherwise not be profitable to exercise the options because the proper market price would have been out of the money.
substantial amounts of gains, and corporations reported excessive deductions from exaggerated gains on non-qualified options.

The point here is not that fraud on the market is a small matter. It is a serious matter even if net losses to shareholders are likely to be modest. After all, fraud harms not only the immediate shareholders but also stakeholders such as employees and other investors who made their investment decisions based on this false information and other firms that had to compete on an uneven playing field created by the false reporting.

The point is that the costs to taxpayers and the economy as a whole are likely to be greater than that to shareholders. The magnitude is not yet possible to measure, and such efforts must wait until investigations are completed and financials and taxes are restated. However, there should be no doubt that it is serious and significant. Moreover, the SEC should not limit itself to protecting shareholders. Merely protecting the small investor is far too narrow a goal and it is in sharp contrast the SEC’s mission spelled out in its authorizing legislation which states its purpose to include making…

“regulation and control reasonably complete and effective in order to protect interstate commerce, the national credit, the Federal taxing power, to protect and make more effective the national banking system and Federal Reserve System, and to insure the maintenance of fair and honest markets in such transactions”

(Securities and Exchange Act of 1934)

In short, the wisdom written into this New Deal legislation understands the broader economic importance of sound and efficient securities markets. Unfortunately, the administrators of these laws often do not. The conclusions of this report and the SEC’s own authorizing legislation are in contrast to the opinion expressed by SEC Commissioner Paul Atkins that the mispricing of options was overplayed and that the SEC needed to help ``avoid some sort of mass stampede of restatements because of misplaced, excessive zeal."\(^{18}\)

**Policy Lessons and Solutions**

Though a significant problem, it is one with a solution. The failure has been primarily one of corporate governance – the inability of corporations to maintain control over their executives in administering the details of their compensation. In some cases the governance failure appears to have reached into the Board of Directors itself.

In order to help facilitate more effective corporate governance, the tax and securities laws governing the use of employee stock options should be changed in the following way. First, all employee stock option grants should be reported within a two day period like insider transactions in corporate securities – thus putting the regulatory treatment of derivatives on par with that for securities themselves. The corporation should report not only the number of shares on which options are granted, but also the minimum vesting periods and periods over which the options can be exercised. Secondly, require that the

\(^{18}\) Bloomberg wire, August 3, 2006.
exercise (i.e. strike) price for qualified (statutory) employee options and non-qualified employee stock options should be set equal to the average of the closing price of the security for the month prior and the month following the option grant. Third, this will require that the initial report be updated since the average price, and hence the exercise price, will not be known for about 31 days following the grant date. This update can occur as part of the next quarterly financial statement.

By taking some of the discretion out of the hands of the corporate executives it will make corporate governance and the monitoring of that governance process more efficient. It will not affect the purported economic purpose of the options which is to motive the executives by tying their individual interest to the interests of the shareholders, i.e. maximizing the value of the firm. These modest measures will help make the securities markets more transparent through better reporting and reduced fraudulent misreporting, and help make them more efficient by restoring confidence in these economically important financial markets. Finally, in these times of tremendous budget deficits it will help temper the greed of the wealthiest and make sure that corporations carry their moral and legally mandated share of the tax burden.
SOURCES

Bloomberg wire service, August 3, 2006.


Financial Policy Forum: Primer on Derivatives Instruments. Available at www.financialpolicy.org/dscprimers.htm


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