Stock options align executives' incentives with those of shareholders.

Malfeasance, Misappropriation, Manipulation—or Not?

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Stock options are the primary form of compensation for chief executive officers because they are the best way to align the interests of CEOs with those of diversified stockholders. Nevertheless, critics argue that the use of stock options leads to excessive pay because there is no effective bargaining between the CEO and the board of directors about the number of options to award. They argue that the cost is underestimated by boards and hidden from stockholders, and that options induce CEOs to undertake risky business strategies to raise stock price or keep it unrealistically high. But none of these objections withstands scrutiny.

First, there is little reason to believe that options have resulted in excessive CEO compensation. Although CEO pay has increased dramatically in absolute terms, data show that total officer compensation as a percentage of corporate income — including gain from the exercise of options — has remained quite stable since 1982 and has even declined a bit in the last few years. This is true even though equity compensation grew from a negligible amount to as much as 90 percent of CEO pay in the intervening years. It would thus appear that equity compensation has been substituted for cash compensation. Moreover, since options pay off only if stock price increases, more of the pot goes to those who generate more gain.

Second, options are subject to powerful market forces that naturally control their use. Using options as compensation effectively requires a corporation to repurchase shares to control for dilution. Because cash is scarce, there is a natural limit on the number of options that a corporation can grant. In addition, stock options confer significant benefits that are difficult to achieve with other forms of compensation. Again, options induce corporations to distribute cash in the form of repurchases to control for dilution. Options also convey significant information to the market about a company's prospects because the need to repurchase stock requires the company to estimate future cash flows in deciding how many options to grant.

To be sure, stock options can be abused through such practices as timing and backdating. But these problems can be addressed by announcing option grants in advance of fixing the exercise price. Moreover, it is quite easy to design an option that addresses the problem of overvalued equity and eliminates the incentive to maintain a stock price that is inappropriately high. By indexing exercise price downward, options can provide an incentive for CEOs to minimize losses in falling markets.

WHAT DIVERSIFIED STOCKHOLDERS WANT

Options are the optimal form of executive compensation because most investors are diversified. The preferences of diversified investors are quite different from those of undiversified investors. Although an undiversified investor wants a corporation to maximize return, an undiversified investor also wants the corporation to minimize risk. In contrast, a well diversified investor wants all portfolio companies to maximize return even if it entails more risk. This is not to say that diversified investors do not care about risk. Rather, they want each portfolio company to seek the highest possible risk-adjusted return.

Although options are not perfect, they are the best incentive for the CEO to maximize return and thus stockholder value. The standard rationale for using options as executive compensation is that options align the interest of the CEO with the interests of the stockholders. But this rationale both overstates and understates the case for stock options as compensation.

The alignment rationale understates the case for options because one would think that it is also possible to align the

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because CEOs are invariably less well diversified than stockholders. Although diversified stockholders would prefer that the CEO bet the farm when it makes sense to do so, the CEO is naturally reluctant to take such a big risk because a bad bet may wipe out several years' worth of pay and may even mean the sack. Ironically, one of the criticisms leveled at stock options is that they induce CEOs to take more risk in order to increase stock price. But that is exactly what diversified investors want. Indeed, a diversified investor would likely prefer more risk than the CEO is willing to assume, because the CEO cannot diversify. He has most of his eggs in one basket.

The unavoidable implication is that if the CEO is going to be paid with options rather than cash, he will insist on more options. Successful CEOs will receive more compensation than they would with all-cash compensation. And unsuccessful CEOs will receive less than they would with all-cash compensation. That is as it should be. But it means that in some cases, CEO pay will appear to be quite generous. A diversified stockholder will understand. But it is undiversified stockholders who tend to show up at stockholder meetings. In short, options are not perfect. But it is not clear that there is any better form of incentive compensation.

interests of officers and stockholders using stock itself as compensation. Indeed, some have suggested that stock is superior to options because with stock the CEO worries both about maximizing gain and minimizing loss. The flaw in this argument lies in the assumption that stockholders want gains but not at the risk of loss. The reality is that diversified investors are indifferent to losses as long as the corporation seeks to maximize return. So options are better because they clearly encourage the CEO to maximize return. Stock sends a mixed message.

The alignment rationale overstates the case for options

HOW MUCH IS TOO MUCH?

None of the foregoing arguments speaks to the possibility that CEOs may still be overpaid with too many options. Again, it is difficult to know how much is too much. But scholars have suggested several second-best ways to approach the question.

Michael Jensen and Kevin Murphy argue that companies grant too many options because options are seen as costless and are granted in addition to cash compensation that is already adequate if not generous. As a result, stockholder returns are unduly diluted. As proof that options are viewed as free money, Jensen and Murphy point to the fact that option grants as a percentage of shares outstanding have

remained relatively constant since 1992 despite the fact that the stock market has risen dramatically during the same period. As a result, executive compensation has risen dramatically. Jensen and Murphy argue that this shows that boards of directors have abdicated their responsibility to bargain with CEOs and have instead fallen back on established formulas for lack of any better standard.

But there is another possible interpretation of these data. Total executive compensation as a percentage of corporate income has also remained quite constant since 1982 (well before the boom in option compensation). Among public corporations with income, total officer compensation from all sources, including option gains, has averaged about 6.0 percent of income, with a high of 7.5 percent in 1992 and a low of 3.7 percent in 2005. Indeed, the average over 2001–2006 fell to 5.0 percent. If one sees the CEO as a glorified employee of the corporation, then these data may be worrisome. But if one sees the CEO (and other officers, for that matter) as akin to equity partners, it is not at all clear that compensation is a problem, and the comparison of CEO pay to that of the average worker becomes nonsense. Pay is one thing. A piece of the pie is another.

To be sure, the traditional model of the corporation is one in which the stockholders are viewed as the owners of the business. The stockholders elect the board as their collective agent, and the board appoints the CEO and other high-level officers to run the business day to day. But it may be time for a new model. It may be more accurate to think of the corporation as akin to a partnership between the stockholders and the officers, with the board of directors acting as an arbiter between these two constituencies. If this is the more accurate view, it makes perfect sense that the percentage of corporate income that goes to the officers would remain about constant.

THE COST OF OPTIONS

Assuming that some amount of gain-sharing is desirable, how do we know what is optimal? To say that the corporation has evolved into a form of organization in which the CEO and other officers work for a piece of the pie is not a complete answer to the argument that options may be seen as free money. To be sure, the question of how much is too much is different if it is about sharing returns. If so, CEO compensation must be seen as the result of two-way bargaining in which the CEO seeks the best possible deal. But even if seen as an equity partner, it may still be that the CEO can command too big a share of the return. The question is whether there is any way to determine how much is too much.

Most commentators who have addressed this question have focused on the cost of options. There are two interrelated cost arguments against options: one relates to opportunity cost, the other to the cost of capital.

Opportunity Cost Simply stated, the opportunity cost argument is that options are risky securities that are worth more to diversified investors than they are to undiversified officers. In other words, an option could be sold to an outside investor for more than it is worth to an undiversified officer as compensation. The upshot is that the corporation must grant large numbers of options to the officers, and as a result outside stockholders will arguably suffer more dilution. Moreover, it seems like an odd bargain for a corporation that places a high value on its options to issue them to officers who place a low value on them. Ordinarily, one expects goods to flow the other way — from those who attach a low value, to those who attach a high value. Because the bargain makes little sense, there must be something wrong. It must be that stockholders are being cheated somehow — or so the argument goes.

But if this theoretical argument is correct, then why are options such a popular form of compensation? There are plenty of real-world examples of folks who work for a share of the business — and work hard — with no guarantee that it will work out. Law firm associates work in large part to become partners. Entrepreneurs routinely accept common stock with zero value when they get venture capital financing. To be sure, both may be paid a salary in the meantime. But many stockbrokers and people in sales work solely on commission. This is risky business. Often one gets no reward at all. So it stands to reason that those who succeed get paid very well. To say that they all would accept some lesser amount of cash or that the reward is somehow worth more to the employer who could sell it to the highest bidder is beside the point. Options and other forms of incentive compensation are not about slicing the pie into more pieces. They are about increasing the size of the pie for all.

Still, the use of options as compensation has the curious effect of shifting risk from diversified stockholders to undiversified CEOs. It may however be risk that the CEO is better able to bear. A CEO may have reason to be more confident than an outside investor. (Indeed, CEOs as a species may suffer from overconfidence.) A CEO may even have inside information of a sort just like the consultant who knows which button to push (and will send a big bill for his brief services). So it may be that CEOs place a higher value on options than would the market. It is difficult to know as a general matter. But that is what markets are all about.

As for the related argument that options were used to excess prior to 2005 because their grant was not treated as an expense for accounting purposes, the assumption is that accounting rules matter. Clearly, a company that uses options as compensation is worth what it is worth whether or not the grant of options is treated as an expense. There is no reason to think that the market cannot accurately assess the effect that options have on firm value. And there is no reason to think that the market will settle for a bit less in return by ignoring the dilutive effect of options (if any). To be sure, investors did not always have as good or complete information as they do today. But the lack of good information likely caused investors to discount stock prices. Thus, although those who advocated expensing thought it would shame away the use of stock options, the more likely result is that the market will now tolerate more options.

Cost of Equity A second argument is that at-the-market options fail to account for the cost of equity. For example, if

the expected rate of return on a stock is 10 percent, then arguably the company must generate a 10 percent return to break even. If the stock is worth $10 per share at the beginning of the year, it must be worth $11 per share at the end of the year (assuming no dividends) or else the stockholders have arguably lost money. But suppose that the company generates a return of 5 percent and the stock increases in value to $10.50. If the CEO holds options to buy shares at $10, she gains 5 percent even though the stockholders have arguably lost 5 percent. The implication is that at-the-market options are poorly designed, because they reward any increase in price.

Accordingly, Jensen and Murphy argue that the exercise price of options should be adjusted upward by the cost of capital going forward. For example, if the cost of equity is 10 percent, the exercise price of an option should increase by 10 percent per year. In the alternative, they suggest that CEOs should pay for options up front, according to the corporation's cost of capital. In other words, the CEO should pay about 10 percent of a stock's price for a one-year option on that stock. Jensen and Murphy argue that this would give the CEO skin in the game and that CEOs will be more motivated if they have paid something for their options. A closely related argument is that options discourage dividends because dividends reduce stock price. By omitting dividends, stock price increases by the amount that could have been paid out. Thus, options are more likely to end up in the money. So it is important to neutralize the effect of dividends by decreasing exercise price by the per-share amount of any distribution.

In short, Jensen and Murphy argue that *either* the CEO should buy options with her own money at a rate equal to the cost of capital *or* that exercise price should be adjusted by the cost of capital less any distributions. Ironically, it appears that both conditions are routinely satisfied in practice, because these fixes are built into the way options work.

First, CEOs have plenty of skin in the game. Again, aggregate officer compensation as a percentage of earnings has remained remarkably stable since 1982, while cash compensation has increased very little in constant dollars. So it must be that option compensation has increased as a percentage of total compensation. While one might argue that total compensation should not have increased as much as it has, it is quite clear that CEOs have taken the difference in options and other forms of equity. So they have in fact given up cash compensation dollar for dollar. Indeed, given that total officer compensation including gain has remained constant as a percentage of corporate income, officers have given up more cash compensation ex ante than they should have given up.

Second, exercise price is effectively adjusted for the cost of capital, because most companies routinely repurchase shares to control for dilution from the exercise of options. Again, Jensen and Murphy argue that either the CEO should buy options with her own money, or exercise price should be adjusted by the cost of capital less any distributions. But a repurchase is a distribution. And it turns out that if a company repurchases enough shares to control for dilution from the exercise of options, it distributes precisely the amount necessary to reduce the exercise price to the market price at the time of grant.

NATURAL LIMITS ON OPTION GRANTS

The foregoing analysis largely dispels the worry that stockholders have been systematically cheated by excessive CEO compensation in the form of options. Although one might think that CEO gain ultimately comes out of return that would otherwise belong to outside stockholders, when a corporation repurchases shares to control for dilution, there is no significant dilution of outside stockholder return. Still, some may worry that CEOs may nonetheless be able to command too much pay in the form of too many options. Experience suggests that boards of directors are unable to resist ever-increasing CEO demands. So what is to keep CEOs from appropriating more and more of outside stockholder return by taking more and more options?

The answer is that options are self-regulating. Although the use of cash by the corporation to repurchase shares does not affect earnings, clearly there is a limit to the cash available to repurchase shares. The need to report fully diluted earnings per share alone effectively dictates repurchases that eliminate dilution. And the amount of cash available for such use is related to return from operations. Thus, for a company to decide how many options to grant, it must have some sense of what its return is likely to be. In other words, the need to repurchase enough shares to make up for options effectively limits the number of options that a corporation can grant or that a CEO would even want.

Paradoxically, the more a company expects to grow, the fewer options it can afford to grant. The more a company grows in value, the more it costs to repurchase shares to control for dilution. While the market may tolerate some dilution from such companies, growth companies also tend to have higher multiples and are thus more limited in the number of

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options they can issue without diluting stockholder value. As a result, the CEO is conflicted in a good way. The more optimistic she is, the more reluctant she will be to grant options liberally. So CEOs have every reason to be conservative in the number of options they seek. They are more likely to err on the low side than on the high side.

To be sure, it is one thing to determine the maximum number of options that a company can afford to grant, but it is quite another to conclude that that number of options is optimal or that a company should grant the maximum number of options that it can afford. There are several responses.

First, when options work as they should — when the company gets it right — the CEO gains only if and to the extent that stockholders gain. There is no dilution of stockholder gain.

Second, it is unlikely that a CEO would want more options than the company can afford to grant. A big grant of options is a pessimistic signal. It indicates that the CEO thinks it will be easy to generate enough cash to buy back shares. In contrast, a small grant of options signals cautious optimism. While optionees may theoretically gain if a company grants more options than it can support by repurchase, excess options have the effect of reducing the price increase that outside stockholders expect. This sets up a negative feedback effect that constrains the use of options. If the company fails to increase in value as much as the market expects, it is likely that its value will be bid down even further in the market, much as happens when a company announces disappointing earnings. Indeed, this may explain why boards of directors seem not to negotiate about CEO compensation with much vigor. It is not necessarily that they view options as free money. Rather, it may be that they understand that CEOs have every incentive to get it right when it comes to their own compensation.

Although there is little reason to worry about excessive stock option compensation, it would be easy to eliminate the risk of excessive grants. To be specific, the number of options granted could be determined by the number of shares that the company is able to repurchase on a specified date in the future. This would assure that stockholders would suffer zero dilution. And it would induce CEOs to think hard about the appropriate vesting period.

In summary, the prospect of dilution and limits on cash protect investors from excessive use of options as compensation. The number of options a corporation can grant depends on the anticipated growth in the value of the company — from the date of grant to the date when the options may be exercised — together with anticipated cash flow and its cost of equity. In the end, it is really up to the CEO to manage his own pay in light of his best guess about the company's prospects. There is every incentive to get it right. No CEO wants to invade existing capital to control for dilution. In short, there is a natural limit on the number of options that a company can grant.

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OTHER BENEFITS OF OPTIONS

Although the primary rationale for using options as compensation is that they are the best way to induce the CEO to maximize stock price, they also give rise to other benefits that may be as important as the incentives they create.

First, unlike traditional compensation plans that focus on aggregate earnings or assets under management, options reward the CEO for any strategy that increases stockholder wealth. If stock price increases because of an acquisition that increases value, options generate a reward. If stock price increases because of a divestiture, options generate a reward. In contrast, traditional compensation plans tend to reward growth irrespective of percentage return. Most CEOs are inclined to grow the company anyway — who would want to shrink his company? But divestitures often create stockholder value. Stock price often increases when a company announces a spin-off. Options encourage such moves. So it is no coincidence that divestitures increased as the use of options as compensation increased. Indeed, divestitures were almost nonexistent before the early 1980s. By 1990, they accounted for more than half of all deals.

Second, options effectively force the company to distribute cash through repurchases. One of the major stockholder gripes that triggered the takeover wars of the 1980s was that target companies hoarded cash and invested it in uneconomic expansion (including acquisitions designed to increase assets under management and aggregate earnings) rather than to pay dividends. Indeed, the rise in option compensation was a direct result of efforts to align the interests of CEOs with those of stockholders. So if stockholders want distributions, CEOs should be paid with equity. This is not to say that anyone necessarily reckoned that options would also induce distributions by way of repurchase in order to control for dilution. Nevertheless, they do.

Third, the grant of options may convey important information about a company's prospects. The number of options a company grants should be related to the cash expected to

be available to repurchase shares. In effect, the company says to the market that it will be able to repurchase a number of shares equal to the number of shares it must issue to satisfy options. So a grant of options may convey soft information to the market that is otherwise difficult to disclose.

Fourth, options perform important communication and bonding functions within a company. They are a way to keep score in real time with the stock market as the scoreboard for all to see. Options provide an immediate reward for good management (at least on paper) and thus communicate immediate feedback about performance to the CEO and other officers.

In addition, equity compensation may be an effective substitute for a non-competition agreement. That is particularly important in California — the cradle of stock options — where non-competition agreements are illegal. Indeed, options may be superior to non-competition agreements in the same way that a carrot is superior to a stick. Options also induce employees to monitor fellow employees, which may be particularly important in a company that depends heavily on intellectual property. Finally, it may be that many talented businesspeople prefer to work at least in part for a piece of the action and will gravitate to positions that offer such compensation. So options may be vital for recruiting. Incidentally, these considerations answer the argument that options have been overused to compensate lower-level employees who cannot do much to maximize stock price. There is no obvious reason why employees other than the CEO and a few other high-ranking officers should not be seen as partners and share in the returns.

THE DARK SIDE OF OPTIONS

Although options are the best form of executive compensation, they are not perfect. Recent controversies over timing and backdating show that options can be abused. In addition, options can create problems if equity becomes overvalued, as it did in the run up to the dot-com bust and the demise of Enron et al. Indeed, it is arguable that options may have been a significant cause or aggravating factor in these scandals. But these problems are easy to fix.

Arguably, the new SEC rules governing disclosure of executive compensation have largely eliminated the problem of timing and backdating by requiring disclosure of grants. Again, under the old rules, disclosure was limited to gain from exercise. Indeed, it was because of the new rules that many cases of timing and backdating came to light. Still, the new rules do not go as far as they might. They require only after-the-fact disclosure of grants, and thus do not address any lingering worry about opportunism on the part of insiders.

The problems of timing and backdating can be avoided altogether by announcing option grants in advance of setting the exercise price. For example, a company might announce that it will make a grant of some specified number of options at the closing market price five days hence. In the meantime, the market can adjust to the news much as it does to news of a dividend. One possible objection is that advance announcement itself might depress the price of the subject stock and make the options granted that much more lucrative. In other words, one might object that advance announcement could be used to manipulate market price downward in advance of the grant. There are several responses. First, this objection assumes that the market does not like options. To the contrary, the market should favor the use of options over other forms of compensation for the numerous reasons discussed above. Moreover, options cost nothing unless stock price rises, so there is no reason for the market to bid down the price of the stock. Second, a grant of options should usually be viewed as a positive signal that stock price is likely to rise. Finally, the market might see a company that announces grants in advance as more trustworthy and thus bid up its price relative to others, as with other improvements in governance.

Yet another real problem is overvalued equity. Options can create perverse incentives if stock price becomes too high. CEOs may be tempted to undertake questionable tactics designed to maintain stock price until options can be exercised and option stock can be sold. If stock price is too high, the CEO will naturally seek to keep it from falling in order to maintain paper gains. And looking back on the most recent spate of corporate scandals, it seems clear that many if not most of the problems resulted from an obsession with meeting analyst expectations — making the quarterly numbers. So the question is, how do we induce CEOs to decrease stock price when necessary or at the very least not to stand in the way of a market correction?

The overvaluation problem can be fixed in large part by indexing the exercise price of options on the downside. In other words, the exercise price of an option can be made to adjust in proportion to a decline in the S&P 500 or some other index. Aside from fixing the overvaluation problem, downward indexing makes sense as an incentive device. In effect, downward indexing rewards the CEO for minimizing losses. If a company loses less in a market downturn than it would have lost if it had simply followed the market downward, the CEO is rewarded. If incentive compensation makes sense in good times, it makes even more sense in bad times.

CONCLUSION

Given the distinct advantages of options as compared to other forms of incentive compensation, it appears that complaints about executive pay are based largely on ex post results. From an ex ante perspective, investors are not likely to object to options, because with options the CEO gains only if and to the extent stockholders gain. It is ironic — indeed hypocritical — that pay critics have focused on options when for years the worry has been about the separation of ownership from control. But the complaints proceed from an outdated view of outside stockholders as the sole owners of a corporation. From this perspective, stockholders see options as diluting their returns. The better view however is that a corporation is owned jointly by traditional outside stockholders and a newer breed of inside officer stockholders. If one thinks of the corporation in terms of this two-owner model, many of the common objections to stock options disappear. R