How to Tie Equity Compensation to Long-Term Results

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In a widely cited 1990 paper, Michael Jensen and Kevin Murphy argued that when it comes to CEO pay, the important thing is "not how much you pay, but how."[1] How best to pay such executives is the focus of this paper.

Although Jensen and Murphy stressed the need to link executive pay to performance, they did not devote much attention to one important element of incentive pay plans: the optimal timeframe for evaluating executives' performance. In our 2004 book, *Pay without Performance: The Unfulfilled Promise of Executive Compensation*,[2] and a series of articles accompanying it,[3] we emphasized the importance of linking compensation to executives' *long-term* performance. We warned that standard executive pay arrangements were leading executives to focus excessively on the short-term and to boost short-term results at the expense of long-term value.

The crisis of 2008-2009 has led to a widespread recognition that pay arrangements that reward executives for short-term results can produce incentives to take excessive risks. The importance of avoiding such flawed structures has been emphasized by leading public officials and top business leaders. But while there is now widespread recognition that improving executives' long-term incentives is desirable, there is much less agreement about how this should be accomplished. The devil here, not surprisingly, is in the details.

In this paper, we aim to contribute to the reform of pay arrangements by building on our earlier work to provide a framework and a blueprint for tying executives' equity-based compensation—the primary component of their pay packages—to long-term performance. We begin by explaining the need for limitations on the freedom of executives to unwind their equity incentives. Such limitations should separate the time in which executives become free to unwind equity incentives from the time in which such incentives vest. We then explain why requiring executives to hold their equity until retirement, as some have proposed, would create undesirable incentives. After making these two critical points, we next discuss the optimal design of both grant-based limitations on unwinding and aggregate limitations on unwinding. Finally, we explain the importance of adopting effective restrictions on executives' use of any hedging or derivative transactions that could undermine the incentives produced by their equity compensation arrangements and the unwinding restrictions contained in them.[4]

The Need for Post-Vesting Limitations on Unwinding

Executive compensation arrangements usually include stock options, restricted stock, or a combination of both types of equity instruments. Under a typical stock option plan, a specified number of options vests each year as compensation for that year's work. Such a vesting schedule encourages an executive to remain with the firm. Once options vest—that is, once they are "earned"—the options typically remain exercisable for ten years from the grant date. However, standard arrangements allow executives, immediately upon the vesting of their options, to exercise the options and sell the underlying shares.

Restricted stock grants operate in much the same manner as stock option plans. The stock is called "restricted" because executives do not own the stock outright when it is granted. Rather, ownership of the stock vests over time, in part to give the executive an incentive to stay on the job. When the vesting period ends, the restricted shares "belong" to the executive and, as in the case of options, executives have generally been free to cash them out.

Not surprisingly, executives have taken full advantage of their freedom to unload equity incentives after vesting. For

* This paper draws on a longer article, "Paying for Long-Term Performance" (forthcoming in the *University of Pennsylvania Law Review*) that provides a fuller treatment of the issues involved in the optimal design of equity compensation to align executive incentives with long-term results. Lucian Bebchuk served as a consultant to the Department of the Treasury Office of the Special Master for TARP Executive Compensation, but the views expressed in this paper and the longer article on which it draws (which was largely written prior to the beginning of Bebchuk's appointment) do not necessarily reflect the views of the Office of the Special Master or any other individual affiliated with this Office. For financial support, the authors are grateful to the IRRC Institute for Corporate Governance and the John M. Olin Center for Law, Economics, and Business.

1. Michael Jensen and Kevin Murphy, "CEO Pay–It's Not How Much You Pay, But How," 68 *Harvard Business Review* 68 (1990): 138-153, and reprinted in this issue.

2. Lucian Bebchuk and Jesse Fried, *Pay Without Performance: The Unfulfilled Promise of Executive Compensation* (Harvard University Press, 2004), Chapters 14 and 16.

3. Lucian Bebchuk and Jesse Fried, "Executive Compensation as an Agency Problem," *J. Economic Perspectives* 117 (2003): 71-92; Lucian Bebchuk and Jesse Fried, "Pay without Performance: Overview of the Issues," *J. Applied Corporate Finance* 17 (2005) 8-22.

4. We assume, for purposes of this paper, that the long-term stock price reflects the cash flow to shareholders over time, and that it is thus appropriate to tie executive pay to the long-term stock price. However, to the extent the firm engages in share repurchases or equity issuances, the long-term stock price will not accurately reflect the cash flow to shareholders over time. For an analysis of this problem and how the proposals of this paper need to be adjusted to address this problem, see Jesse M. Fried, "How Tying Executive Pay to the Stock Price Can Hurt Shareholders (and What to do About It)," working paper, 2010.

5. Eli Ofek and David Yermack, "Taking Stock: Equity-Based Compensation and the Evolution of Managerial Ownership," *Journal of Finance* 55 (1997): 1367-1384.

example, stock options are commonly exercised years before they expire, and almost all of the shares acquired through option exercises are immediately sold.[5] As a result, executives are frequent sellers of their firms' stock.

As we explained in *Pay without Performance*, such early unwinding imposes two types of costs on shareholders. First, the corporation must now give the unwinding executive fresh equity grants to replenish her holdings; otherwise, the executive's incentive to generate shareholder value will be diminished. These replenishment grants economically dilute current public shareholders by reducing their fractional ownership of the corporate pie. If executives were unable to unwind their stock and options so quickly after vesting, the cost of replenishing executives' equity positions would be lower.

Second, and more importantly for our focus in this paper, the ability to sell equity shortly after vesting leads executives to focus excessively on short-term prices—the prices at which they can unload their shares and options. At any given point in time, executives may have accumulated—and wish to unload—a large number of vested shares or options. Once executives have decided to sell large amounts of stock, they are motivated to increase the short-run stock price and might find it in their interest to increase the short-term stock price even when doing so would be at the expense of the corporation's long-term value.

Both of the costs associated with early unwinding can be limited by following an approach we advocated in *Pay without Performance*: separating the time that most of the restricted stock or options can be cashed out from the time that the equity vests. By requiring an executive to hold the equity for a longer period of time, the board will not need to replenish that executive's holdings as frequently. This, in turn, will reduce the cost to shareholders of maintaining the executive's equity ownership at an adequate level. More importantly for the purposes of this paper, post-vesting holding requirements will reduce the executive's incentive to focus on the short-term, since the payoff from her equity will depend on stock prices in the long run.

Although the end of the vesting period and earliest cash-out date are almost always the same under current option and restricted stock plans, there is no reason for the two dates to be identical. As soon as an executive has completed an additional year at the firm, the restricted stock or options that were promised as compensation for that year's work should vest: they should belong to the executive even if the executive immediately leaves the firm. But the fact that the equity is now the executive's to keep does not mean that the executive should be able to immediately cash out all the equity.

Of course, under current tax rules, an executive is liable for taxes upon the vesting of equity incentives. Thus, it may be undesirable to require an executive to hold all her equity for a particular period of time after vesting. To the extent the executive is liable for taxes upon vesting, she should be permitted to cash out enough of the vested equity to pay the taxes arising from all the equity vesting. But the equity remaining after taxes are paid should be held for some time after vesting.

The Dark Side of Hold-Till-Retirement Requirements

If, as we suggest, cash-out dates are separated from vesting dates, the length of the "blocking" period between vesting and cash-out must be determined. Several dozen companies, including Deere, ExxonMobil, and Citigroup, have adopted plans that require executives to hold stock until they retire, so-called "hold-till-retirement" plans.[6] As soon as the executives retire, they are free to unload their stock. For example, Citigroup requires that directors and the Executive Committee of its senior management hold 75% of the net shares granted to them under the firm's equity programs until they leave those positions (with a reset of the holding requirement at age 65 if the covered person has not yet retired). These hold-till-retirement plans move in the direction of proposals by commentators and shareholder activists who advocate linking executives' cash-out of their equity to retirement.[7]

The appeal of retirement-based cash-out dates is understandable. Such an approach would, first of all, reduce the costs of replenishing executives' equity holdings. It would also cause executives to focus more on the long term and less on the short term. Unfortunately, retirement-based limitations may well also create perverse incentives.

In particular, a hold-till-retirement requirement could provide an executive with incentives to retire too soon—that is, even when the company could still benefit from the executive's services. Suppose, for example, that an executive with large amounts of equity has information suggesting that the firm's stock is overvalued and that, for reasons unrelated to the executive's future performance, the stock price is likely to decline over the next several years. Resigning at once would enable the executive to unload the accumulated equity earlier, and the prospect of large profits from such an unwinding could induce the executive to leave. If the executive is the best person to run the firm, the executive's departure could impose a substantial cost on the firm and its shareholders.

Even more perversely, retirement-based blocking provisions could lead to the early retirement of the most successful executives. The executives with the strongest temptation to quit will be those with the largest amounts of accumulated

6. Citigroup's 2009 Proxy Statement; Deere & Co.'s 2010 Proxy Statement; Exxon Mobil's 2009 Proxy Statement.

7. Jesse Brill, "Hold Through Retirement: Maximizing the Benefits of Equity Awards While Minimizing Inappropriate Risk Taking," *The Corporate Executive* 22: 1 (November-December 2008); Sanjai Bhagat and Roberta Romano, "Reforming Executive Compensation: Focusing and Committing to the Long-Term," *European Company and Financial Law Review*, forthcoming 2010); AFSCME Press Release, "AFSCME Employees Pension Plan Announces 2009 Shareholder Proposals."

equity. Because the value of such equity will generally be higher when an executive has generated considerable returns for shareholders over a long period of time, tying equity unwinding to retirement may provide an especially strong incentive for long-serving and successful executives to leave their firms.

In addition, if the executive is permitted to cash out all of his blocked equity immediately upon retirement, the arrangement will result in the executive placing excessive weight on short-term results in the executive's last year or two of service. Consider an executive who plans to leave in a year or two, either because of the retirement-based cash-out provision or for some other reason. Knowing that he will be able to cash out all of his equity in one or two years, the executive will have an incentive to pay excessive attention to the stock price around the time of her retirement.

Some of those urging companies to adopt retirement-based holding plans have suggested that executives be required to hold their shares for a period of one or two years following retirement.[8] Such a post-retirement holding requirement would reduce, but not eliminate, the above costs of hold-till-retirement plans. Under such an arrangement, retirement would not enable immediate unwinding. However, it could still well produce a substantial acceleration of the executives' ability to unwind some of their vested equity incentives. As a result, retirement-based plans with a post-retirement holding requirement of one or two years could still produce perverse incentives to retire prematurely. Furthermore, while requiring an executive to hold equity incentives for one or two years after retirement would prevent an executive about to retire from focusing exclusively on stock prices in the very short term, the executive's horizon could still be limited to one or two years out, with insufficient weight placed on stock values in the longer term.

Given the drawbacks of existing and proposed retirement-based holding requirements, executives' ability to unwind their equity incentives should not be determined by reference to their time of retirement. What, then should be done? We now explain how holding requirements should be structured—through the use of both grant-based limitations on unwinding and aggregate limitations on unwinding.

Grant-Based Limitations on Unwinding

We begin by discussing grant-based limitations that should be placed on the unwinding of equity incentives. By grant-based limitations, we refer to restrictions that are defined with respect to each equity grant awarded to an executive. The grant-based limitation we favor, which is based on our proposal in *Pay without Performance*, would allow an executive to unload an increasing amount of equity as time passes from the vesting date of a particular equity grant.[9]

For example, after allowing for the cashing out of some vested equity incentives to pay taxes, an executive might be required to hold all remaining equity incentives for two years after vesting. On the anniversary date two years after vesting, the executive would be free to unwind 20% of the grant. And on each of the following anniversary dates, the executive would be free to unwind another 20% of the grant. This way, the executive would be permitted to sell the first 20% two years after vesting, 40% three years after vesting, and the entire amount six years after vesting. We call this the "fixed-date" approach because stock becomes freely transferrable on fixed dates, rather than upon retirement or some other date chosen or influenced by the executive.

This fixed-date approach would avoid *both* costs associated with using a retirement-based approach. Because an executive's ability to cash out a particular equity grant is based on fixed dates on the calendar, her decision whether to remain at the firm or retire would not be affected by the prospect of being able to unwind large amounts of equity. Whether she remains at the firm or retires, the executive can cash out additional amounts of that particular grant of equity when, but only when, she reaches those fixed dates.

In addition, under the fixed-date approach, executives would not have an incentive to focus on the short term as retirement approached. Because each equity grant is made at a different point of time, and must be unwound gradually, the executive does not face a situation where almost all of her accumulated equity can be cashed out at once. Thus, even when the executive is in her last year or two in office, she will still have an incentive to consider the effect of her decisions on long-term share value.

Some companies have begun adopting variants of the fixed-date approach. GE requires executives exercising options to hold for one year any net shares that they receive.[10] Procter and Gamble requires the CEO to hold net shares received upon the exercise of options for two years.[11] And Goldman Sachs recently announced that it will pay 100% of discretionary compensation (the dominant portion of their executives' pay) in "Shares at Risk" that cannot be sold for five years.[12] Similarly, Special Master for TARP Executive Compensation Kenneth Feinberg has required companies under his jurisdiction to pay some of their executives in "salarized stock" that cannot be unloaded for two to four years.[13]

8. Sanjai Bhagat and Roberta Romano, "Reforming Executive Compensation: Focusing and Committing to the Long-Term," *European Company and Financial Law Review*, forthcoming 2010; and Alex Edmans, Xavier Gabaix, Tomasz Sadzik, and Yuliy Sannikov, "Dynamic Incentive Accounts" (CEPR Discussion Paper No. DP7497, October 2009).

9. Lucian Bebchuk and Jesse Fried, *Pay Without Performance: The Unfulfilled Promise of Executive Compensation* (Harvard University Press, 2004), Chapter 15.

10. General Electric's 2009 Proxy Statement.

11. Procter and Gamble's 2009 Proxy Statement.

12. http://www2.goldmansachs.com/our-firm/press/press-releases/current/compensation.html.

13. See, for example, AIG Determination Letter, U.S. Dept. of Treasury (October 22, 2009), available at http://www.treas.gov/press/releases/docs/20091022%20AIG%20Letter.pdf.

One limitation of some of the arrangements noted in the preceding paragraph is that the required holding periods after vesting tend to be short. Another limitation of these arrangements is that, unlike our approach that provides for gradual unwinding, they make the executive's stock from the grant disposable all at once. This could lead to situations in which executives who are about to become free to sell a large amount of equity incentives are too focused on short-term stock prices.

One firm, ExxonMobil, has adopted a hybrid plan that uses both fixed dates and retirement in its holding requirements. Under ExxonMobil's plan, 50% of an executive's stock grant must be held until the later of ten years from grant or retirement.[14] Thus, if retirement occurs early, the stock can be cashed out only after ten years have passed since the grant date. However, if the executive continues to work at the firm for more than ten years from the grant date, the departing executive is permitted to cash out the equity only upon retirement.

Because ExxonMobil's arrangement functions like a fixed-date plan in certain circumstances, it will in such cases create better incentives than a pure retirement-based plan. Consider Executive A who received a single grant five years ago and who is planning to retire in any event before ten years have elapsed since the grant date. ExxonMobil's plan would not provide Executive A with any incentive to accelerate the executive's retirement as such acceleration would not enable Executive A to cash out equity from the grant any earlier.

In some circumstances, however, ExxonMobil's plan functions like a retirement-based plan, and in these circumstances it will create undesirable incentives. Consider the situation where ten years have passed since the equity grant to Executive B. Executive B is considering whether to retire. ExxonMobil's plan, which will allow Executive B to cash out the entire equity grant upon retirement, may encourage Executive B to retire too quickly. In addition, whenever Executive B decides to retire, the ability to cash out at that time all of the executive's equity from that grant could induce Executive B to pay excessive attention to short-term stock prices in the period leading to retirement.

Would fixed-date limitations on unwinding subject an executive to undue risk by requiring an executive to hold stock after retirement? For example, consider a CEO receiving equity with a cash-out date in five years who is planning to retire in one year. Her final payoff will in part be a function of her successor's decisions in years two through five. The compensation provided to the CEO, it might be argued, should not depend on how the CEO's successor performs.

However, the fact that the payoffs to the CEO under fixed-date unwinding limitations would depend (for better or worse) on a successor's performance is no different from the dependence of the CEO's payoff on many factors other than the CEO's performance under any equity-based pay arrangement. Much of a company's stock-price movements are commonly driven by industry and market factors, rather than firm-specific factors. Furthermore, the part of the stock performance that is due to firm-specific factors is to a substantial extent influenced by factors other than the CEO's performance, such as the contributions of other current employees, as well as the contributions of former employees, including the former CEO. Thus, any equity-based pay arrangement subjects the CEO's payoff to a considerable amount of "noise" from factors other than the CEO's own performance.

The key question is whether an executive's incentives are improved by requiring her to hold an equity grant for a fixed period of time, even if that fixed period may extend into her retirement. And the answer to this question is yes. Requiring the retiring executive to hold her shares until the specified fixed date would both remove any incentive for the CEO to accelerate her retirement, and make it less likely that the executive will focus on short-term results while making decisions for the firm just prior to retirement. This leads us to the following conclusion: after cashing out enough newly-vested shares to cover taxes upon vesting, equity compensation should be subject to grant-based limitations on unwinding that allow the equity to be sold only gradually beginning some time after vesting.

Aggregate Limitations on Unwinding

The grant-based limitations we have proposed, while beneficial, do not fully address the concern that executives may place excessive weight on short-term prices. Executives serving for an extended period of time may get a number of different equity-based grants. At any given point, the incentives of such executives—and the weight they place on short-term stock prices—will be shaped by their overall portfolio of firm equity. The incentives will depend, in particular, on the total number of equity-based instruments they have accumulated and on the fraction of such instruments that can be freely unloaded in the near future.

Consider an executive who is hired in 2010, and each year gets a grant of one million shares that cannot be cashed out—other than to cover taxes upon vesting—at a rate of more than 20% per year beginning two years after a two-year vesting period. For the first two years after vesting, the executive will not be able to sell any shares (beyond those sold to pay taxes), and the executive's equity awards will provide no incentive to focus on short-term prices. During the third year after vesting, the executive will be free to sell 20% of the first year's award, but will be holding a much larger number of shares that the executive will not be free to unload.

14. ExxonMobil's 2009 Proxy Statement.

Suppose that this executive serves the company for many years. Fast forward to, say, the executive's fifteenth year. By this point, the executive may have accumulated through his annual grants a large portfolio of firm shares, including a substantial fraction that, under the grant-based restrictions, the executive is free to unload immediately if he so chooses. In such a case, the ability to unload quickly a large fraction of the executive's portfolio may lead the executive to pay excessive attention to short-term prices. Grant-based limitations are thus not sufficient to avoid short-termism and other problems associated with executives' ability to unwind large amounts of stock at once when executives serve a significant period of time and accumulate large numbers of disposable shares.

This was the case, for example, with the top five executives at Bear Stearns and Lehman Brothers during the years preceding the firms' meltdowns. Most of the members of the companies' top executive teams were long-serving executives who had accumulated large portfolios of shares and options. As a result, even though the firms had substantial grant-based limitation on unloading, the executives were free during this period to sell substantial numbers of shares relative to their total holdings. Indeed, a recent case study co-authored by one of us estimates that, during the period 2000-2008, the top five executives at Bear and Lehman cashed out close to $2 billion of their firms' stock: about $1.1 billion at Bear and $850 million at Lehman. This selling allowed the executives to unwind more shares during this period than they held when the firms failed in 2008.[15]

To address such situations, we believe that it is important to supplement companies' grant-based limitations on unwinding with aggregate limitations on unwinding that are tied to the executive's entire portfolio of vested equity that she has accumulated over time through the company's compensation programs. We propose that, in any given year, executives should not be permitted to unload more than a specified percentage of the total vested equity they hold at the beginning of the year. By definition and by construction, such an approach will limit the weight accorded by the executive to short-term results and stock prices.

For example, a company could prohibit executives from selling, in any one year, more than 10% of the vested equity they hold at the beginning of the year. An executive subject to such an arrangement would have little incentive to take steps that would increase the stock price in the coming year at the expense of the stock price later on. Even if the executive unwinds the 10% of the executive's vested shares that she is free to unwind during this year, taking such steps would reduce the value of the 90% of the vested equity she cannot sell.

Importantly, the proposed aggregate limitations on unwinding should not cease immediately upon retirement. Consider, for example, a long-serving executive who has been able to accumulate a substantial amount of equity incentives. If the proposed aggregate limitation on unwinding terminates upon retirement, that executive would be free to unwind a large number of shares the day after he retires. As we explained earlier, the ability to unload large amounts of stock upon retirement could have two undesirable consequences: first, it may encourage an executive to retire earlier than is desirable; and, second, it may lead the executive to focus too much on the short-term as he approaches retirement. For these two reasons, the aggregate limitations on unwinding should not end when the executive retires.

Although the aggregate limitations on unwinding should not be terminated upon retirement, they need not continue indefinitely after the executive retires. An aggregate unwinding limitation could instead expire several years, say five years, after retirement. If executives understood that most of their shares could not be unwound for five years, their incentives to focus on the long-term would not be undermined as they approached retirement. In addition, because retirement would not change the fraction of shares that may be sold for the next several years, the aggregate limitations on unwinding would not provide executives with significant incentives to retire early.

All of this leads us to the following conclusion: There should be aggregate limitations on unwinding so that, in each year—including a specified number of years after retirement—the executive may unwind no more than a specified percentage of the equity that is not subject to grant-based limitations on unwinding at the beginning of the year.

Unfortunately, such aggregate limitations on unwinding are rarely used. Currently, many companies have "target ownership plans" that either encourage or require managers to hold a certain amount of shares, usually expressed as a multiple of the executive's salary. But the targets have tended to be low. In an examination of 195 firms adopting such plans, John Core and David Larcker found that only 138 disclosed the ownership target and that, among these 138, the minimum level of ownership for the median CEO was four times his or her base salary.[16] However, an executive's base salary is commonly dwarfed by other elements of the compensation package, such as bonus and equity compensation. As a result, the target ownership amount may be less than one year's compensation. Furthermore, less than 25% of the 195 firms imposed a penalty for not meeting the target. In many cases, the targets were purely voluntary.

Companies continue to use multiples of base salary in

15. Lucian A. Bebchuk, Alma Cohen, and Holger Spamann, "The Wages of Failure: Executive Compensation at Bear Stearns and Lehman 2000-2008," Harvard Law School Olin Discussion Paper No. 657, December 2009 (forthcoming, *Yale J. on Regulation*, Summer 2010).

16. John E. Core and David F. Larcker, "Performance Consequences of Mandatory Increases in Executive Stock Ownership," *J. Financial Economics* 64: 317-340 (2002).

creating holding requirements, and these multiples are often low relative to total compensation received over time. For example, Procter and Gamble requires CEO A.G. Lafley to hold shares and/or restricted stock units valued at eight times base salary.[17] This requirement may appear stringent at first glance, but Lafley need hold only $14 million worth of stock, less than 20% of his $75 million aggregate compensation during the years 2006-2008. Verizon requires CEO Ivan Seidenberg to hold shares valued at five times base salary of $2.1 million.[18] This $10 million holding requirement, however, is less than 15% of the $66 million in compensation paid to Seidenberg in the years 2006-2008. CVS Caremark also requires its CEO, Thomas Ryan, to hold five times his base salary in stock.[19] Ryan's base salary is $1.4 million, producing a share ownership target of $7 million. That share ownership target, however, is less than 10% of the $74 million Ryan made in 2006-2008.

However, some firms do appear to have more demanding requirements. A number of investment banks now typically require executives to hold over half of their equity awards after certain deductions. According to their 2009 Proxy Statements, Morgan Stanley, J.P. Morgan Chase, Citigroup, and Goldman Sachs all require certain top executives to hold at least 75% of the shares they receive from their firms, less allowance for the payment of the option exercise price and taxes. This requirement is likely to be more meaningful than standard target ownership requirements because it is related to total equity compensation over time rather than to base salary.

In contrast to those corporate policies that allow executives to sell a specified fraction of their total equity compensation, and then give them discretion as to when such sales take place, our approach specifies the fraction of equity holdings executives may sell during any given year. The advantage of this approach is that it ensures that serving executives never unload a sizable chunk of their holdings at any given time. Interestingly, at least one savvy investor objected to Goldman's policy on unwinding by its executives–which allowed them to sell 25% of their total accumulated equity compensation. When Warren Buffett invested in Goldman Sachs, he required the CEO and other high-ranking executives to commit to hold 90% of their stock until the earlier of three years or the termination of Buffett's investment in Goldman Sachs.[20] Buffett's objection to Goldman's limitations on executive unwinding, which were stringent compared to those adopted by most other public companies, suggests that there is considerable room for improving holding requirements at most U.S. firms.

Limitations on Hedging and Derivative Transactions

We have discussed how equity-based compensation should be designed to tie executives' payoffs from equity-based compensation to long-term shareholder value. For these arrangements to produce their intended benefits, however, it is essential that executives be prevented from using hedging and derivative transactions to undermine or circumvent these arrangements. We now focus on the restrictions on such transactions that we recommend companies put in place.

As we highlighted in *Pay without Performance*, standard pay arrangements have commonly failed to restrict the use of financial instruments that can weaken or eliminate entirely the incentive effects of equity-based instruments awarded as part of compensation arrangements.[21] Indeed, standard arrangements have failed to prevent executives from entering into hedging transactions with respect to their own firm's stock. A study by Stewart Schwab and Randall Thomas of 375 employment contracts collected by the Corporate Library found that none restricted the CEO from hedging the CEO's option grants.[22]

A recent empirical study by Bettis, Bizjak, and Kalpathy confirms the significance of the problem we highlighted in *Pay without Performance*.[23] The study examines executives' disclosures to identify cases in which executives hedged their stock positions in their firms. The study finds that, between 1996 and 2006, more than 1,000 insiders hedged their stock positions. The average level of ownership hedged through the most common forms of hedging transactions was significant, around 30%.

The Bettis-Bizjak-Kalpathy study found that hedging transactions were preceded by large abnormal positive price returns, and often followed by large negative abnormal returns. This pattern is consistent with executives profiting by either using inside information to time their hedging transactions, or using their influence over corporate disclosure decisions to boost the price before entering the hedging transactions. The researchers distinguish between hedging motivated by such use of inside information and influence over disclosures, which they of course view unfavorably, and hedging motivated by a desire to diversify risk, which they view as legitimate. In the pages that follow, we will disagree with this characterization and argue that hedging motivated solely by a desire to diversify risks is also problematic and should be prevented.

Consider a board that awards an executive one million shares worth $10 each at the time of the award. Suppose that the shares will vest at the end of the year and then be subject to restrictions on unloading that will prevent the executive

17. Procter and Gamble's 2009 Proxy Statement.
18. Verizon's 2009 Proxy Statement.
19. CVS Caremark's 2009 Proxy Statement.
20. Christine Harper, "Goldman Executives Restrained From Stock Sales in Buffett Deal," Bloomberg.com (Oct. 3, 2008). Buffett also imposed a similar requirement when investing in GE. See Rachel Layne, "GE's Immelt Waived Bonus Pay After 2008 Profit Drop," Bloomberg.com (Feb. 18, 2009).
21. Lucian Bebchuk and Jesse Fried, *Pay Without Performance: The Unfulfilled Promise of Executive Compensation* (Harvard University Press, 2004): 176-177.
22. Stewart J. Schwab and Randall Thomas, "An Empirical Analysis of CEO Employment Contracts: What Do Top Executives Bargain For?" *Washington & Lee Law Review* 63 (2006): 231-70.
23. J. Carr Bettis, John M. Bizjak, and Swaminathan L. Kalpathy, "Insiders' Use of Hedging Instruments: An Empirical Investigation," working paper, 2009.

from cashing out the shares for an additional three years. The award is designed to provide the executive, during the next four years, with an incentive to increase the long-term value of the firm's shares.

But suppose also that the executive is not subject to any limitations on hedging and derivative transactions, and that immediately after receipt of the award the executive sells short one million of the company's shares (or enters into an economically equivalent derivative transaction) and pockets $10 million. The executive then waits four years and delivers the now freely transferable shares awarded by the company to close the short position.

In this case, even though the company has awarded stock that cannot be unwound for four years, the executive will have no economic exposure to changes in the firm's value during the four years following the equity grant. The executive will be in the same situation that he would have been in had the board granted him a $10 million cash payment rather than an equity award with a grant-date value of $10 million. Converting the $10 million equity award into a fixed $10 million cash payment enables the executive to avoid uncertainty and risk-bearing costs. Thus, even if the executive does not have information suggesting that the value of the firm's stock will fall below $10 a share, he may well benefit from entering into this hedging transaction.

From the perspective of the firm and its shareholders, however, there is no reason to allow the executive to convert the $10 million equity award to a $10 million cash payment. The board could have granted the executive a $10 million cash payment in lieu of the $10 million equity award, but it did not. This choice was presumably based on a desire to pay the executive in a way that would tie his compensation to performance and thereby provide desirable incentives to increase shareholder value.

In fact, the use of equity instruments as the means of compensation might have led the board to offer a higher level of pay than if the executive had been paid only in cash. Given the board's choice of an equity-based pay structure, and its setting of pay levels in light of this chosen structure, the executive should not be permitted to change the structure unilaterally by using hedging and derivative transactions.[24]

The problem of executives' use of hedging and derivative transaction is likely to become even more important in the future than it has been in the past. As discussed earlier, past pay arrangements have commonly allowed executives to unload freely all vested equity-based awards, and thus concerns about hedging and derivatives have been limited to their use in undoing the effects of awarded but not yet vested options and shares. To the extent companies begin to impose substantial limitations on the unloading of vested equity awards, either along the lines we have proposed or otherwise, the set of circumstances in which executives have incentives to use hedges and derivatives to undo the effects of these arrangements will expand substantially.

In other words, the adoption of restrictions on the unwinding of equity-based awards make it all the more important to place limitations on the use of hedging and derivative transaction by top executives. Without such limitations, the restrictions on unloading can easily be undone. No matter how well-designed the restrictions are in theory, they will not do much if they can be circumvented in practice.

Thus, going forward it is especially important for companies to adopt the kinds of prohibitions on hedging and derivative transactions that reduce executives' exposure to fluctuations in the company's stock price that we offer in *Pay without Performance*. And for these prohibitions to be effective, they must be cast broadly enough to encompass all transactions, no matter how labeled, that have the effect of undoing some or all of the intended effects of the company's equity-based arrangements. Accordingly, under the approach we put forward, *executives should be prohibited from engaging in any hedging, derivative, or other transactions with an equivalent economic effect that could reduce or limit the extent to which declines in the company's stock price would lower the executive's payoffs or otherwise materially dilute the performance incentives created by the company's equity-based compensation arrangements*.

The anti-hedging approach we proposed was adopted by the Special Master for TARP Executive Compensation, Kenneth Feinberg, who was charged with supervising the executive pay decisions of several firms that received special assistance from the U.S. government. The determination decisions issued to the companies subject to the Special Master's supervision required the companies to adopt policies containing anti-hedging prohibitions in accordance with the above approach.[25]

A small number of companies have announced anti-hedging policies in their annual proxy statements. Among companies reporting anti-hedging policies in their 2009 annual proxy statements were Procter and Gamble, Aetna, and ExxonMobil. Some of these policies appear comprehensive, banning the use of any derivatives to hedge. For example, Procter and Gamble "prohibits pledging, collars, short sales, hedging investments and other derivative transactions involving Company stock." Similarly, Aetna prohibits "all employees (including executives) and Directors from engaging in hedging strategies using puts, calls or other types of derivative securities based upon the value of our Common Stock."

24. For a formal model of how hedging can undermine incentives, see Mariano Tommasi and Federico Weinschelbaum, "Principal-Agent Contracts under the Threat of Insurance," *J. Institutional and Theoretical Economics* 163 (2007): 379-393.

25. Report of the Special Master for TARP Executive Compensation, Determination Decisions for the Seven Exceptional Assistance TARP Recipients, October 22, 2009.

In contrast, some of the policies appear to be too narrow to be effective. ExxonMobil "prohibits all employees, including executives, from entering into put or call options on ExxonMobil common stock or futures contracts on oil or gas." It does not prohibit executives from entering into other derivative transactions, not involving actual puts and calls, that may have economically equivalent or similar hedging effects as puts and calls. For example, ExxonMobil executives are not prevented from entering into swap agreements that enable them to offload the risk associated with holding company stock. And ExxonMobil executives may have a particularly strong incentive to enter into such hedging arrangements because, as we discussed earlier, they are subject to relatively substantial long-term holding requirements. To ensure that these holding requirements are not evaded, ExxonMobil should modify its hedging policy to prohibit the use of a broader set of hedging and derivative transactions that could undermine the incentive effects of its long-term holding requirements.

Importantly, to prevent the various limitations on unwinding described above from becoming meaningless, executives' ability to engage in certain hedging and derivative transactions should be limited as long as they are subject to these unwinding limitations. As discussed earlier, it may be desirable to limit the ability of executives to unwind equity-based awards not just during their years of service but also for some period after their departure. In such a case, the limitations on hedging and derivative transactions should also continue after retirement until the executive is no longer subject to unwinding limitations.

If an executive can hedge her accumulated stock as soon as she retires, she is in no different a position than an executive who expects to sell his stock upon retirement. In both cases, the executive's wealth will not depend on how the stock performs during the period between retirement and the cash-out date, but rather only on the retirement-date price. Thus, when an executive can hedge her position after retiring, she will have an incentive to focus only on how the stock performs in the period leading up to retirement, and may retire too early. It follows that, for post-retirement limitations on unwinding to work, companies must contractually prohibit executives from hedging their stock positions after they retire.

Before closing, we should note the enforcement issues involved in implementing an anti-hedging prohibition. The inclusion of such a prohibition in an executive's employment contract is not self-enforcing. While the company may retain control over equity instruments awarded to an executive and thereby easily impose limitations on their unwinding, an executive may use his personal account to engage in various hedging and derivative transactions. For executives subject to filing requirements under the securities laws, the company may be able to rely on such filings to determine whether the executive is acting consistently with its anti-hedging prohibition. However, some executives may not be subject to such filing requirements, and executives generally cease to be subject to such requirements after they leave the firm.

Thus, at least for executives who retire but remain subject to unwinding limitations for a certain period, companies should take steps to ensure the enforcement of whatever anti-hedging prohibition they have in place. For example, companies could hold the blocked stock of a retired executive in an escrow account and, before releasing the stock on the cash-out date, require the executive to file an affidavit certifying that the executive has not engaged in any hedging transactions before the cash-out date, either before or after retirement.

Conclusion

There is now a growing consensus that equity-based compensation awarded to the top executives of public companies should be tied to long-term results and that rewards for short-term gains that may prove illusory can produce substantial distortions in managerial decision-making. In this paper, we have sought to contribute to the reform of executive pay by providing a framework of analysis for understanding these defects and by putting forward a set of arrangements for remedying them. To provide managers with stronger incentives to focus on the long term rather than the short run, they should be prevented from cashing out their equity incentives for a specified period of time after vesting. At the same time, however, companies should avoid "hold-till-retirement" requirements that could distort executives' decision to retire, as well as undermine their incentive to focus on long-term value as they approach retirement. Instead, equity-based awards should be subject to grant-based and aggregate limitations on unwinding along the lines we put forward. Finally, we have stressed the importance of adopting robust prohibitions on hedging and derivative transactions that can undo and undermine the beneficial incentive effects of long-term equity-based plans. We hope that the compensation principles we put forward in this paper will prove useful to a broad range of companies and contribute to strengthening the link between executive pay and long-term performance.

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