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Is Equity Compensation Tax Advantaged?

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IS EQUITY COMPENSATION TAX ADVANTAGED?

DAVID I. WALKER*

INTRODUCTION ........................................................................................................... 697
I. THE USE AND DESIGN OF EQUITY COMPENSATION ........................................... 701
   A. Compensatory Stock Options ............................................................................. 702
   B. Deferred Stock .................................................................................................... 704
   C. Restricted Stock .................................................................................................. 706
II. THE EMPLOYEE-LEVEL BENEFIT OF DEFERRED EQUITY COMPENSATION ........... 708
   A. Rising Market ...................................................................................................... 709
      1. Restricted or Deferred Stock ............................................................................ 709
      2. Nonqualified Stock Options .......................................................................... 711
      3. Incentive Stock Options ................................................................................. 712
   B. Flat or Falling Market .......................................................................................... 713
   C. False Symmetry .................................................................................................... 715
      1. Capital Loss Limitations ................................................................................ 715
      2. Ex Post Adjustment to Deferred Equity Compensation Contracts ............... 717
      3. Upward Drift in Stock Prices ....................................................................... 718
      4. Predicting Bull Markets ................................................................................ 719
      5. Progressive Tax Rates on Ordinary Income .................................................. 720
   D. Other Employee-Level Issues ............................................................................ 721
      1. Participant Portfolio Adjustment .................................................................... 722
      2. Two-Period Analysis ..................................................................................... 725
      3. Alternative Outside Investments .................................................................... 726
III. EMPLOYER INVESTMENT AND THE NET IMPACT OF EQUITY COMPENSATION .... 727
   A. Modeling the Employer's Investment Decision in a Rising Market ...................... 727
      1. Stock Awards .................................................................................................... 729
         a. Share Repurchase ......................................................................................... 729
         b. Market Investment ....................................................................................... 731
         c. Internal Investment ....................................................................................... 731
      2. NQSOs ............................................................................................................. 732
         a. Options Hedged with Options ..................................................................... 733

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695
Employees who receive stock options and other forms of equity compensation generally are able to defer paying tax on this compensation for years, sometimes decades. In a rising market this deferral results in a tax benefit at the employee level. This article asks whether the employee-level tax benefit in a rising market results in a global tax advantage for companies that rely heavily on equity compensation and their employees. There are two primary issues. First, on initial inspection one might conclude that the employee-level benefit in a rising market is offset by a disadvantage in a stagnant or declining market, but this is not the case. This article demonstrates that the apparently symmetric disadvantage of equity
compensation in a declining market is undermined by capital loss limitations, the likelihood of employee-favorable ex post adjustments to equity compensation contracts, and the general upward drift in stock prices. Thus, equity compensation and deferral do provide a tax benefit at the employee level on an expected value basis.

The second question is who bears the burden of the employee-level tax benefit? This article demonstrates that the key to determining the overall winners and losers lies in tracking the actual corporate investment of the cash that is saved when employees are compensated with equity. The evidence suggests that this investment results in significant corporate tax revenues for the fisc that offset the employee-level tax savings. In aggregate, taxpayers do not appear to be subsidizing corporate equity compensation programs, and these programs are not producing a global tax advantage.

However, this does not mean that equity compensation tax reform should be off the table. The aggregate global tax advantage (and taxpayer subsidy) could increase if companies become more adept at hedging stock and option grants. In addition, the concentration of equity compensation in the hands of senior executives may cause vertical inequity between the taxation of these executives and rank and file employees, who tend to be cash compensated, and could undermine the formation of broad-based qualified savings plans. Thus, a modest reform to the taxation of equity compensation, such as the imposition of a special employee-level tax on equity gains, may be justified.

INTRODUCTION

Equity compensation has come to dominate executive compensation within U.S. public companies over the last two decades and play a very significant role in rank and file employee compensation as well. Over the last five years, the average S&P 500 company granted employee stock options worth about $170 million annually. That’s $170 million per company per year and does not include other forms of equity compensation, such as restricted stock, deferred stock, or stock appreciation rights.

Employees who receive stock options and other forms of equity compensation benefit in two ways if share prices rise. First, and most obviously, they benefit as a result of the appreciation in value of their investment. They’ve made a good bet on the share price. Second, they benefit

1 See Kevin J. Murphy, Executive Compensation, in HANDBOOK OF LABOR ECONOMICS 2485, 2515 (Orley Ashenfelter & David Card eds., 1999) (recognizing the trend in executive compensation, and indicating that stock options “now constitute the single largest component of CEO pay”).

2 See, e.g., infra note 18 and accompanying text.

because the tax on their compensation is deferred. Recipients of compensatory stock or options generally do not pay tax at the time of grant. Stock option compensation is taxed at option exercise or later; restricted stock is taxed when the stock vests, unless the recipient elects grant-date taxation; and deferred stock is taxed on payout.

In a rising market, the tax deferral associated with equity compensation is tantamount to exempting "outside" investment earnings from tax. Consider the following example: Alice receives $100 cash compensation and pays $35 in tax at a 35% marginal rate. Alice invests the $65 that is left in the stock of her employer. Three years later, when the stock price has doubled, Alice sells the shares for $130. After paying $10 capital gains tax (at an assumed 15% rate), Alice is left with $120. Bob, on the other hand, receives $100 worth of restricted stock in lieu of cash compensation. The stock vests in three years at which time the employer's stock price has doubled. Bob will recognize $200 of ordinary income at vesting, which at a 35% tax rate will leave him with $130 after tax. Bob is better off by $10, which, not coincidentally, is the amount of tax that Alice pays on her outside investment earnings.

During the bull market of the 1990s, equity compensation effectively resulted in a large exemption of investment earnings from the individual tax base. But, as we all know now, bull markets do not last forever. To determine whether equity compensation is truly tax advantaged, we need to consider the employee-level tax effects in a flat or declining market as well. Individual tax, however, is only part of the equity compensation taxation picture. Companies that compensate employees with stock or options have more cash available, or a reduced need to raise funds, at the time of grant. At some future point these companies have an obligation to their employees to deliver shares underlying options, pay out deferred stock, or remove restrictions from restricted stock. In essence, companies that compensate with equity are investing on behalf of their employees in the interim, and thus one must consider how that investment is made and how it is taxed in order to complete the equity compensation taxation equation.

The primary aim of this article is to begin to complete this picture. This

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4 Nonqualified stock options generally are taxable on exercise. Incentive stock options are taxed when the underlying shares are sold unless the recipient makes a disqualifying disposition. See infra Part I.A.

5 See infra Part I.C.

6 See MYRON S. SCHOLES ET AL., TAXES AND BUSINESS STRATEGY: A PLANNING APPROACH 3 (2d ed. 2002) (explaining that effective tax planning requires the parties to take a multilateral or global view that includes the effects on the employer as well as the employee).

7 Careful analysis of the tax effects of equity or other deferred compensation programs has been surprisingly rare given the importance of this phenomenon in our economy. Valuable contributions to this literature include Daniel I. Halperin, Interest in Disguise: Taxing the "Time Value of Money", 95 YALE L.J. 506 (1986); Calvin H. Johnson, Stock Compensation: The Most Expensive Way to Pay Future Cash, 52 SMU L. REV. 423 (1999);
article will focus on the two issues raised above. First, it examines the expected employee-level deferral benefit of equity compensation. We will see that there is an apparent symmetry between the benefit of deferral in a rising market and a disadvantage in a flat or declining market that might lead one to believe that, on average, employees would be as well off taking cash compensation, paying tax up front, and investing the after-tax dollars themselves. But this symmetry is more apparent than real. Limitations on individuals' use of capital losses on outside investments, the possibility that underwater stock options will be re-priced (explicitly or implicitly), and the general upward drift in stock prices, all of which favor equity compensation, undermine this symmetry. Progressivity in tax rates on ordinary income may reduce the expected benefit of equity compensation for some employees, but at high income levels, tax rates are relatively flat, and thus the aggregate impact of progressivity is likely to be slight. As a result, equity compensation appears to provide an employee-level tax benefit on an expected value basis.

Next, the article shifts focus from employees to employers and examines the effect of the compensation decision on incremental corporate investment and corporate tax. The article takes both a theoretical and an empirical perspective in seeking to determine whether equity compensation provides a combined employer and employee (a.k.a., global) tax advantage.

Profitable companies


Shortly before this article went to press, I learned that Michael Knoll was finalizing an article for Tax Notes that covers some of the same ground. See Michael S. Knoll, The Tax Efficiency of Stock-Based Compensation, 103 TAX NOTES 203 (2004). Knoll's insightful article analyzes the tax efficiency of equity compensation with an emphasis on an employee's outside investment alternatives. Because my primary focus in this article is on employee-level tax symmetry in rising and falling markets and the impact of employer investment choices, our two articles are complementary.

8 The goal of this article is to isolate and analyze the tax implications of equity compensation. This seems a sufficiently ambitious task. No attempt is made to rigorously consider other implications such as incentive generation or risk bearing, although these factors obviously are important to employees and shareholders. However, risk bearing is alluded to from time to time throughout the article, and incentive generation is considered briefly as an argument against reform of equity compensation taxation in Part V.

9 One might also imagine that companies or employees time participation in equity programs to take advantage of rising markets, but this factor alone is unlikely to contribute to an expected employee-level benefit. See infra Part II.C.4.

10 Scholes and Wolfson utilize the term "global" to describe a combined employer and employee tax perspective. See SCHOLES ET AL., supra note 6, at 3. I adopt this convention despite the possible (and, on my part, entirely unintentional) implication that the third actor in this play, the Treasury, resides on another planet.
that compensate their employees with equity are the primary focus, because unprofitable companies or firms with large losses can always provide tax-advantaged equity compensation.\(^\text{11}\)

Analysts who have considered the entire picture have shown that profitable companies can ensure a global tax advantage.\(^\text{12}\) In order to do so, a company need only purchase shares of its own stock or options on its own stock with the cash that is saved when it issues equity compensation. The profits achieved by a company trading its own stock or options are not taxable under §1032 of the Internal Revenue Code (the "Code"). Thus, if companies follow this strategy, they can invest on behalf of their employees at a zero rate of tax.

This is all true but not dispositive of the ultimate question of whether equity compensation is in fact tax advantaged. Companies and employees can enter into equity compensation arrangements in which the cost of the deferral benefit enjoyed by the employee is borne by the public fisc. But do they? Do companies invest the cash conserved through equity compensation grants in their own equity or elsewhere? This, of course, is an empirical question.

Unfortunately, the empirical evidence bearing on these questions is sparse and conflicting. Although two recent studies indicate that some large public companies repurchase a substantial number of shares in the year in which they grant stock options,\(^\text{13}\) other studies and much anecdotal evidence suggest that option-issuing firms that buy back shares often delay repurchase and that many companies choose to invest the cash conserved through equity compensation in the business, rather than in repurchasing shares. Overall, the weight of the empirical evidence suggests that stock option programs result in significant incremental taxable corporate investment and incremental corporate tax revenue for the fisc. Even less is known about employer hedging of compensatory stock grants, but it seems unlikely that these programs would be managed in such a way as to ensure a global tax advantage when stock option programs are not.

A picture emerges of inconsistent practice and effect. Companies with large losses can always provide tax advantaged equity compensation, but they appear to rely no more heavily on equity compensation than their taxable brethren.\(^\text{14}\) Profitable companies can hedge equity grants in such a way as to ensure a global tax advantage, but many companies do not. Overall, the evidence certainly does not suggest a fiscal crisis resulting from excessive reliance on tax-advantaged equity compensation. Rather, the evidence suggests that the employee-level tax benefit of equity compensation is offset

\(^\text{11}\) Unprofitable companies or firms with large accumulated losses, which are effectively tax exempt, can easily provide tax advantaged equity compensation. The interesting question is whether these firms rely more heavily on equity compensation than their profitable brethren. The evidence to date suggests that they do not. See infra Part IV.C.

\(^\text{12}\) See infra note 122 and accompanying text.

\(^\text{13}\) See infra Part IV.B.1.a.

\(^\text{14}\) See infra Part IV.C.
by incremental corporate tax payments. So, is equity compensation tax advantaged? In theory, yes. In practice, generally no.

However, even if one believes that equity compensation currently results in little or no aggregate global tax advantage, tax reform should still be considered. If companies increase hedging of equity grants with equity, the aggregate global tax advantage and taxpayer subsidy would increase. Moreover, despite the fact that equity compensation has been pushed down through the ranks, senior executives continue to receive the bulk of equity grants. This concentration could result in vertical inequity between the taxation of these executives and rank and file employees, who tend to be cash compensated, and could reduce the incentives to form broad-based qualified savings plans. Of course, concluding that equity compensation produces an employee-level tax benefit does not necessarily imply that recipients will enjoy the benefit. The employee-level tax advantage may be split or appropriated by employers who reduce the pre-tax value of equity compensation. Nonetheless, there are reasons to expect that those who are compensated with equity enjoy some of the tax advantage and that executives who receive more equity enjoy a larger tax advantage. Thus, a modest reform to the taxation of equity compensation, such as the imposition of a special employee-level tax on equity gains, may be justified.

The remainder of the Article is organized as follows: Part I provides background on the design and use of equity compensation vehicles. Part II examines the employee-level benefit of deferring tax through substitution of equity for cash compensation and considers the effect of flat or falling markets. Part III models the impact of equity compensation on employers and the taxpayers. Part IV examines a number of empirical studies that address incremental corporate investment and taxation resulting from equity compensation programs. Part V pulls together the theory and empirical evidence and briefly considers potential tax reforms.

I. THE USE AND DESIGN OF EQUITY COMPENSATION

This article analyzes the economics of deferred equity compensation in an attempt to determine whether such compensation results, in practice, in a net tax advantage for employers and employees. I use the term “deferred equity compensation” to denote equity or equity-based compensation schemes that require or permit participants to defer the tax on their compensation. The article focuses on three instruments—stock options, deferred stock, and restricted stock—which comprise the bulk of the activity with respect to deferred equity compensation. This part provides background on the design, use, taxation, and accounting treatment of these instruments.

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15 Restricted stock grants essentially allow recipients to choose between current taxation and deferral. See infra Part I.C.

16 The analysis developed herein can be easily extended to other equity compensation schemes that result in the deferral of taxation. Other equity compensation vehicles include,
A. Compensatory Stock Options

Compensatory stock options have become and are likely to remain the dominant form of equity compensation in the United States. As noted above, the typical S&P 500 company gave out an average of $170 million worth of options over the last five years. Interestingly, "only" about ten to fifteen percent of these options were granted to the top five executives. Eighty-five to ninety percent of the grant date value of S&P 500 firm options went to employees below this level.17

Nonetheless, options dominate equity compensation and, indeed, executive compensation at the very top. On average, stock options accounted for over two-thirds of the total compensation granted to the CEOs of 200 large U.S. public companies surveyed by Pearl Meyer & Partners in 200118 and over half of total compensation in 2002, reportedly an off year for stock option grants.19

Employee stock options provide the holder with the right, but not the obligation, to purchase shares of employer stock at a predetermined exercise price. The options issued by publicly traded companies in the U.S. tend to be extremely uniform in design. Generally, the options 1) are issued with an exercise price set equal to the fair market value of the employer’s stock on the date of the grant (known as an “at-the-money” option), 2) become exercisable or “vest” three to five years after the grant, 3) expire ten years following the date of the grant, and 4) are nontransferable.20

From a tax perspective, employee stock options come in two flavors: incentive stock options (“ISOs”) and nonqualified stock options (“NQSOs”). Generally, the grant of an option (whether an ISO or NQSO) is not a taxable event for either party. The holder of a NQSO is taxed at the exercise of the option in an amount equal to the difference between the fair market value of the shares received on exercise and the exercise price paid.21 This amount is treated as compensation and is taxed at ordinary income rates. The company is among others, stock appreciation rights, phantom stock, and employee stock purchase plans. Deferral of compensation and taxation also can be achieved through qualified or nonqualified cash-based plans. Traditional cash-based nonqualified deferred compensation will be addressed occasionally in the notes. Qualified plans, such as traditional broad-based employee pension plans, will not be considered. The tax treatment of qualified plans is designed to create incentives for companies to provide such plans to their employees and represents an explicit tax subsidy. For example, employer contributions to qualified plans are immediately deductible and investment earnings are exempted from tax. See I.R.C. §§ 404, 501 (2000). Qualified plans are uninteresting from our perspective because there is no doubt that taxpayers bear the cost of the exemption of investment earnings.

17 See HALL & MURPHY, supra note 3, at 5.
20 See Murphy, supra note 1, at 2507-10. Compensatory stock options of this nature are call options, specifically American call options. A European call option is similar, but the exercise of that option must occur, if at all, on a fixed date.
entitled to a deduction at the same time and in the same amount. 22 Going forward, the employee simply holds the stock received as a capital asset with a basis equal to the fair market value of the shares received at the time of exercise. 23

If certain holding period requirements are satisfied, the holder of an ISO is not taxed at exercise, but is taxed on the ultimate disposition of the underlying shares and is taxed at capital gains rates on the entire profit on the ISO. 24 A company that grants an option that is accorded ISO treatment is not entitled to a deduction at any time. 25 The Code, however, limits the value of ISO shares that can be provided to an employee, and the large majority of options issued to executives of publicly traded companies are NQSOs. 26

For publicly traded U.S. companies, option design is dictated as much by accounting concerns as tax issues. Under current accounting rules, a company that issues at-the-money options like those described above incurs no charge to earnings at any time. 27 A company must disclose the impact of these options in pro forma earnings calculations that are included in the footnotes to its financial statements, but the options do not affect its basic financial reports. 28

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22 See I.R.C. § 83(h) (2000) ("Such deduction shall be allowed for the taxable year of such person in which or with which ends the taxable year in which such amount is included in the gross income of the person who performed such services.").

23 The cash equivalent of a NQSO is known as a stock appreciation right ("SAR"). The holder of a SAR has the right to receive a cash payment equal to the difference between the market price of employer stock and a predetermined exercise price. SARs are currently out of favor because they do not share the favorable accounting treatment applicable to traditional options. Nonetheless, the tax implications of SARs and NQSOs are identical, and the NQSO analysis developed below should be understood to apply equally to SARs.

24 See I.R.C. § 422(b) (2000). To qualify for ISO treatment, the shares may not be sold within one year of option exercise or two years of the option grant. See I.R.C. § 422(a) (2000).


26 To the extent that the grant date fair market value of shares underlying options that first become exercisable by an individual in any year exceeds $100,000, such options shall not be treated as ISOs. See I.R.C. § 422(d). ISOs should be relatively more attractive to companies that have generated net operating loss carryforwards, which effectively reduce their marginal tax rates. See Scholes et al., supra note 6, at 192-93. However, a recent government study indicates that Enron Corporation, which carried a large net operating loss from 1996 through 1999, issued no ISOs. See Staff of Joint Comm. on Taxation, 108th Cong., Report of Investigation of Enron Corporation and Related Entities Regarding Federal Tax and Compensation Issues, and Policy Recommendations 6, 547 (Comm. Print 2003) [hereinafter Investigation of Enron Report].


28 Because publicly traded companies do not explicitly substitute options for cash compensation and historically were not required to even footnote option expense, option valuation was largely a question for academics. Today, companies are required to employ an option pricing model, such as the Black-Scholes model, in valuing options for pro forma
Option use and accounting are under attack on several fronts. Many commentators blame excessive reliance on options for executive excesses at companies like Enron and Tyco. The Financial Accounting Standards Board recently has promulgated an exposure draft of an accounting standard that would require stock options to be expensed. These pressures may result in some shift by firms away from options and in favor of other forms of equity compensation. Options provide very strong incentives, however, and it seems likely that they will continue to play a major role in corporate compensation.

B. Deferred Stock

The term "deferred stock" refers here to an unfunded and unsecured promise to deliver stock, other securities, or the cash equivalent in the future. In the expense presentation. The Black-Scholes model is widely used and accepted for pricing traded options. The model does not perfectly fit employee stock options, however, because the model assumes that the holder is diversified and can transfer the option. Nonetheless, with certain adjustments, the Black-Scholes model provides a reasonable approximation of the value of employee stock options.


30 See FINANCIAL ACCOUNTING STANDARDS BD., SHARE BASED PAYMENT, PROPOSED STATEMENT OF FINANCIAL ACCOUNTING STANDARDS (2004). If this standard is adopted, companies would be required to expense options granted or modified in fiscal years beginning after December 15, 2004. See id. ¶ 20.

31 Signs of a shift have already surfaced. Joseph Rich, a compensation specialist with Clark/Bardes Consulting, reported that his technology clients had shifted CEO equity compensation from 80% options and 20% restricted stock in 2001 to 65% options and 35% restricted stock in 2002. See Patrick McGehee, A Remix in the Grants of Options and Stock, N.Y. Times, Apr. 6, 2003, at R4; see also John Markoff & David Leonhardt, Microsoft Will Award Stock, Not Options, to Employees, N.Y. Times, July 9, 2003, at A1 (reporting Microsoft's decision to cease compensating employees through stock options).


33 The deferred stock plan discussed in this section is simply a subset of a broader class of deferred compensation vehicles known as traditional nonqualified deferred compensation programs. As discussed supra note 16, these plans are to be distinguished from qualified retirement plans that provide explicit tax incentives for formation. Traditional nonqualified deferred compensation plans generally are unfunded and limited to certain senior executives.
paradigm case, an employee elects to forego current cash compensation (most often salary or annual bonus) and instead receive a bookkeeping credit for an amount of stock or securities of equal value. For example, if company XYZ’s stock is trading at $20 per share, an employee of XYZ who defers $100 cash compensation in the form of employer shares would be credited with five shares. At retirement or some other predetermined point in the future, the employee receives stock or securities equal to her account balance or the cash equivalent.

An employee participating in a properly designed deferred stock program will not be taxed on her deferred compensation until she receives payments under the plan. At that point the value of the employer stock or other securities delivered to her will be includable as compensation and taxed as ordinary income. The program I have described is not qualified for special tax treatment under the Code, and the employer, if taxable, will be entitled to a deduction for the compensation paid only when the stock or other securities are delivered. The amount deductible by the employer will be equal to the amount includable by the employee.

Although deferred stock plans fail to qualify for any special tax treatment to avoid ERISA restrictions.

Deferred stock accounts typically accrue credits in the form of additional stock units for any dividends paid on the underlying stock. Of course, deferred stock accounts also must be adjusted for stock splits or other recapitalizations. In order to simplify the analyses, I will assume throughout that no dividends are paid.

The term “phantom stock” is often used to denote a deferred compensation arrangement in which the participant receives a cash payment equal to the appreciated value of a deferred amount credit in employer stock. Phantom stock taxation and accounting is identical to that of deferred stock, and the analysis of deferred stock throughout this article applies equally to phantom stock.

The plan must be designed and implemented in a fashion that avoids current income recognition under theories of constructive receipt or economic benefit. Practitioners have not had trouble designing effective plans. As long as the deferral election is made sufficiently early, the deferral term is fixed in advance, and the promise to pay is sufficiently unfunded and unsecured, deferral will be effective for tax purposes. Of course, employees and employers constantly push on these levers and test the boundaries of constructive receipt and economic benefit, but it is not the purpose of this article to speculate on the edges of these doctrines in the context of deferred stock. Suffice it to say that many wealthy and well-advised executives and corporate directors are satisfied to forego current compensation for an “unfunded and unsecured” promise to deliver stock in the future and are not kept awake at night by the prospect of the IRS asserting constructive receipt or economic benefit. For more on the contours of these doctrines in the context of nonqualified deferred compensation plans, see Robert A. Miller, Nonqualified Deferred Compensation Plans, in EXECUTIVE COMPENSATION 211, 255 (Yale D. Tauber & Donald R. Levy eds., 2002).


This amount will be deductible assuming that an employer deduction is not barred under I.R.C. § 162(m) or any other Code provision.
under the Code, such plans are very popular with taxable companies because they can be designed to avoid many of the burdensome requirements of the Employee Retirement Income Security Act of 1974 ("ERISA"), such as nondiscrimination, funding, and vesting requirements. For example, an employer can establish a "top hat" deferred stock plan that is open only to senior executives that avoids most of the onerous restrictions of ERISA.

C. Restricted Stock

Unlike deferred stock, which is simply a commitment to deliver stock in the future, "restricted stock" refers to stock that is currently granted or sold to a party in connection with the performances of services but is subject to restrictions on further transfer and a risk of forfeiture. Companies commonly grant employees restricted shares in their own stock, which become nonforfeitable or "vest" after some number of years of continued service. The holder of restricted stock is required to return the shares (or sell them back to the company at her cost, if any) in the event that her employment is terminated prior to the vesting date or other conditions of vesting are not satisfied.

Restricted stock plans are designed to fit within the contours of § 83(a) so that the participant need not recognize income until the stock vests. Accordingly, restricted stock is nontransferable and subject to forfeiture if employment terminates prior to the vesting date. Under § 83(a), the fair market value of the stock at the vesting date, less any amount paid for the stock, is taken into income by the participant as of the vesting date.

A recipient of restricted stock may elect under § 83(b) to take the fair market value of the stock, less any amount paid for it, into income as of the date of the grant. For tax purposes, a § 83(b) election causes a transfer of restricted stock to be treated as a transfer of unrestricted property.

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39 See Miller, supra note 35, at 216-53 (discussing ERISA considerations for nonqualified deferred compensation plans).
40 See Judith E. Alden & Murray S. Akresh, Using Equity to Compensate Executives, in EXECUTIVE COMPENSATION 67, 82 (Yale D. Tauber & Donald R. Levy eds., 2002) (explaining the characteristics of restricted stock).
41 See id. (noting that "[r]estricted stock is usually awarded as a retention device").
42 See id. at 82-83.
43 See I.R.C. § 83(a) (2003) (providing that the fair market value of property transferred to an employee in connection with the performance of services shall be measured and included in the employee's income in the year in which the transfer and forfeiture restrictions lapse).
44 Essentially, deferral is optional. To the extent that participation in stock option or other equity compensation programs is optional, deferral of tax is optional in these cases as well. Restricted stock is different in permitting the recipient to elect the tax regime while holding the instrument.
45 See I.R.C. § 83(b).
§ 83(b) election is made, the recipient then holds the stock as a capital asset. The advantages to making a § 83(b) election are that any appreciation after the date of transfer will be taxed at capital gains rates and the recipient controls the timing of disposition and income inclusion. The disadvantages are that the election triggers immediate taxation of the value transferred and any tax paid as a result of the election cannot be recovered if the stock fails to vest.

Under § 83(h), an employer’s compensation deduction related to restricted stock is timed to coincide with its employee’s recognition of income, i.e., at vesting if § 83(a) applies or at the time of transfer if a § 83(b) election is made. The amount of the deduction is equal to the amount included by the employee in income.

Mature public companies and start-up companies use restricted stock in different ways. Public companies typically make outright grants of restricted stock to their employees as compensation, generally in combination with or as an alternative to stock options. Only rarely are public company employees asked to pay anything for restricted stock, and they are virtually never asked to pay fair market value. Here, the disadvantages of a § 83(b) election—immediate taxation and risk of forfeiture and non-recovery of tax—loom large, and the election is very rarely made. By contrast, early stage start-up companies often sell shares to key employees at a nominal value, which can be argued to be the fair value of the stock in the fledgling venture. Thus, employees of start-ups can make a § 83(b) election and incur little or no current tax, and they generally do. (Unless otherwise noted, future references

46 See Alden & Akresh, supra note 40, at 83 (explaining that a § 83(b) election leads to treatment of restricted stock as a capital asset).

47 See id. (discussing the tax implications of a § 83(b) election).

48 See I.R.C. § 83(b) (clarifying that an individual making a § 83(b) election cannot subsequently claim a deduction if the property is forfeited).

49 See I.R.C. § 83(h).

50 See id.

51 See E-mail from Ted R. Buyniski, Buck Consultants, to David I. Walker, Associate Professor, Boston University School of Law (Mar. 26, 2003) (on file with author).

52 See HALL & MURPHY, supra note 3, at 3-4 (indicating the varied ways in which employers use stock options).

53 Because employees of publicly traded companies can buy stock at fair market value that will be subject to no restrictions, it would make little sense for such employees to buy restricted stock from their employers for full value.

54 See Buyniski, supra note 51 (stating that in the case of mature companies § 83(b) elections are not common).

55 See id. Employees who pay full fair market value for restricted stock should always make the § 83(b) election. Since they have paid fair market value, the election will result in no current income. Going forward, the election will result in the stock being treated as a capital asset that will produce capital gains or a capital loss. If the election is not made, any appreciation between the date of grant and vesting will be taxed as ordinary income as of the vesting date. If the election is not made and the share price declines, the holder will have
to restricted stock in this article should be presumed to refer to the public company context, i.e., outright grants for which no § 83(b) election is made. This article is not concerned with non-deferred equity compensation.

Unlike stock options, restricted stock must be expensed at the time of grant. For this reason, and perhaps others, restricted stock was a much less popular compensation tool during the 1990s. As attacks on option accounting and practice have increased, however, compensation experts have begun to see some shift away from options and in favor of restricted stock.

II. THE EMPLOYEE-LEVEL BENEFIT OF DEFERRED EQUITY COMPENSATION

At the employee level, deferring compensation and tax through substitution of equity compensation for cash is advantageous in a rising market. The effect is equivalent to exempting the participant's outside investment earnings from tax. If capital losses are usable, however, there is a corresponding disadvantage to deferral in a declining market (or, in the case of options, in a market that fails to rise substantially). But this symmetry is more apparent than real. Deferred equity compensation provides an expected tax benefit because an individual's use of capital losses on outside investments may be limited, stock prices drift upward, and employee-favorable ex post adjustments often are made to poorly performing deferred compensation contracts.

To isolate the employee-level tax effects, this article follows Merton Miller and Myron Scholes in modeling deferred equity compensation as a substitute for cash compensation of equivalent pre-tax value. I assume that the same capital loss that she would have had had she made the § 83(b) election. Accordingly, start-up company employees generally make the § 83(b) election. See id. The § 83(b) election decision is much more complicated for employees who pay something, but less than full fair market value for restricted stock. See David I. Walker, Market Symmetry and the Tax Efficiency of Equity Compensation 18-21 (June 2004) (unpublished working paper), available at http://ssrn.com/abstract=556608 (last accessed June 14, 2004).

56 See Alden & Akresh, supra note 40, at 73 (indicating that most of the equity compensation in the 1990s was in the form of stock options); see also HALL & MURPHY, supra note 3, at 8 (discussing trends regarding equity compensation in the 1990s).

57 See McGeehan, supra note 31 (indicating that employers are increasingly compensating employees in the form of restricted stock).

58 The model employed herein is a simplified version of that employed by Miller and Scholes in a 1982 article that tested deferred compensation plans generally for tax advantage. See Miller & Scholes, supra note 7, at 185-92. Although our basic results are in agreement, I disagree to some extent with the authors' interpretation of these results. See infra note 100; see also Walker, supra note 55.

The assumption of equivalent pre-tax value cash or equity compensation is made for expository reasons only. See infra note 62. I will retain this assumption in analyzing an employer's economics. At this point, no assumptions are made about how any employee- or employer-level tax costs or benefits would be shared between the parties. I am only attempting to determine the global costs or benefits.
particular investment instrument—deferred stock, restricted stock, or nonqualified stock options—utilized in the deferred equity compensation program ("inside investment") would be available to and would be selected by the participant for the investment of the after-tax proceeds of cash compensation ("outside investment").\footnote{Deferred equity compensation typically involves investment in the equity of the provider—restricted stock and stock options being the most common examples. An employee generally can make an outside investment in her employer's stock and often can purchase options on her employer's stock in the market, but she cannot make an outside investment in NQSOs or ISOs. However, even if an employee can purchase employer stock with cash, diversification concerns weigh against doing so. As discussed below, the tax advantage enjoyed by the deferred equity compensation participant on investments in employer equity must be weighed against the lost opportunity to diversify the participant's portfolio.} Relaxation of this (admittedly artificial) assumption, as discussed subsequently, does not affect the conclusions generated through this mode of analysis. I also assume initially that all investments are cashed out at an arbitrary "Time 2." This simplifying assumption can affect the analysis to a modest extent, but that complication will be addressed as well.\footnote{A final caveat: My analysis will only include regular income tax effects and will ignore the alternative minimum tax ("AMT"). The AMT can be important for recipients of equity compensation, but issues arise most often in the context of incentive stock options, which will not be a major concern.}

To keep the analysis concrete yet manageable, I will focus on two price scenarios: 150% gain and 100% loss.\footnote{The reader may ask why I have not utilized symmetric gain and loss scenarios, e.g., 100% gain versus 100% loss. The reason is that I want to demonstrate the leverage effect of options, and under my price assumptions, the enhanced value and deferral benefit associated with options over stock do not appear until share price appreciation exceeds 100%. Losses in excess of 100% are, of course, impossible with these investments.} We will see that the effect of holding deferred stock, restricted stock, and NQSOs is similar in the two price scenarios but that the leverage of options amplifies the impact of deferral.

A. Rising Market

Example 1: Rising Market

- Deferrable compensation: $100
- Stock price at time of deferral ("Time 1"): $20 per share
- Stock price at time of income recognition ("Time 2"): $50 per share
- Employee's marginal tax rate on ordinary income: 35%
- Employee's tax rate on capital gains: 15%

1. Restricted or Deferred Stock

First assume that the employee is given a choice between cash compensation and a pre-tax equivalent grant of deferred or restricted stock.\footnote{Recognizing the benefits of deferral at the employee level (and, as we will see, a cost...}
receives compensation as cash, she will be taxed immediately in the amount of $35 and will have $65 left to invest. If she invests the remaining $65 in stock of her employer, she will have stock worth $162.50 at Time 2. If she sells the stock at this point, and assuming that Time 2 is a year or more later, she will have a long term capital gain of $97.50, tax of $14.62, and after-tax proceeds of $147.88.63

If, on the other hand, the employee elects to defer the compensation,64 her $100 will be credited as five shares (deferred stock) or result in the issuance of five restricted shares (restricted stock), which will be worth $250 at payout or vesting. This entire amount will be treated at payout or vesting as ordinary income, regardless of whether it is received more or less than a year later. After paying taxes of $87.50, the employee will be left with $162.50, which is the same result that she would have enjoyed had there been no tax imposed on her $97.50 gain on her after-tax investment in the non-deferral scenario.65

As recognized by Miller and Scholes, the employee compensated with deferred or restricted stock does not have to liquidate her outside investment at Time 2 and trigger the capital gains tax. See Miller & Scholes, supra note 7, at 189. This article will assume liquidation at Time 2 in order to generate an “apples to apples” comparison with the deferred stock case, which is necessarily liquidated (and taxed) at Time 2. As discussed below, however, relaxing the assumption of liquidation of the outside investment at Time 2 lessens but does not eliminate the benefit produced by deferral in a rising market. See discussion infra Part II.D.2.

If the employee is electing to receive restricted stock in lieu of cash in order to defer tax on her compensation, we can assume that a § 83(b) election will not be made. See discussion supra Part I.C.

As Miller and Scholes demonstrate, the deferral advantage of appreciated deferred stock relative to cash compensation of equivalent pre-tax value and outside investment in employer stock can be generalized algebraically as:

\[ w(1 - t_{oi}) t_{cg}\left(P_2/P_1 - 1\right) \]

where \( w \) is the amount of compensation deferrable at Time 1; \( P_2 \) and \( P_1 \) are the stock prices at Time 2 and Time 1, respectively; \( t_{oi} \) is the tax rate on ordinary income; and \( t_{cg} \) is the tax rate on long term capital gains. This expression is positive as long as the share price on payout is greater than the share price on grant. Interestingly, this expression describes the relative advantage of deferral at Time 2, assuming, as I have done, that all investments are cashed out at Time 2, or at a later Time 3, assuming, more generally, that outside investments are held until Time 3. Because a benefit received at an earlier point is worth more than a nominally identical benefit received at a later point, the use of this model to describe the benefit of deferral at Time 2 essentially states the maximum benefit of deferral. See Miller and Scholes, supra note 7, at 189; see also Walker supra note 55.

The employee-level tax analysis of nonqualified deferred compensation is identical. The difference is that an employee’s account would normally be tied to a third party stock or fund rather than to employer stock. The key, however, lies in the appreciation in the
Thus, it can and has been said that deferral of tax is equivalent to imposing the tax on the initial grant of compensation and exempting the return on the after-tax amount.66

2. Nonqualified Stock Options

Now imagine that the employee is permitted to defer the compensation in the form of a nonqualified stock option with a strike price of $20 per share. Assume that the fair market value of such an option is equal to $10 per share so that the pre-tax value of an option on ten shares would be equivalent to $100 cash compensation. If the employee exercises the option at Time 2 and sells the underlying shares, she will have pre-tax proceeds of $300 ($500 share value minus $200 aggregate exercise price). This entire amount will be taxable as ordinary income, leaving $195 after imposition of tax at a 35% marginal rate.

This result is significantly better than that achieved through inside or outside investment in employer stock, but to provide a fair comparison and isolate the NQSO tax effects, we should compare this result with the employee's hypothetical outside investment in a NQSO. Thus, imagine as before that the employee receives $100 cash compensation and pays $35 in tax, but now purchases an at-the-money option on her employer's stock with the remaining $65. In this case, the employee buys an option on 6.5 shares. At Time 2 she exercises the option and sells the underlying shares, producing pre-tax proceeds of $195 ($325 share value minus $130 aggregate exercise price), taxable gain of $130, and tax at long term capital gains rates of $19.50. Her outside investment thus nets $175.50 after tax. As before, deferral effectively eliminates the tax on the outside investment return. Because options are a leveraged investment, however, and produce a greater return in a sharply rising market, more is at stake. Under these price assumptions, for example, the benefit of inside versus outside investment in an option is $19.50, while the benefit of inside versus outside investment in stock is only $14.62.67


67 Within the range of \( P_2 \) prices that result in option exercise, the relative advantage of inside investment in options versus outside investment in options can be expressed as:

\[
t_{cg} w(1-t_w)(P_2-P_1)/OV - 1
\]

where, as before, \( w \) is the amount of compensation deferrable at Time 1, \( P_2 \) and \( P_1 \) are the stock prices at Time 2 and Time 1, respectively, \( t_w \) is the tax rate on ordinary income and \( t_{cg} \) is the tax rate on long term capital gains. Here, \( OV \) represents the option value or cost. This
3. Incentive Stock Options

In a rising market ISOs provide a deferral benefit similar to that offered by NQSOs. Because the ISO rules provide additional employee-level benefits—effectively causing the compensatory element of the option to be treated as capital rather than ordinary—the deferral benefit is less obvious, but it is there nonetheless. Employees cannot buy ISOs or achieve ISO tax treatment on their outside investments, but we can again isolate the deferral benefit by comparing hypothetical transactions.

Recall the unique tax features of ISOs: Assuming holding period requirements are satisfied, the optionee is taxed on her entire gain at capital gains rates when she sells the underlying shares. Her employer, however, receives no compensation deduction related to a qualifying ISO at any time.

Reconsider the hypothetical described above in which an employee purchases an option on 6.5 shares of her employer’s stock with after-tax cash compensation or receives a compensatory option on ten shares. If the stock appreciates from $20 to $50 per share between the grant date and the date of exercise and share sale, the outside investment results in after-tax funds of $175.50 (6.5 option shares times $30 spread, less 15% tax on a $20 per share taxable gain). Inside investment in an NQSO produces after-tax proceeds of $195 under these assumptions ($30 spread times ten shares less 35% tax). If the compensatory option is an ISO, however, the tax on the spread would be 15% instead of 35%, resulting in after-tax proceeds of $255.

The employee-level ISO benefit has two sources. First, like NQSOs, ISOs result in the effective exemption of outside investment earnings from tax. Second, the compensatory element of ISOs is effectively taxed at the lower capital gains tax rate. This second effect makes ISOs unique among equity compensation instruments, although, as we will see, a heavy price is paid by the company that issues ISOs and foregoes a deduction for compensation paid.

To see the dual effect at the employee level, however, compare the ISO result under these assumptions to a hypothetical case in which the employee receives cash compensation, pays tax on this compensation at the capital gains rate, and then invests the after-tax proceeds in a purchased option. In this hypothetical cash case, the employee would pay tax of $15 on the $100 received and would be left with $85 to purchase an option. Assuming a $10 per share option value, $85 would purchase an at-the-money option on 8.5 shares. At exercise at Time 2, this option produces gross proceeds of $255.

expression is positive and inside investment is advantageous as long as $P_2 > P_1 + OV$, in other words, as long as the share price at exercise exceeds the sum of the strike price and the option cost. See Walker, supra note 55, at 10.

The tax savings available to the holder of an ISO is offset by a tax cost to the issuer. Nonetheless, Congress elected to limit the number of ISOs that could be granted to any individual employee. See supra note 26; see also discussion infra Part III.A.3.

See supra notes 24-25 and accompanying text.

See discussion infra Part III.A.3.
($30 spread times 8.5 option shares). This pre-tax result is the same as the after-tax ISO result described above, confirming the view that the ISO tax rules both exempt investment return and tax compensation at the lower capital gains rate.\textsuperscript{71}

B. Flat or Falling Market

As we have been reminded of late, stock prices can fall as well as rise, or they can simply drift sideways for extended periods. Although a participant in a deferred equity program avoids the taxation of gains on investment income if the stock price rises, the participant also loses the benefit of capital losses if the price falls or, in the case of options, fails to rise significantly. If an employee were able to fully utilize her capital losses and had no reason to believe that gains were more likely than losses, these effects would be largely symmetric, and deferral would appear to provide little advantage. As the following section will show, however, these caveats are important and tend to undermine the apparent symmetry.

To see the mirror effect in a falling market, reconsider the examples discussed above but substitute a stock price at Time 2 of zero instead of $50 per share:

**Example 2: Falling Market**

- Deferrable compensation: $100
- Stock price at time of deferral ("Time 1"): $20 per share
- Stock price at time of income recognition ("Time 2"): $0 per share
- Employee's tax rate on ordinary income: 35%
- Employee's tax rate on capital gains: 15%

If the employee elects to take cash compensation and invests the 65 after-tax dollars in employer stock, she will have a $65 capital loss when the shares become worthless at Time 2. If the employee can deduct the capital loss, the loss will provide a tax benefit of $9.75 at a 15% rate.\textsuperscript{72}

If, on the other hand, the employee elects to take deferred or restricted stock, she will have or be entitled to five shares at Time 2, but these shares will be worthless. As a result the employee will have no compensation income and will thus bear no tax. However, she will not have the potential benefit of the tax shield associated with investing after-tax cash compensation in her employer's stock.

As this example demonstrates, the tax benefit of deferral in a rising market is mirrored by the loss of a tax benefit in a falling market and the effect is similar in the case of deferral of compensation through stock options. If

\textsuperscript{71} From a recipient's perspective (and ignoring the AMT), ISOs are always preferred to NQSOs and produce significantly higher expected value than cash compensation of equivalent pre-tax value invested in purchased options.

\textsuperscript{72} Under current law, taxpayers can offset capital gains and up to $3,000 of ordinary income with capital losses. See I.R.C. § 1211 (2003).
identical options are never exercised, a purchased option would produce a capital loss while a compensatory option would simply produce zero income. Perhaps more surprising is the fact that a purchased option can provide a relative tax benefit over an identical NQSO even if exercised, but this is indeed the case since an option purchaser may report a capital loss on an exercised option.

First consider option expiration without exercise. If the market price of the underlying shares is no greater than the exercise price at expiration, as in Example 2, the option will not be exercised. If the employee has elected to receive cash compensation and has invested the 65 after-tax dollars in a purchased option on her employer’s stock, she would have a $65 capital loss when the option expires worthless at Time 2. If the employee can deduct the capital loss, the loss will provide a tax benefit of $9.75 at a 15% rate.

If, on the other hand, the employee has elected to defer the compensation in the form of a NQSO or ISO, that option also would expire worthless at Time 2. In this case, however, the employee would simply recognize no compensation income as a result of the option. She would not have a capital loss or the potential benefit of the tax shield associated with investing after-tax cash compensation in an option on her employer’s stock.

Now consider option exercise at an economic loss. Compensatory options do not provide a deferral benefit unless the stock price at exercise exceeds the sum of the strike price and the implicit or explicit premium paid for the options. To see this imagine that the share price at Time 2 in the foregoing example is $25 per share, which will result in the exercise of a $20 strike option, but at an economic loss given a $10 per option share premium. A NQSO on ten shares would yield pre-tax proceeds of $50 ($250 share value minus $200 aggregate exercise price) and net proceeds of $32.50 after imposition of tax at 35%. A purchased option on 6.5 shares would yield pre-tax proceeds of $32.50 ($5 per share gain times 6.5 shares), but also would produce a capital loss of $5 per share, or $32.50 in total, since the stock would have a $30 per share basis ($10 per share option premium plus $20 per share exercise price). If the employee can utilize capital losses, this loss would produce a tax benefit (and outside investment advantage) of $4.88 at a 15% rate.73

73 An employee who held an ISO in this circumstance would come out ahead of an employee who purchased an option with after-tax cash compensation ($42.50 versus $37.38), but this is in spite of a deferral disadvantage. In the ISO case, the employee-level benefit of taxing the compensatory element of the option at capital gains rates more than offsets the loss of the deduction for the capital loss.
The following table summarizes the employee-level costs and benefits of deferral under several market scenarios, assuming that capital losses are fully and immediately usable. In the next section we will see that this is generally not a reasonable assumption and consider other reasons for concluding that the apparent symmetry portrayed in the table between the benefit of deferral in a rising market and a disadvantage in a falling market is illusory.

Table 1: After-Tax Value at Time 2 of $100 Investment at Time 1 (Assuming Full Loss Offsets)\(^ {74} \)

<table>
<thead>
<tr>
<th>Stock Compensation</th>
<th>Stock Price at Time 2 vs. Time 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Inside” Investment in Deferred or Restricted Stock</td>
<td>(-100%) (\text{N.C.}) +100% +150%</td>
</tr>
<tr>
<td>“Outside” Investment in Stock</td>
<td>$9.75 (\text{N.C.}) $130.00 $162.50</td>
</tr>
<tr>
<td>“Inside” Investment Advantage</td>
<td>(-9.75) (\text{N.C.}) 9.75 14.62</td>
</tr>
<tr>
<td>NQSO Compensation</td>
<td>(\text{N.C.})</td>
</tr>
<tr>
<td>“Inside” Investment in NQSO</td>
<td>$9.75 $9.75 $120.25 $175.50</td>
</tr>
<tr>
<td>“Outside” Investment in Option</td>
<td>$9.75 $9.75 $120.25 $175.50</td>
</tr>
<tr>
<td>“Inside” Investment Advantage</td>
<td>(-9.75) (-9.75) (9.75) (19.50)</td>
</tr>
</tbody>
</table>

C. False Symmetry

As the foregoing discussion and table demonstrate, there is an employee-level disadvantage associated with deferred equity compensation in a flat or declining market that would seem to offset the benefit in a rising market and leave an employee indifferent, ex ante, between inside and outside investment. However, the apparent symmetry is somewhat illusory. Capital loss limitations, potential ex post adjustment to the terms of employee stock option agreements, and the upward drift in stock prices undermine the apparent symmetry and result in an expected employee-level equity compensation tax advantage. Increased reliance on employee stock options in bull markets may also impact the expected deferral benefit, but the effect is unlikely to be positive. Progressivity in the tax rates applicable to ordinary income tends to reduce the expected tax advantage of equity compensation, but the impact of progressivity is likely to be slight for high-income taxpayers, who receive the bulk of equity compensation.

1. Capital Loss Limitations

The apparent symmetry between a deferral advantage in a rising market and disadvantage in a flat or falling market is significantly undermined if an employee is unable to take immediate and full advantage of capital losses. In

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\(^{74}\) This table assumes that capital losses are fully usable, a 35% marginal tax rate applies to ordinary income, and a 15% tax rate applies to long term capital gains. The 150% appreciation case demonstrates the effect of option leverage.
the most extreme case, in which capital losses provide no tax benefit to the employee whatsoever, deferral is unambiguously preferred to the receipt of current cash compensation.

Under current law, an individual’s capital losses are deductible only to the extent of capital gains, if any, plus ordinary income up to $3,000, although an individual may carry forward unused capital losses indefinitely. Given this limitation, many highly compensated employees should significantly discount the tax benefit associated with potential capital losses. Consider again Example 2 above, but substitute $100,000 for $100. (A highly compensated employee could quite reasonably consider deferring $100,000 of compensation, or even $1,000,000.) If the employee elects to take the full amount in cash, invests the after-tax proceeds in employer stock or an option on that stock, and the investment becomes worthless at Time 2, the employee will have a $65,000 capital loss. If the employee has equal or greater unrealized capital gains, the loss on the employer stock or option can be used to offset those gains and will provide a tax benefit. However, if the employee has no unrealized gains or has other capital losses, the opportunity to offset $3,000 of ordinary income per year will not be very meaningful. If the poor performance of the employer’s stock correlates with a weak investment market generally, the loss on the employer stock or option may provide little benefit.

Working within their liquidity constraints, investors generally have the ability to time the sale of assets and the recognition of gains and losses. This timing discretion helps investors utilize capital losses, but, as suggested above, may be of little benefit to investors whose losses are correlated. Joint Committee on Taxation (“JCT”) scoring of a 2002 bill that would have increased the annual capital loss deduction limitation from $3,000 to $8,250 suggests that the limitation has significant bite. The JCT estimated that the increased annual deduction limitation would cost the Treasury $11.8 billion over the first five years. This implies that at a minimum about 1.3 million U.S. taxpayers, and possibly many more, would be able to take advantage of

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75 See I.R.C. § 1211. House Resolution 1619, proposed in 2002, would have increased the amount of capital losses deductible against ordinary income from $3,000 to $8,250 per year, with indexing for inflation after 2002. See JCT Describes, Scores Capital Losses Bill, 97 TAX NOTES 248 (Oct. 14, 2002). This measure was not enacted.

76 See I.R.C. § 1212(b).

77 Although equity compensation is being pushed down through the ranks, we should recognize that executives and other highly compensated employees continue to receive the bulk of this compensation.

78 Even one-off stock price collapses such as Enron’s tend to occur during bear markets.

79 Holders of purchased stock options that expire unexercised will have a capital loss in the year of expiration. Built-in gains on stock, however, may be taken at any time and used to offset the loss on the purchased option.

80 See JCT Describes, Scores Capital Losses Bill, supra note 76.

81 See id.
the relaxed limitation. When we consider that only about 11 million returns are filed with an adjusted gross income ("AGI") in excess of $100,000 (and that low and middle income taxpayers are much less likely to generate capital losses), this suggests that a significant fraction of wealthy taxpayers who generate capital losses actually are constrained by the current $3,000 limitation.

Discounting the utility of capital losses makes the opportunity associated with deferred equity plans much more attractive. In the limiting case in which capital losses are assumed to provide no tax benefit, the employee will be indifferent between cash compensation and the receipt of an NQSO, for example, if the stock price falls or fails to rise sufficiently to cover the exercise price plus the implicit premium. If the stock price appreciates beyond this level, capital losses do not come into play and deferral is always advantageous. While full use and no use of capital losses set the outer bounds for this analysis, rational employees should assign some discounted value to potential capital losses ex ante, although that discounted value may be small.

2. Ex Post Adjustment to Deferred Equity Compensation Contracts

The potential for ex post contract adjustments in a participant's favor also can disrupt the apparent symmetry of the marketplace and provide a strong incentive for an employee to accept deferred equity compensation in lieu of cash. Consider the formerly common practice of explicitly resetting option exercise prices in a down market. If an employee receives cash

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82 The average estimated revenue effect was about $2.4 billion per year. See id. The JCT provided no detail to back up its calculation, but assuming a 35% marginal tax rate and that each taxpayer who could take advantage of the increased deduction took full advantage of the increased deduction, this suggests an impact on 1.3 million taxpayers at a minimum. More likely, the JCT estimated average increased deductions of less than $5,250 and a greater number of impacted taxpayers.

83 In 2000, the most recent year for which such statistics are available, there were approximately 10.9 million returns filed reporting AGI in excess of $100,000. See Brian Balkovic, High-Income Tax Returns for 2000, STAT. INCOME BULL., Spring 2003, at 10, 28, available at http://www.irs.gov/pub/irs-soi/00hiinco.pdf (last accessed May 5, 2004).

84 In a recent study of predominately high income taxpayers, Alan Auerbach, Leonard Burman, and Jonathan Siegel found that 9% to 16% of taxpayers sampled carried forward unused capital losses over the 1987-1994 period, although most of these taxpayers did not carry losses forward more than a year or two. As the authors noted, however, despite the 1987 stock market decline, the market generally rose across the period studied, generating far more gains than losses. See Alan J. Auerbach et al., Capital Gains Taxation and Tax Avoidance: New Evidence From Panel Data, in DOES ATLAS SHRUG?: THE ECONOMIC CONSEQUENCES OF TAXING THE RICH 355, 364, 365 tbl. 11.5, 374, 377 (Joel B. Slemrod ed., 2000).

85 See Walker, supra note 55, at 14.

86 Although common, this practice has been routinely derided by institutional investors and industry watchdogs. See, e.g., GRAEF S. CRYSTAL, IN SEARCH OF EXCESS: THE
compensation, buys a traded option, and suffers a decline in the underlying asset price, that option will expire worthless. She can be sure that that option will not be re-priced. However, if the employee receives a NQSO and the underlying stock price declines sharply, the provider may reduce the option exercise price (directly or indirectly) in order to restore the incentive associated with the option. Because strike prices are never increased in a rising market, the potential for resetting exercise prices means that it is more likely that an employee ultimately will hold an appreciated option than a depreciated one. As we know, the deferral advantage associated with deferred equity compensation arises when securities appreciate. To the extent that appreciation is more likely to arise than not, employees should prefer deferred equity compensation to cash compensation of equivalent value and outside investment.  

Recent changes in accounting rules have eliminated explicit option re-pricing. The accounting rules are not watertight, however, and there are ways to indirectly re-price options while avoiding an accounting hit. For example, companies can cancel old out-of-the-money options and issue new at-the-money options six months and one day later without incurring unfavorable accounting treatment. Moreover, some companies have simply issued additional options with a lower exercise price to current holders of out-of-the-money options. In any event ex post adjustments to deferred equity compensation contracts have increased the probability of positive investment returns and are likely to continue to do so.

3. Upward Drift in Stock Prices

Over the long haul stock prices rise to repay investors for the time value of their money and their assumption of risk. Thus, the expected value of the employer stock in Examples 1 and 2 is somewhat greater than $20 per share at Time 2. Because gains are more likely than losses, participation in a deferred stock program provides an expected advantage even if the employee could


87 Of course the deferral benefit associated with repricing out-of-the-money options is just the icing on the cake. The more important effect for the employee is that repricing vastly increases the value of the underlying investment, unless the number of shares underlying options is adjusted to reflect the relative value of the old and new options.

88 Recent guidance promulgated by the Financial Accounting Standards Board specifies that a modification of an option award to reduce the exercise price triggers variable accounting treatment from the date of the modification. See Accounting for Certain Transactions Involving Stock Compensation, FASB Interpretation No. 44 ¶ 38-48 (Financial Accounting Standards Bd. 2000).

89 See id. ¶ 45-47. See also Rachel Emma Silverman, Breathing Underwater: Companies Look for New Ways to Help Workers Stuck with Worthless Stock Options, WALL ST. J., Apr. 12, 2001, at R8 (recounting the variety of techniques used by companies to reprice underwater options).

90 See Silverman, supra note 89.
fully utilize losses in a down market.

However, the expected deferral advantage associated with the upward drift in stock prices is likely to be fairly small for most employees and should not be overstated. Participation in a deferred equity program generally is not for the long term but for a relatively short period of a decade or less.\footnote{Employees often defer compensation through deferred stock or other nonqualified deferred compensation plans until retirement. Generally, however, stock options may be held unexercised for no more than ten years, and restricted stock typically vests in five years or less. See Murphy, supra note 1, at 8.} Furthermore, while the large majority of decades over the last two hundred years exhibited rising market prices,\footnote{See Jeremy J. Siegel, The Equity Premium: Stock and Bond Returns Since 1802, 48 FIN. ANALYSTS J., 28, 34 fig.G (1992) (charting the real returns on stocks and bonds in U.S. markets during the decades between 1806 and 1990).} participation in a deferred stock program does not involve a general market investment but an investment in a particular firm's equity. Together, these factors suggest that the bias in favor of rising prices is likely to be small and quite uncertain for an equity compensation program participant.\footnote{On the other hand, the cumulative impact on the public fisc of upward equity drift and deferred equity compensation could be significant. See HALL & MURPHY, supra note 3, at 5 fig.1.}

4. Predicting Bull Markets

Employee stock option programs took off in the 1990s as the sustained bull market enriched employees holding options—at least on paper—and encouraged other employees to seek or accept equity compensation. Option grants have declined from their peak in the year 2000, in part because of the prolonged slump in equity markets. If equity compensation is more prevalent in rising markets, deferral may provide a net advantage for this reason alone. However, due to the lag in the realization of the deferral effect, market timing is likely to have no effect, or could even have a negative effect, on the employee-level deferral benefit.

The problem can be seen in the pattern of option grants in the late 1990s and early 2000s. Average option grants by S&P 500 firms increased from about $100 million in 1998 to $146 million in 1999 and then to $238 million in 2000. From there, average grants declined to $226 million in 2001 and to $141 million in 2002.\footnote{As the following figure demonstrates, that pattern tracks but slightly lags the performance of the S&P 500 Index, which also peaked in 2000. Almost all of these options were granted at the money and few of them would have been immediately exercisable. Thus, the huge grants of options made in 2000 and 2001 are mostly unexercised and underwater. Of course, the market may turn around before these options expire, but evaluating these options today suggests that the recipients would have been better off if they...}
had received cash compensation, paid taxes, and purchased options with the after-tax cash. At least they would have the possibility of using capital losses. Of course some of these options may be directly or indirectly re-priced and the employees may not have been able to utilize capital losses generated on outside investments in any event, so even if participants badly mistime the market, deferral of compensation and tax may result in no real disadvantage. Nonetheless, the recent pattern of option grants suggests that it is unlikely that market timing alone would *add* to the expected employee-level benefit of deferred equity compensation.

5. Progressive Tax Rates on Ordinary Income

Under the Code, ordinary income generally is taxed at progressively increasing rates while most taxpayers' capital gains are taxed at a flat 15% rate. Progressivity in ordinary income rates tends to reduce the expected tax advantage of equity compensation, but the impact is likely to be negligible currently because of the lack of significant progressivity at high income levels.

A combination of highly progressive tax rates on ordinary income and flat rates on capital gains would significantly reduce the attractiveness of equity compensation. I have assumed that ordinary income is subject to a flat 35% marginal tax rate, but assume instead that gains on an equity compensation contract, which are taxed as ordinary income, push an employee into a higher marginal bracket. This circumstance would reduce the benefit of equity compensation versus cash compensation and outside investment in a rising market, and there would be no offsetting reduction in the disadvantage of
equity compensation in a declining market.\textsuperscript{95} Thus, progressivity in marginal rates undermines the apparent symmetry in a way that favors cash compensation and outside investment.

At current tax rates, however, the impact of progressivity is unlikely to be a significant factor in weighing cash versus equity compensation, particularly for high-income taxpayers, who receive the bulk of the equity compensation. First, base marginal tax rates applicable to ordinary income are relatively flat. For 2003, married couples filing jointly faced a 33\% base marginal tax rate on taxable income between $174,700 and $311,950 and then a 35\% base marginal rate on additional taxable income.\textsuperscript{96} Second, high-income taxpayers actually experience reductions in their effective marginal tax rates when their personal exemptions and itemized deductions are fully phased out.\textsuperscript{97} For 2003, a married couple with two children experienced a reduction in their effective marginal tax rate of about three to three and a half percentage points when their personal exemptions were fully phased out at adjusted gross income of $331,750.\textsuperscript{98} Third, many high income taxpayers are subject to the alternative minimum tax, which has an even flatter rate structure and also produces reductions in effective marginal rates when alternative minimum tax exemption amounts are fully phased out.\textsuperscript{99}

D. Other Employee-Level Issues

The foregoing analysis suggests that deferred equity compensation provides an expected benefit over pre-tax equivalent cash compensation at the employee level. Importantly, the apparent symmetry between a deferral benefit in a rising market and disadvantage in a declining market turns out to be largely illusory because of limitations on the deduction of capital losses, ex post adjustment to equity compensation contracts, and upward drift in stock prices.

This article has employed a very simple analytical model to isolate the employee-level tax effects, and we should consider briefly whether it is too

\textsuperscript{95} Imagine in Example 1 that the $150 gain on deferred or restricted stock is taxed at a 40\% rate instead of 35\%. The increased tax on the gain would reduce the equity compensation advantage from $14.62 to $7.12. The declining market scenarios would be unaffected.


\textsuperscript{97} For 2003, personal exemptions of a married couple filing jointly were phased out between adjusted gross income levels of $209,250 and $331,750, and itemized deductions were phased out once AGI exceeds $139,500. See id.

\textsuperscript{98} Taxpayers may be in a 33\% or 35\% base marginal tax bracket when the phase out of personal exemptions is completed. For 2003, a married couple with two children would be entitled to base personal exemptions of $12,200. See id. Two percent of the exemption amount, here $244, is phased out for every $2500 of adjusted gross income in excess of the threshold amount. See I.R.C. § 151. At a 35\% base marginal tax rate, the effect of the phase out is to increase effective marginal rates by 3.4 percentage points (($244/$2500) x 0.35) until the exemptions are fully phased out.

\textsuperscript{99} See I.R.C. § 55.
simplistic to provide a reasonable picture of the employee-level benefit. This section will show that the model is reasonably robust but that two factors tend to reduce the real world benefit of deferral in a rising market: hedging or portfolio adjustment by employee-recipients and the possibility of holding outside investments beyond the exercise, payout, or vesting date of inside investments.

1. Participant Portfolio Adjustment

Employees who receive stock or option grants and make no adjustments to their portfolios maximize their upside potential with respect to stock price and the potential deferral benefit in a rising market. Conversely, they accept significant downside exposure and risk of regrets in a down market. Empirical evidence indicates that a significant number of employees sell previously held shares upon receipt of an option grant. These sales may result in the recognition of gains, which might otherwise continue to be deferred and which would offset some of the deferral benefit associated with equity grants in a rising market.\textsuperscript{100} Theoretically, employees might also utilize derivative securities, such as collars or equity swaps, to hedge equity grants against price declines, but hedging with derivatives is rarely observed.

Eli Ofek and David Yermack investigated hedging practices of top executives at S&P 500, S&P MidCap, and S&P SmallCap firms from 1992 through 1995.\textsuperscript{101} They found that managers whose shareholdings equaled or exceeded the number of shares underlying new stock or option grants (high-

\textsuperscript{100} Miller and Scholes have demonstrated that participant portfolio adjustment can be used to lock in an employee-level tax benefit in any market scenario, and thus they conclude that equity compensation is "predominately tax-advantageous" and should not be accepted at face value as an incentive alignment device. See Miller and Scholes, supra note 7, at 189-90. This assessment is questionable, however. Essentially, Miller and Scholes have shown that compared with investing after-tax compensation in employer stock or options, a scheme involving the deferral of a portion of deferrable compensation combined with riskless investment of the remainder is unambiguously preferred. But under reasonable assumptions as to tax rates and rates of return on riskless investments, the benefit that can be locked in is quite small, on the order of one to two percent of deferrable compensation. See Walker, supra note 55, at 12-14. However, in both cases—i.e., inside or outside investment in employer equity—the employee takes on additional firm-specific risk. All else being equal, relatively undiversified employees would prefer to receive cash compensation, pay tax, and invest the after-tax remainder elsewhere, rather than make an inside or outside investment in employer equity. Given a choice between diversifying and investing in employer stock or options with a one to two percent kicker, many employees, one suspects, would prefer to take the cash and the opportunity to diversify. Thus, I agree that equity compensation is tax advantaged at the employee level, but contend that the reasons discussed above—capital loss limitations, ex post contract adjustments, and upward drift—are more important than potential portfolio adjustment in reaching this result.

ownership managers) tended to sell shares contemporaneously with the grant. Low ownership managers, on the other hand, tended to retain stock previously held upon the receipt of additional stock or option grants. Sales by high ownership managers were significant statistically and economically. The authors' regression results implied that a high ownership manager who received an option on 1000 shares contemporaneously sold 684 previously held shares.

John Core and Wayne Guay conducted a similar study of S&P CEOs from 1992 through 1997 and directionally confirmed Ofek and Yermack's results. But Core and Guay found that, on average, the CEOs sold previously held shares equal to only about 15% of the shares underlying new deferred equity compensation grants. However, they also found evidence that CEOs were more likely to hedge new grants if firm-specific exposure was already high.

Together, these studies suggest that at least some executives sell employer shares in response to new deferred equity compensation grants. To the extent that such sales result in the recognition of gains that would otherwise continue to be deferred, they offset some of the deferral benefit associated with equity grants in a rising market. However, without knowing more about the basis and built-in gains on the shares sold in these studies, it is impossible to assess the extent to which such hedging undermines deferral benefits.

Investors who hold equity positions and wish to hedge against price declines without liquidating the investment might also utilize derivative instruments such as collars and equity swaps. In the absence of tax, contract, or

102 See id. at 1383.
103 See id.
104 See id. at 1381.
105 See id. at 1376.
107 See id. (finding that CEOs sell 20% of “newly-granted incentives,” which equates to 15% of shares underlying new options).
108 See id. at 177; see also Ying Li, Maintaining Optimal CEO Incentives Through Equity Grants and CEO Portfolio Rebalancing (Feb. 2002) (unpublished working paper, on file with author) (finding evidence consistent with the idea that CEOs adjust their portfolios and companies adjust CEO equity grants in an effort to optimize CEO incentives, implying that some CEOs will sell previously held shares in conjunction with new equity grants); Lisa K. Meulbroek, Does Risk Matter? Corporate Insider Transactions in Internet-Based Firms (2000) (working paper) available at http://www.hbs.edu/research/facpubs/workingpapers/papers2/9900/00-062.pdf (last accessed May 5, 2004) (demonstrating that high volatility counsels executives of internet firms to sell shares and diversify even if they believe the shares are significantly undervalued, suggesting that internet executives would be more likely than executives of less volatile enterprises to hedge deferred equity compensation grants by selling previously owned shares).
109 For example, a shareholder can lock in a future sales price within a range with no cash outlay by entering into a costless collar in which the shareholder sells a call option at a
regulatory constraints, deferred equity compensation participants could use these instruments to lay off all or part of the firm-specific risk associated with stock or option grants. Unfortunately for them, but fortunately for shareholders who prefer "sticky" incentive compensation, use of these instruments to hedge deferred equity compensation grants is severely constrained. David Schizer has shown that, despite the considerable ingenuity of investment bankers and tax practitioners, derivative hedges of option grants are effectively precluded by tax and securities laws, while hedges of restricted stock grants are difficult or costly.\textsuperscript{1} Derivative hedging of stock held outside of a deferred equity compensation program is feasible,\textsuperscript{11} but the incentive for hedging such stock, versus outright sale, is reduced.\textsuperscript{112}

The empirical evidence suggests that derivative hedging by corporate insiders remains relatively rare.\textsuperscript{113} This evidence is consistent with the difficulty Schizer describes in hedging options and restricted stock and the reduced incentive to hedge stock owned outright. Thus, we can be reasonably certain that derivative hedging does not undercut the employee-level deferral benefit associated with equity compensation.

strike price above the current market price and uses the premium to purchase a put option at a strike price below the current market price. As long as the market price remains within the collar, neither option will be exercised and the shareholder will simply receive the market price on sale. If the stock price drops, the shareholder is ensured of at least receiving the strike price of the put. If the price rises, the shareholder will receive no more than the strike price of the call. See Schizer, supra note 7, at 442. An equity swap allows an existing shareholder to swap the return on the stock going forward with the return on some other instrument, such as a bond or a diversified stock portfolio. Unlike a collar, which leaves some residual price risk with the shareholder of record, a swap generally transfers the entire risk of loss to the counterparty to the transaction.

\textsuperscript{110} See id. at 493-94 (relating the various negative tax and securities law implications of restricted stock grants to executives).

\textsuperscript{111} See id. at 491.

\textsuperscript{112} There are a variety of reasons that a shareholder, particularly a corporate insider, might choose to hedge stock held outright in lieu of selling the shares. Putting on a hedge and locking in a price may be less visible to the market than an outright sale, and hedging permits the stockholder to maintain voting control, at least for a period.

\textsuperscript{113} Bettis, Bizjak, and Lemmon searched for costless collar and equity swap transactions by insiders of Securities and Exchange Commission ("SEC") reporting firms between 1996 and 1998. See Bettis et al., Insider Trading in Derivative Securities: An Empirical Examination of the Use of Zero-Cost Collars and Equity Swaps by Corporate Insiders (May 1999) (unpublished working paper), available at http://ssrn.com/abstract=167189 (last accessed May 5, 2004). They found only 2 equity swap transactions and 87 collar transactions involving 65 firms. Currently there are over 13,000 domestic companies filing annually with the SEC. (These are U.S. annual filers other than broker-dealers and investment companies as of September 30, 2002. Data provided by the SEC information line on June 3, 2003.) Using this figure as a ballpark denominator, this data suggest that collars were observed in only about 0.5% of sample firms, while equity swaps were almost unheard of.
2. Two-Period Analysis

To this point, I have assumed that all investments are made at Time 1 and are cashed out at Time 2. This simplified, two-period model overstates the effects of deferral in some situations.\footnote{As noted above, Miller and Scholes do not make this simplifying assumption and thus provide a more technically accurate model of the employee-level tax implications of deferred compensation. See generally Miller & Scholes, supra note 7.}

Deferred equity compensation plans provide for payout on a predetermined date or dates. Restricted stock generally vests within several years of grant; stock options normally expire within ten years of grant; and even deferred stock arrangements, which can extend into retirement, are not indefinite. In the examples and the model presented above, I have assumed that all equity positions are cashed out on the date of the equity compensation payout (Time 2). However, an employee who elects to receive cash compensation and invest the after-tax amount in her employer’s stock need not cash out at Time 2. Indeed, the cash-compensated individual can hold the stock indefinitely and even pass the stock on to her heirs, tax free. The ability to defer (or avoid) taxation on appreciation enjoyed between the date of grant and the date on which deferred stock would have been paid out may reduce the disadvantage of cash compensation portrayed in this simple two-period model. In no case, however, is cash compensation preferred. If the employee dies holding the shares, her heirs will be indifferent as between cash and deferred stock, for example, but will not be advantaged by cash.\footnote{See Walker, supra note 55, at 7-9.}

Of course, many “outside” investment opportunities also lack unlimited life and the potential for indefinite deferral of gains. Purchased options, for example, have a fixed expiration date.\footnote{Purchased options have a fixed expiration date, but the exercise of a purchased option is not in itself a taxable event, and the shares underlying a purchased option need not be sold on exercise. The exercise price paid by the optionee is added to the price paid for the option and becomes the basis of the shares received on exercise. See Rev. Rul. 71-521, 1971-2 C.B. 313. Thus, the purchaser of a traded option can control the timing of recognition of the gain accruing prior to exercise. Of course the optionee must find the cash to pay the exercise price, and generally, some of the shares would be sold for this purpose. By contrast the exercise of a NQSO is treated for tax purposes as a bargain purchase of the underlying shares at that time. Thus, the optionee pays tax on the entire spread, which is considered compensation, whether she holds the shares or sells them. If she holds the shares, of course, she takes a basis equal to their fair market value at the time of exercise.} Other investments, such as bonds or certificates of deposit, produce regular interest payments rather than capital appreciation. Moreover, the deferral effect is only overstated to the extent that outside investments are held significantly longer than the deferral period associated with the equity compensation arrangement. Nonetheless, this factor, when combined with evidence that some executives sell shares out of their portfolio when granted new options, tends to reduce the deferral benefit calculated in the preceding section.
3. Alternative Outside Investments

Deferred stock, restricted stock, and stock option programs generally entail an investment in employer equity. In calculating the advantage of these programs to participants, I have compared each of these arrangements to an alternative in which the participant invests after-tax cash compensation in the stock or options of her employer. Are these reasonable comparisons? Why should we assume that an employee would invest cash compensation in the stock or options of her employer? Does it matter whether an employee would or wouldn’t?

Comparing direct and indirect investment in the same security is the most straightforward way to demonstrate the advantage of participation in a deferred compensation program, but the assumption is not vital to the analysis. Assuming that a participant would, in any event, hold equity investments totaling at least as much as her balance in the deferred equity compensation program, a diversified, risk-neutral participant without inside information should be indifferent between investing in the equity of her employer and in third-party equities. In that case the expected return on outside investment in employer stock or third-party stock, employer options or third-party options would be the same and the opportunity to diversify through outside investment would not affect the analysis.

However, potential participants in deferred equity compensation programs, particularly employees and executives who make up the majority, generally will not be diversified and risk neutral, which would discourage them from holding employer stock or options in their outside investment portfolio. Access to inside information, on the other hand, may reduce the negative effects of increased firm-specific risk associated with investment in employer equity. Additionally, senior executives may be subject to formal or informal shareholding guidelines that require a certain level of employer equity investment in any event.

More importantly, even if an employee would avoid employer stock when constructing an outside investment portfolio, the deferral effects described above still hold. In a reasonably efficient market, all investments should produce the same return on a risk-adjusted basis. In other words, alternative investments of similar risk to employer stock or options should produce the same expected returns. Thus, whether an employee would spend after-tax dollars to buy employer stock, other equities, or even fixed income securities or real estate is irrelevant. The benefit or cost of deferral associated with equity compensation is essentially independent of the alternative investment choice.

117 Formal shareholding guidelines, however, generally specify that the requirements must be met through outright share ownership, not through restricted stock or options holdings. See John E. Core & David F. Larcker, Performance Consequences of Mandatory Increases in Executive Stock Ownership, 64 J. FIN. ECON. 317, 319-20 (2001).
III. EMPLOYER INVESTMENT AND THE NET IMPACT OF EQUITY COMPENSATION

I have confirmed the employee-level benefit of deferring compensation and tax in a rising market and have shown that there is an expected benefit of deferral in general because of capital loss limitations, the potential for employee-favorable ex post adjustments to deferred equity compensation contracts, and the existence of upward drift in stock prices. Presumably, where there is a winner, there is a loser, i.e., the tax effects of deferred equity compensation sum to zero and some other party bears the cost of the employee-level tax benefit.

In this part of the article, I will add employers to our theoretical model and demonstrate that the distribution of the burden arising from the employee-level benefit depends in large part on how employers invest the cash they conserve when compensating employees with equity. As some commentators have noted, this burden can be firmly placed on the public fisc, thus ensuring a combined employee-employer advantage, if employers use the freed-up cash to repurchase their own stock or to buy options on their stock. If employers invest this cash elsewhere, however, the resulting corporate tax revenue for the fisc tends to offset the effective employee-level exemption and reduce or eliminate the combined tax advantage.

Many variables affect this analysis, including the type of equity compensation used, the investment selected for the freed-up cash, and the employer’s marginal tax rate. We will consider all of these variables, focusing chiefly on the most economically significant situations, which involve stock and NQSO grants by large, profitable companies. As before, we will limit our analysis to regular tax effects.

A. Modeling the Employer’s Investment Decision in a Rising Market

A company that provides its employees deferred stock, restricted stock, or stock options will have more cash on hand, or a reduced need to raise cash, at the grant date and an obligation to deliver cash or shares (or to release share restrictions) at some point in the future. Such a company is, in effect,
investing on behalf of its employees during this interim period. To determine the overall tax implications of deferred compensation for all of the parties, we must consider how this freed-up cash is invested and the tax implications of that investment.\textsuperscript{120}

In some cases companies can take advantage of § 1032 and ensure that the fisc, and only the fisc, bears the burden of the employee-level tax benefit. A company that purchases its own stock or options with the cash conserved by compensating employees with equity will incur no tax on its investment gains under § 1032.\textsuperscript{121} The lack of corporate tax on the company's investment means that the fisc bears the full cost of the employee-level exemption and that equity compensation results in a global tax advantage, at least on an expected-value basis.\textsuperscript{122} If, however, the company makes a taxable investment with the

\hspace{1cm} of deferred equity compensation. See Halperin, \textit{supra} note 7, at 521.

\textsuperscript{120} \textit{See} Scholes \textit{et al.}, \textit{supra} note 6, at 3 (discussing global contracting perspective). In the discussion that follows, I will speak generally of the investment of cash freed up as a result of providing equity in lieu of cash compensation. It should be noted that this is just one way to frame the analysis, but that alternative frameworks produce the same result. I find it most helpful to view the alternatives as follows: In the base case, a company provides cash compensation at Time 1. In the alternative case the company provides deferred equity compensation and has more cash to invest at Time 1. It is just as valid, however, to view the base case as the delivery of deferred equity compensation at Time 1 and the alternative as cash compensation funded through borrowing, sale of shares to the public, or reduced investment. Thus, when I speak of investment of freed-up cash in shares, this should be viewed as equivalent to reduced public sale; third-party investment is equivalent to reduced borrowing; and, of course, internal investment is equivalent to internal investment. The exception to this symmetry (there is always an exception) arises in the case of option issuance. Since companies do not issue options to the public, one cannot view reduced sales of options coupled with employee stock option issuance as the equivalent of employee stock option issuance coupled with the purchase of options from a financial institution, although, as we will see, companies generally do not purchase options from third parties either.

\textsuperscript{121} Note that ensuring a global tax advantage and perfectly hedging the equity contract risk are not exactly the same thing. In order to perfectly hedge NQSOs, an employer must buy options or delta hedge the grant with dynamic stock and borrowing transactions. It is not enough to simply buy back shares with the cash that is conserved. Stock grants, on the other hand, can be perfectly hedged by simply repurchasing shares with the freed-up cash.

\textsuperscript{122} Several commentators have noted that companies can ensure that the fisc bears the cost of the employee-level exemption. Dan Halperin has written that "[i]f the employer invests in its own securities, appreciation in the value of those securities will not be subject to tax if, instead of issuing stock directly to the employee, the employer holds the stock itself for the benefit of the employee or provides for a deferred compensation arrangement tied to the value of the stock," and provides an example similar to that which follows. See Halperin, \textit{supra} note 7, at 540. In order to determine the global advantage or disadvantage of equity compensation, Miller and Scholes assume that the employer and employee "invest" in the same instrument and reach similar results. See Miller \& Scholes, \textit{supra} note 7, at 185. Hall and Liebman assume that an employee's payoff from stock options is based on the after-tax return generated by the company on its freed-up cash. As we will see, this is true if we assume in addition that the company purchases options on its own stock with the
freed-up cash, the results are very different. We will begin by examining the effect of § 1032 on compensatory stock transactions in a rising market.

1. Stock Awards

a. Share Repurchase

A taxable company that provides pre-tax equivalent value deferred or restricted stock in lieu of cash will be indifferent as to the compensation choice (and the fisc will bear the full brunt of the employee-level exemption) if the company invests the freed-up cash in its own shares.\textsuperscript{123} To see this, let us return to Example 1 and add an assumption as to the employer’s tax rate. (I will focus on the deferred stock case in the text and treat the equivalent restricted stock case in the footnotes.)

\textit{Example 1 (reprise)}

- Deferrable compensation: $100
- Stock price at time of deferral (“Time 1”): $20 per share
- Stock price at time of deferred stock payout (“Time 2”): $50 per share
- Employer’s marginal tax rate: 35%

If the employer provides $100 cash compensation, it will be entitled to an immediate deduction, and its after-tax cost of compensation will be $65. If this taxable (and tax paying) employer provides deferred stock in lieu of cash, it will have $65 more to invest (or less to borrow) at Time 1. It also will have undertaken a commitment to deliver five shares of its stock to the employee at Time 2. Assume that the $65 is used to buy back shares of the employer’s own stock. These 3.25 shares will be worth $162.50 at Time 2. At this point the employer can sell the shares and incur no tax under § 1032. The employer can now purchase $250 worth of stock to deliver to the employee or simply pay the employee $250 if the deferred stock plan permits cash settlement.\textsuperscript{124} Either way, the employer will be entitled to a $250 deduction at this time, which will provide a $87.50 tax benefit. Thus, the employer’s after-tax cost of settling the deferred stock account ($162.50) is equivalent to the proceeds from its investment in its own stock, and the employer is indifferent between the two freed-up cash. See Hall & Liebman, \textit{supra} note 7.

\textsuperscript{123} Consistent with the employee-level tax analysis, I compare pre-tax equivalent compensation devices. As before, this assumption is made for expository reasons and is not meant to imply that firms necessarily substitute equity for cash based on pre-tax values.

\textsuperscript{124} Of course, the employer can simply issue new shares to the participant and avoid purchasing them on the market, but new share issuance dilutes existing shareholders. In order to ensure that the employer and its shareholders are indifferent between providing cash and deferred stock compensation, I have assumed that shares delivered to employees are purchased.
scenarios.\(^{125}\)

Under these assumptions the fisc bears the full cost of the employee-level exemption. If, as assumed here, the employee’s marginal tax rate on ordinary income and the employer’s marginal tax rate are equal, the cost to the fisc exactly mirrors the employee exemption. In the cash compensation scenario, the Treasury collects $35 from the employee and pays $35 to the employer at Time 1. At Time 2, the fisc collects $14.62 on the employee’s outside investment gain. If, on the other hand, the employee receives deferred or restricted stock,\(^{126}\) there are no tax consequences at Time 1. If the employer invests its freed-up cash in its own stock, the $97.50 gain enjoyed at Time 2 will not be taxed under § 1032. At Time 2, the employee will receive shares worth $250, have compensation income of $250, and pay tax of $87.50. The employer will be entitled to deduct $250 at Time 2 and will thus receive $87.50 from the fisc. Because the tax on the employee’s compensation and the tax benefit associated with the employer’s tax deduction offset in each case, the impact on the fisc is clear: The fisc fails to collect $14.62 in tax at Time 2 in the deferral case that it would have collected on the employee’s outside investment in the cash case.\(^{127}\)

\(^{125}\) Obviously, the employer also may deliver the 3.25 shares to the employee along with 1.75 additional shares purchased on the market for $87.50. The cost of these purchased shares is exactly offset by the tax benefit of the $250 deduction, which shows in yet another way that the employer is indifferent between providing current cash and deferred stock in this scenario.

Aside from the possibility of forfeiture, restricted stock and deferred stock are analytically identical from an employer’s perspective. Assuming that no § 83(b) election is made, an employer who provides restricted stock in lieu of cash will not be permitted to deduct compensation expense until the shares vest, but nonetheless will have more cash on hand at Time 1. Instead of crediting the participant’s account with deferred stock units, a company issuing restricted stock will issue actual shares. These shares will not be transferable prior to vesting, but the participant will have ownership and will receive dividends. In order to avoid potential dilution, an employer should purchase shares on the market with the after-tax cash freed up through issuing shares in lieu of cash compensation.

Let’s return again to the assumptions of Example 1 and examine the employer’s tradeoff between cash and restricted stock. As before, if the employer provides $100 cash compensation, it will be entitled to an immediate deduction and will incur an after-tax cost of $65. If, instead, the employer issues $100 of restricted stock to the employee, it will have $65 more to invest. Assume that this amount is used to purchase 3.25 shares of employer stock at $20 per share. At vesting (Time 2), the stock held by the participant, which is now worth $50 per share, becomes unrestricted. The participant recognizes compensation income of $250, and the employer is entitled to an equivalent deduction. The deduction provides the employer with a $87.50 tax benefit. This amount can be used to purchase 1.75 shares of its own stock, which, with the 3.25 shares purchased at Time 1, eliminates any dilution from the issuance of restricted stock and results in the company and its shareholders being indifferent between cash compensation and restricted stock.

\(^{126}\) Recall that unless otherwise stated, I am assuming that no § 83(b) election is made.

\(^{127}\) Even if the marginal tax rates of the employer and employee are not equal, it is
b. Market Investment

In order to highlight the power of § 1032, let’s consider the same case with just one change in the assumptions: Instead of buying back its own stock with the freed-up cash, the company purchases third party stock with similar risk/return characteristics. As before, the company invests $65 at Time 1. As before, the stock appreciates by 150% over the deferral period, and the investment grows in value to $162.50 at Time 2. When these shares are sold to fund the deferred stock payout obligation, however, the $97.50 gain will be taxable. At a 35% rate, the company will pay tax of $34.13 on this gain.

Now the results for the company and the fisc are very different. The fisc actually comes out ahead versus cash compensation, since the cost of the employee-level exemption ($14.62) is more than offset by the tax on the employer-level investment ($34.13). The company is no longer indifferent between cash and deferred stock of equivalent pre-tax value. Specifically, the company comes up $34.13 short of what it needs to fulfill its obligation at Time 2. This cost must be borne by shareholders, employees, or by the two in some combination.

c. Internal Investment

Many companies, start-ups in particular, rely heavily on equity compensation because they are cash constrained or find other sources of financing to be prohibitively expensive. Any cash that can be freed up is invested in the business. Of course, companies with ready access to additional funding have this option as well. They also can plow the cash conserved by utilizing equity compensation into operations or expansion. If the equity pay decision results in truly incremental business investment, it seems as reasonable to include the internal investment result in the compensation analysis as it does to include more traditional hedging results in that analysis. To do so, however, the relationship between internal investment returns and reasonable to conclude that the fisc bears the full cost of the employee exemption if the employer invests the freed-up cash in its own stock. In the limiting case, imagine that the employer has such large losses that it is effectively tax-exempt for the foreseeable future. In this case the impact on the fisc is as follows: In the cash case, the fisc collects from the employee $35 at Time 1 and $14.62 at Time 2. In the deferred/restricted stock case, the fisc collects $87.50 from the employee at Time 2. Now we must adjust these receipts for the mismatch in timing. One simple and reasonable way to adjust is to assume that the Treasury’s opportunity cost of funds is equal to the employee’s investment return across the period. Using this return as a benchmark, the $35 collected at Time 1 in the cash compensation scenario is worth $87.50 at Time 2 ($35 x $50 per share / $20 per share). Now comparing tax receipts at Time 2 (in Time 2 dollars), we see that cash compensation produces Time 2 receipts of $102.12, while deferral produces Time 2 receipts of $87.50 and that the Treasury’s cost, like the employee’s gain, is $14.62.

128 The benefit to the fisc is driven by the difference between the marginal corporate tax rate and the tax rate on individual capital gains, which at about 20% is currently quite large by historical standards.
share price performance must be considered. Over the long haul, the return from owning a stock should equate to the corporation’s after-tax rate of return, as, over time, a company returns its after-tax profits to its shareholders. Given the assumption of zero dividends, it might be reasonable to assume, as a first approximation, that the change in share price, which fully incorporates the return on a non-dividend paying stock, is equal to the corporation’s after-tax return on its investment.129

If this is so, investing the freed-up cash in the business would, on average, provide sufficient cash to settle a company’s deferred or restricted stock obligation without any further subsidy. Imagine in Example 1 that the company invests the $65 freed up as a result of providing $100 of deferred stock in its operations. In that example, the share price increases by 150% between Time 1 and Time 2. If the stock price tracks after-tax returns, the $65 investment would have to return $215 pre-tax at Time 2. After 35% corporate tax on this $150 profit, the company would be left with $162.50 to settle its deferred stock obligation—a 150% after-tax profit. As we have seen, given the deduction for deferred compensation at Time 2, $162.50 is sufficient to satisfy the company’s $250 deferred stock obligation at that time without any further imposition on the shareholders.130

The fisc fares very well in this optimistic scenario. It collects $52.50 in tax revenue on the internal investment return, more than offsetting the $14.62 employee-level exemption on deferred or restricted stock.

Of course, what we are really interested in is the relationship between incremental corporate investments and stock prices. Incremental returns may exceed or lag average returns. If companies tend to implement their best ideas first, incremental returns may tend to lag average returns. If so, the after-tax return on the corporation’s incremental internal investment would fall short of the pre-tax stock return associated with deferred or restricted stock grants. In this scenario, the company would come up short, while the fisc might still enjoy corporate tax receipts in excess of the employee-level exemption because of the difference between corporate and capital gains tax rates.

2. NQSOs

Analogously, the fisc bears the cost of the employee exemption associated with NQSOs (and shareholders are indifferent) if a company that issues

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129 See HALL & LIEBMAN, supra note 7, at 9-10 (making this assumption in comparing cash compensation to deferred equity compensation). Of course, this is only a rough approximation of the relationship between corporate profits and stock prices. The critical comparison for companies that grant deferred equity compensation and invest the freed-up cash in the business is between the incremental investment return and the change in stock price.

130 Note, however, that even if stock prices track after-tax investment returns on average, investing the freed-up cash in the business introduces basis risk that disappears if a company hedges a stock grant by buying back its own stock.
NQSOs in lieu of cash invests the freed-up cash in options on its own stock or replicates an option investment through delta hedging. If the company instead makes a profitable market investment, the associated corporate tax will reduce or perhaps eliminate the hit to the fisc. Importantly, a company that simply buys back its own stock with the cash saved by issuing options comes up short in a steeply rising market although, from the point of view of the fisc, there is no corporate tax revenue to offset the employee-level exemption.

a. **Options Hedged with Options**

Let's reconsider NQSOs from the company’s perspective under the market assumptions of Example 1 and assume, as before, that at-the-money options with a $20 strike price are worth $10 per option-share. As shown above, the after-tax cost to the company of providing $100 cash compensation is $65. In the NQSO scenario, the employer is obligated to deliver ten shares of stock to the participant at Time 2 valued at $50 per share. Subtracting the $20 per share exercise price, the employer’s net obligation is $300. The employer will receive a tax deduction for $300 of compensation expense, which is worth $105. Thus, the company’s net out-of-pocket expense at Time 2 will be $195. Also assume that the NQSO is fairly priced and the employer can purchase an equivalent option for $10 per option-share. In this scenario, the employer purchases an equivalent option on 6.5 shares of its own stock for $65. At Time 2, the employer exercises this option paying $20 per share for 6.5 shares worth $50 per share. Under § 1032, the $20 per share gain realized by the company on this option is not taxable, and the company has effectively converted $65 of freed up cash at Time 1 into $195 at Time 2.

As before, the fisc bears the full cost of the employee-level exemption if the NQSO-issuing company buys options. The net impact on the fisc from switching from cash compensation to NQSOs is the loss of the $19.50 tax receipt from the employee at Time 2 in the cash compensation scenario.\(^{131}\)

As noted, NQSOs are not publicly traded. Much shorter-term options on the shares of public companies are traded, but purchasing short-term options, even sequentially, will not provide the same result.\(^{132}\) Companies that wish to hedge option grants against the cash compensation alternative essentially have two choices. They can ask a financial institution to write an equivalent option, or they can "delta hedge" the option exposure.

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\(^{131}\) In the cash case, the employee pays $35 tax at Time 1, and the company enjoys an equivalent tax benefit. The employee also pays capital gains taxes of $19.50 on its outside investment in an option. In the NQSO case, the employee pays tax of $105 at Time 2 on her compensation, and the company enjoys a tax benefit in the same amount.

\(^{132}\) If the stock price appreciates steadily, for example, subsequent options will be in the money and much more expensive.
b. **Delta Hedging**

The effect of purchasing a call option can be replicated through a continuous, dynamic program of stock purchases and sales, and borrowings and repayments, known as delta hedging.\(^{133}\) A thorough description of delta hedging is beyond the scope of this article, but in brief, a delta hedge program is initiated through the purchase of a significant fraction of the shares underlying the option (the "hedge ratio") at the time of grant. Generally, the cost of the shares purchased would exceed the cash saved by issuing the option.\(^{134}\) The difference is funded by borrowing. Over time, the hedge ratio, the number of shares held as a hedge, and the amount of borrowing varies as the share price varies. If the option is in the money at expiration, the net value of the hedge should provide sufficient funds to satisfy the employer’s obligation. The bottom line for our purposes is that delta hedging essentially produces the same result as purchasing an equivalent option. Thus, a company that issues NQSOs and delta hedges or purchases calls ensures both shareholder indifference and that the fisc bears the cost of the employee-level exemption.

c. **Third Party Equity Investment**

In order to isolate the impact of § 1032 in the case of an NQSO grant, one could imagine the employer using the freed-up cash to purchase an option on a third-party stock that performs just like the employer’s stock. This is probably not a realistic scenario, but it provides a useful thought experiment. The only difference between this and the own-option case is that the employer’s $20 per share gain on the third-party option would be taxable, resulting in corporate tax of $45.50 and a significant shortfall in funding option exercise. From the fisc’s perspective, this receipt would more than offset the $19.50 employee-level exemption.

A more realistic scenario is one in which an option issuer places the freed-up cash in a more traditional market investment—third-party stock or bonds. Many firms maintain substantial “cash” investments, and one can easily imagine the cash saved through option issuance being added to that pile. In a sharply rising market, the return on these unleveraged investments will not match that of options on a pre-tax basis and will, in addition, be taxed. Thus, the company comes up short, while the fisc may break even or benefit, just as it did in the compensatory stock/market investment scenario discussed above.

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\(^{133}\) In fact, it is this correspondence that enables financial analysts to value options.

\(^{134}\) The option delta, or hedge ratio, and the Black-Scholes value of an option are closely related. See supra note 28 (discussing the Black-Scholes model). Suppose that the initial delta of the NQSO described above is 0.6. This figure indicates that on the date of grant the issuer should purchase 60% of the shares underlying the option at a cost of $120 (10 shares x $20 per share x 0.6). On an after-tax basis, however, issuing the NQSO in lieu of cash only saved the issuer $65. The balance, $55, would be borrowed as part of a self-funding delta hedging strategy.
d. Simple Share Repurchase

As shown above, an employer can perfectly hedge an option grant through a dynamic program of share repurchase, but suppose that a company issues an NQSO and simply buys back its own shares with the freed-up cash. This scenario produces a global tax advantage since § 1032 eliminates any corporate tax on the company’s investment, but in a steeply rising market, shareholders still come up short because the employee’s option investment, which is leveraged, outperforms the company’s unleveraged stock investment. As we have seen, the company is obligated to settle the option at Time 2 by delivering cash or shares of net value of $300, but this amount is deductible, so the after-tax cost of providing the option is $195. If the company invests the $65 freed up at Time 1 as a result of issuing the option in its own stock, that investment will grow in value, tax free, to $162.50 ($65 cash x $50/$20). But despite that impressive tax-free yield, the company will face a $32.50 funding gap in settling the option.

The fisc still comes up short $19.50. From the Treasury’s perspective, it does not matter whether the company makes a tax-free investment in its own options, its own stock, or simply stuffs the freed-up cash in a vault. Unless the company’s investment creates a taxable return, the cost to the fisc is the mirror image of the employee-level exemption.

e. Internal Investment

We previously observed that investing freed-up cash in operations or expansion would provide sufficient cash to settle a company’s compensatory stock obligations if its stock price increases in sync with after-tax investment returns. We also noted that this may be an optimistic assumption for mature companies. However, even if a corporation’s stock price does move with its after-tax investment return, this return would not be sufficient to hedge a nonqualified stock option grant. From a company’s point of view, investing cash freed up as a result of compensating employees with NQSOs internally, given this assumption as to the relationship between stock price and investment returns, is the same as buying back its own stock. As we have seen, the performance of an option outpaces the performance of stock in a steeply rising market. Thus, a company that follows this strategy still comes up short.

The fisc, on the other hand, does fine under these assumptions. It loses $19.50 in tax revenue from the employee-level exemption on the NQSO, but it gains $52.50 in corporate tax revenue on the company’s internal investment.

3. ISOs

A taxable (and tax-paying) employer that issues an ISO bears the brunt of the tax “preference” that is enjoyed by the employee-recipient. As shown above, an employer that issues a NQSO in lieu of cash of equivalent pre-tax value will be indifferent between the two cases if the employer invests the freed-up cash in an option on its own stock, manufactures such an option, or otherwise achieves an after-tax return equal to the pre-tax return on the
employee's option. These strategies will not render the issuer of an ISO indifferent. Consider a case in which an employer issues an ISO under the assumptions of Example 1 and invests the freed-up cash in an option on its own shares. As shown previously, the employer will have $65 more cash at Time 1, which can be used to purchase an option on 6.5 shares of its own stock. At Time 2, this option can be exercised yielding tax-free proceeds of $195 under §1032. The company is obligated to provide the optionee ten shares worth $300 or the cash equivalent. This worked out fine in the NQSO case since the company could deduct the $300 payment, leaving an after-tax cost of $195. The ISO payout is not deductible, however, so the company has a $105 funding gap at Time 2 in the ISO case, despite its prudent tax-free investment of the extra cash generated at Time 1.135

Under these tax and price assumptions, taxable companies should avoid ISOs. At the employee level ISOs were worth $60 more than NQSOs. This advantage is just over half of the employer-level cost of these "incentive" options ($105). Not surprisingly, the fisc is the beneficiary of an election to provide ISOs in lieu of NQSOs. In this example, if a company hedges options with options, NQSOs result in a $19.50 loss to the Treasury when compared to cash compensation. If ISOs are issued instead, the fisc comes out ahead by $25.50, as the employee-level exemption (worth $79.50) is more than offset by the $300 deduction foregone by the employer (worth $105).136

B. Employer Tax Implications in a Falling Market

In a rising market, equity compensation provides a global tax advantage as long as employers take advantage of §1032 and repurchase shares or buy options with the freed-up cash. The global tax advantage disappears, however, if employers invest the freed-up cash in a taxable fashion, and generally, equity compensation turns out to be more costly than cash in this scenario.

But, one may ask, aren't these effects reversed if prices decline? They are, but only to a limited extent, and thus the expected global tax implications of equity compensation are directionally the same as the rising market implications.

First, take the case of stock grants hedged with stock or NQSO grants that are delta hedged or hedged with options. Given §1032, employers are perfectly hedged in this scenario irrespective of whether share prices rise or fall. The global tax advantage or disadvantage is simply equal to the employee-level benefit or cost.137 At first blush, there is an employee-level

135 As noted above, an employer can always negotiate for a greater cash compensation sacrifice to compensate for the employee-favorable and employer-unfavorable tax treatment of ISOs. This analysis is based on the assumption of equivalent pre-tax value.

136 The net tax-disadvantage of ISOs is even larger if a profitable company simply purchases its own shares with the freed-up cash. See generally Scholes et al., supra note 6, at 191-95 (analyzing the tax tradeoff between ISOs and NQSOs).

137 Consider the tax implications of an option issued under the falling market
disadvantage in a flat or falling market, but this disadvantage is mitigated for all of the reasons discussed in Part II. Thus equity compensation yields an expected employee-level benefit and an expected global tax advantage if employers hedge with their own equity.

If employers make taxable market investments with the cash conserved by issuing equity compensation and those investments produce losses, the corporate-level tax shield could potentially cause equity compensation to be globally tax advantaged in a weak market. However, like individuals, corporations are limited in their ability to utilize capital losses. A corporation may deduct capital losses only against capital gains and can carry excess losses back three years and forward five years. Given the possibility that corporate capital losses might expire unused in a declining market, investing the freed up cash in the market is likely, on average, to result in a global tax disadvantage.

C. Employer Tax Rates

I have argued that if a company makes an incremental taxable investment as a result of compensating employees with equity in a rising market, there is a global tax disadvantage and the fisc generally benefits (versus cash compensation) since the corporate tax on that investment more than offsets the employee-level capital gains tax that is lost. Of course, a key assumption in this analysis is that the marginal corporate tax rate exceeds the individual capital gains rate. This will be the case for equity compensation granted by most mature public companies, which generally pay tax at the top corporate rate of 35%. However, start-up companies or established companies with large, continuing losses often are effectively tax-exempt. For these firms and their employees, equity compensation will produce a global tax advantage even if the freed-up cash is invested in an otherwise taxable fashion. The fisc would

assumptions of Example 2. There, it was assumed that $100 of cash compensation was deferrable at Time 1 when the employer’s stock was trading at $20 per share and that an at-the-money option could be purchased for $10 per option-share. At Time 2, the share price has fallen to zero. If the employee receives cash, her $65 outside investment in an option will be worthless at Time 2, generating a capital loss worth $9.75, if she can use the loss. If the employee receives a NQSO, that option will expire worthless and will produce no tax benefit. If the employer hedges the NQSO with an option, its purchased option also will expire worthless. Under § 1032, the employer’s loss will not be deductible, so the company’s after-tax revenue from this hedge ($0) is exactly equal to its obligation on the NQSO.

138 See I.R.C. § 1212(a)(1).

139 Of course, investing freed up cash in the market also introduces the risk of divergence between the return on the employer’s stock and the market investment, which could lead to a deficit or surplus for the equity compensation plan. Assuming that this risk is balanced, i.e., equal risk of gaining or losing on the market investment relative to employer stock on a pre-tax basis, the more significant effect is the difference in tax treatment of the two investment alternatives.
be disadvantaged by heavy reliance on equity compensation by such firms.

It is important to be clear that the issue is the tax rate applicable to the investment leg of the transaction—the employee's outside investment in the cash compensation scenario or the employer's incremental investment in the equity compensation scenario. As shown, the employer's compensation deduction is essentially irrelevant, at least so long as the deduction would be at the same tax rate at Time 1 in the cash scenario and at Time 2 in the deferred equity case. For example, if a company hedges options with options, the fisc bears the full cost of the employee-level exemption whatever the employer's marginal rate.

Companies with large, continuing losses that are effectively tax-exempt present the greatest threat to the fisc in terms of deferred equity compensation. These firms can provide their employees, executives, and directors with an unlimited amount of tax-advantaged deferred equity compensation at no cost to shareholders. The fisc bears the entire burden of the employee-level exemption irrespective of the nature of the employer's incremental investment.

ISOs should be particularly appealing to effectively tax-exempt companies. As shown, ISO optionees enjoy an exemption from tax on their investment returns and effectively pay a lower rate of tax on the compensatory portion of their options. In the case of taxable (and tax-paying) issuers, the employee advantage versus NQSOs is more than offset by the loss of the employer's compensation deduction. Since firms with large losses cannot take advantage of the compensation deduction in any event, compensating employees with ISOs should be unambiguously attractive. Surprisingly, however, the evidence on their incidence is mixed. Enron, for instance, which had a large net operating loss ("NOL") position during the late 1990s did not issue any ISOs. This may reflect the relatively small amount of ISOs that can be issued to any employee. Given this restriction, ISOs simply may not be worth

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140 See supra text accompanying note 127.

141 It is interesting to compare equity compensation offered by tax-exempt organizations. These organizations do not have equity securities and cannot offer their employees traditional compensatory stock or option plans, but they can provide deferred compensation programs in which employee accounts are tied to third party stocks or mutual funds. Since these organizations pay a zero rate of tax on investment returns one might think that their compensation programs would present a similar threat to the fisc. This is not the case, however. Section 457 severely limits the amount of compensation that can be deferred by employees of tax exempt organizations unless the employee is willing to accept a substantial risk of forfeiture. Some exempt organizations have attempted an end run around the § 457 limitations by issuing options on third-party stocks or funds. However, recently adopted Treasury regulations should close this potential loophole and maintain the tight restrictions on exempt organization deferred compensation. See David I. Walker, Stock Options for Tax-Exempt Organization Managers?, 100 TAX NOTES 1581, 1582 (2003).

142 See INVESTIGATION OF ENRON REPORT, supra note 26, at 640.
the bother, even for companies with large losses.\footnote{A more cynical view would be that ISOs are irrelevant for the senior executives that drive equity compensation arrangements and that these individuals cannot be bothered to structure attractive ISO programs for their underlings. The AMT may play a role as well. ISO optionees often wind up paying the AMT as a result of exercise and often do not have the cash to pay the tax. The AMT reduces the attractiveness of ISOs and may result in complaints by ISO optionees that executives would just as soon not hear.}

Although firms with large, continuing losses would seem to present an equity compensation threat to the fisc, the majority of mature public firms should be paying tax on incremental investments at the top corporate rate. Average corporate tax rates certainly are much lower than the 35% top published rate because of various preferences and loopholes,\footnote{According to the Congressional Budget Office, the average corporate tax rate for domestic non-financial companies for 2002 was 24.6%. \textit{See} Jonathan Weisman, \textit{Congress Weighs Corporate Tax Breaks; Lawmakers Look to Help Manufacturing Sector While Averting Conflict Over Export Subsidy}, WASH. POST, Oct. 14, 2003, at E1.} but these devices do not affect marginal rates. Thus, the foregoing analysis of the net impact of equity compensation for companies and the fisc should hold for most mature public companies.

\section*{D. Global Tax Advantage of Equity Compensation (Recap)}

At this stage it may be helpful to recap the results of the analysis thus far. This article has modeled deferred compensation as a substitute for cash compensation, which provides employers with additional cash to invest, and considered the impact of an employer's investment options on the economics for all parties. Two things are known for sure: First, equity compensation use by effectively tax-exempt companies is always globally tax advantaged. Second, at current tax rates, ISO use by profitable companies is globally tax disadvantaged no matter how the employer invests the freed-up cash. Thus, the focus of this article going forward primarily will be upon stock and NQSO grants made by profitable companies. For this subset, equity compensation is globally tax advantaged only if the employer invests the cash conserved in its own equity. In other cases, the tax burden associated with the employee-level exemption of investment earnings is borne not by the fisc, but by issuers and employees in some combination. In the latter case, I will simply say that the burden is borne by the shareholders.\footnote{The employee-level benefit and any employer-level cost of deferral will be shared in some manner between a company and participants in these plans. It seems unlikely that employees would enjoy 100% of the employee-level exemption or that employers would absorb 100% of any employer-level cost. We can assume that employees generally will not accept deferred compensation if the expected value is less than that associated with cash compensation. In a competitive employment market, any net cost or benefit should redound to the shareholders. \textit{But see infra} note 228 and accompanying text (questioning whether executives generally absorb the employer-level tax costs of unhedged equity compensation).}

From the shareholders' perspective, however, the story does not end with
assessment of the global tax advantage. Despite a global tax advantage, NQSOs may prove to be more costly than pre-tax equivalent cash compensation in a rising market if the employer simply buys back shares at the time of grant and fails to delta hedge. Conversely, despite a global tax disadvantage, investing the freed-up cash in the business could create a shareholder surplus if the after-tax business return outpaces the company’s stock return.

Table 2 summarizes these theoretical results. Two points briefly mentioned or implied by the analysis should be emphasized. First, investment of freed-up cash in X is equivalent to selling less X, e.g., the effect of reducing planned share sales in the face of a compensatory stock grant is the same as buying back stock with the conserved cash. Second, the chief concern is the action taken by the employer when the equity compensation is granted. As discussed below, repurchasing stock in conjunction with option exercise does not create a tax advantage if the freed-up cash has been invested in a taxable fashion in the interim.

Table 2: Is Equity Compensation Globally Tax Advantaged?

<table>
<thead>
<tr>
<th>Effectively Tax-Exempt Employer:</th>
<th>In Lieu of Cash Employee Receives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitable Employer Invests Freed-Up Cash In:</td>
<td>Stock</td>
</tr>
<tr>
<td>Own Stock</td>
<td>Yes</td>
</tr>
<tr>
<td>Own Options/Delta Hedge</td>
<td>N/A</td>
</tr>
<tr>
<td>Internal Investment</td>
<td>No, but . . .</td>
</tr>
<tr>
<td>Market Investment</td>
<td>No</td>
</tr>
</tbody>
</table>

IV. EMPIRICAL ASSESSMENT OF THE TAX IMPLICATIONS OF DEFERRED EQUITY COMPENSATION

As shown, equity compensation results in a global tax advantage when profitable, taxable employers hedge stock or NQSO grants with their own stock or options. Whether firms in fact do so is, of course, an empirical question, which will be addressed in this part. To avoid unnecessary suspense, let me say at the outset that the existing empirical evidence is mixed and sparse. Two recent studies have found evidence that large public companies repurchase a significant number of the shares underlying options in the year of option grant, which is consistent with partial delta hedging and the creation of a global tax advantage. However, these studies do not suggest complete or consistent delta hedging, and other empirical studies and much anecdotal evidence points in the other direction, indicating that many option-issuing firms defer or forego share repurchase and invest the cash that is conserved in a taxable fashion, at least for part of the life of the options. There is very little
TAX ADVANTAGES OF EQUITY COMPENSATION

The final section of this part examines empirical evidence relating to equity compensation use by companies with large losses. It is clear that such use is always tax advantaged. The interesting question is whether such firms rely more heavily on equity compensation, thus exploiting this advantage. The answer appears to be no.

A. A Preliminary Question: Why Do We Need to Consider Empirical Evidence to Determine Whether Equity Compensation is Globally Tax Advantaged?

At this point, readers may feel that the question posed in the title of this article has been answered. Some readers may conclude that equity compensation is tax advantaged by definition because profitable, taxable firms can hedge stock and option grants in a fashion that ensures that the fisc bears the cost of the employee-level investment exemption. If firms fail to take advantage of this opportunity, then they have either squandered the tax benefit or concluded that other factors outweigh the tax effects. However, I think it important to determine whether equity compensation programs are globally tax advantaged in fact, i.e., to find out whether the fisc or shareholders actually bear the cost. Moreover, assuming that a company makes a truly incremental investment—in operations, expansion, or third-party securities—I think it is appropriate to ascribe the tax consequences of that investment to the compensation decision and include those tax effects in the equity compensation analysis.\(^{146}\)

Other readers may question the need for empirical evidence because they think that firms can be expected to ensure that equity compensation is tax advantaged since it is relatively easy to do so. But there are several reasons to doubt this inference.

First, as noted, some issuing firms are cash constrained and issue equity to conserve cash for internal investment. These firms obviously will not hedge equity grants in the manner suggested above, even if they recognize the tax advantage. Many of these firms, perhaps the majority, are start-up firms that have not begun generating a profit and are effectively tax-exempt in any event. If so, their choice of investment is irrelevant.\(^{147}\) However, profitable but fast-growing companies may find themselves in this position as well.

Second, failure to ensure that equity compensation plans are tax advantaged could result from a lack of information, understanding, or expertise. The equity compensation picture is quite complex and in some ways non-intuitive. Moreover, the tax-advantaged strategy varies from case to case. Firms may

\(^{146}\) Ascribing the tax and investment consequences of incremental investments resulting from equity compensation grants to those grants is no different and should be no more controversial than ascribing the investment and tax consequences of dedicated pension fund investments to the pension plan.

\(^{147}\) See supra Part III.C.
fail to put the entire picture together, neglect to consider the impact of § 1032 in making investment decisions, fail to take account of the leverage differences between stock and option investments, or simply lack the expertise to delta hedge option grants.

Third, some management teams may fully understand the economics of equity compensation but simply choose to retain the freed-up cash for other purposes. They may plan to repurchase shares at some point in the future (perhaps as part of a financial reporting management strategy) and want to keep the cash available, or they may wish to retain cash in hopes of superior investment opportunities arising subsequently.

Fourth, some firms may choose an alternative investment for the freed-up cash at the time of grant based on an ex ante belief that the alternative investment will produce a superior after-tax return. This assessment may or may not turn out to be correct, of course, but there is certainly nothing objectionable about such an investment decision. If the freed-up cash results from option issuance, however, it is important that the firm recognizes that the after-tax return on its alternative investment must match the pre-tax leveraged return on the option issued in order to break even.\footnote{See supra Part III.A.2.}

Finally, agency problems may come into play. Some managers may be loath to return cash to shareholders. They may desire to increase the size of their empires in order to increase their own compensation, psychic benefits, or security,\footnote{See, e.g., John C. Coffee, Jr., Shareholders Versus Managers: The Strain in the Corporate Web, 85 MICH. L. REV. 1, 29 (1986) (discussing a managerialist view of corporate governance).} and they may conclude that paying employees with equity provides an attractive means of financing expansion.\footnote{See id. at 8 (stating that there exists a “long-standing managerial bias in favor of corporate growth and inefficient size-maximization’’).}

For the foregoing reasons, it cannot be assumed that firms will necessarily hedge equity compensation grants so as to ensure tax advantage. Therefore, it behooves us to consider what profitable companies actually do with the freed-up cash.

B. Empirical Evidence on Employer Investment of Freed-Up Cash

This section reviews the empirical evidence relating to the investment of the cash conserved as a result of issuing compensatory stock or options. I will begin with options because these instruments are the most economically significant (and because almost all of the available evidence relates to option grants).
1. Management of NQSO Grants

a. Share Repurchase and Delta Hedging

Share repurchase programs are the best documented corporate response to stock option programs. Although the primary motivation for share repurchase remains an open question, the relationship between the boom in option grants and in repurchase programs during the late 1990s has been convincingly documented. For purposes of this article, the important questions are when and how firms repurchase shares, and to a lesser extent, why.

If a company simply repurchases shares at the time of option exercise to offset dilution, the repurchase itself is essentially irrelevant to our analysis. The firm has done something else with the cash freed up as a result of the option grant (presumably invested it in operations, expansion, or a third-party investment, or reduced debt), has watched its shares appreciate, and must utilize after-tax proceeds of its investments to purchase the shares to deliver on option exercise. Such a firm has not benefited from tax-free appreciation in its own shares. In all likelihood the decision to issue options has resulted in

increased taxable investment by the company. However, repurchase at the
time of exercise does indicate that the company did not simply issue
compensatory options as an alternative to a public share offering. The issuer
clearly was concerned about maintaining its pre-issuance level of shareholding.

If, on the other hand, a company repurchases shares at the time of an option
grant and holds these shares until exercise, there would be a tax advantage in a
rising market. We have seen that a strategy of simply buying shares with the
after-tax cash conserved is an insufficient hedge in a rising market and results
in a funding gap at the time of option exercise, but such a firm would enjoy
a tax benefit.

Finally, a company could buy and sell shares and borrow and repay funds in
a dynamic fashion that would fully hedge an option grant. While this delta
hedging technique generally requires a significant share purchase at the time of
grant, it perfectly hedges the grant and fully replicates the effect of purchasing
a call option. Further, it leaves no funding gap at exercise and ensures that the
option grant is tax advantaged.

The empirical evidence on the timing of option related share repurchase is
described below and is somewhat mixed. Two recent studies have found
evidence consistent with substantial grant-year repurchase and delta hedging,
while other studies have found that firms tend to repurchase shares in the year
of exercise or in the years between grant and exercise as they manage earnings
dilution. The implication of the latter studies is that cash conserved through
option issuance often is invested in a taxable fashion for some period following
the grant.

In a very recent study, Gene Amromin and Nellie Liang examined changes
in debt and share repurchase by 120 to 130 of the very largest non-financial
S&P 500 companies between 1995 and 2001. Although the number of firms
in their sample was relatively small, these firms represented 62% to 70% of the
market value of all U.S. publicly traded non-financial corporations over the
period. The authors found that debt and share repurchase patterns were
generally consistent with delta hedging option grants. Most importantly,
they found significant share repurchase in the year of option grant, although
not in sufficient quantity to make a case for strict adherence to delta hedging

152 See supra Part III.A.2.d.
153 If stock prices move with after-tax corporate investment returns, as suggested by Hall
and Liebman, buying stock at Time 1 is no better than investing freed-up cash in the
business, even though the stock appreciation is tax free. See HALL & LIEBMAN, supra note 7,
at 26. If the company invests in a less-successful, but taxable, fashion, buying stock would
have been better. (Business investment also introduces a basis risk issue that does not exist
with a stock hedge.)
154 See Amromin & Liang, supra note 151, at 517-18.
155 See id. at 517.
156 See id. at 527.
programs. They also found that grant-year share repurchase was greater for firms that were consistently profitable and faced no net operating losses across the period. These firms comprised 38% of their sample and repurchased about 46% of shares underlying options in the year of grant, or about 59% of the shares needed to initiate a perfect delta hedge of the options. The remaining firms only repurchased about 20% of the shares underlying options in the year of the grant, or about 27% of the shares needed to put on a perfect delta hedge. Directionally, these results are consistent with theory. As previously shown, unprofitable firms that are likely to be effectively tax-exempt do not need to delta hedge option grants to ensure a tax advantage, while profitable firms do. However, while Amromin and Liang’s results support partial delta hedging by a subset of consistently profitable S&P 500 firms, they also suggest that much of the cash conserved by options-issuing firms is invested elsewhere. Even the most profitable firms in their sample failed to delta hedge 40% of option shares, while the less consistently profitable firms failed to hedge almost 75% of option shares. Few of these large S&P 500 firms would be so consistently unprofitable as to render delta hedging superfluous.

Similarly, Haim Mozes and Steven Raymar found evidence consistent with indirect and partial delta hedging of stock option grants by profitable companies. They found that companies with more options authorized, which proxied for option grants, both repurchased more shares and increased leverage, which is consistent with a hypothesis of implicit delta hedging. The explanatory power of their model was relatively low, however, and, given the unavailability of data on actual option grants and exercise, one cannot be sure whether the increases in leverage and repurchasing activity were associated with option grants or option exercise.

Other evidence relating to the timing of share repurchase runs counter to the delta hedging hypothesis. Daniel Bens, Venky Nagar, and Franco Wong studied repurchase activity undertaken by a subset of S&P 500 companies in the late 1990s and found no correlation between option grants and stock

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157 See id.
158 See id. at 526.
159 See id. at 527 tbl.5.
160 See id.
161 See supra Part III.C.
162 The authors designated a firm as having a low marginal tax rate in a given year if it had negative taxable income and operating loss carryforwards. Only about 5% of firm-year observations met these criteria. See Amromin & Liang, supra note 151, at 521.
163 See Mozes & Raymar, supra note 151, at 21-22. The authors’ data were drawn from Standard and Poor’s Compustat database, which provides data on 10,000 actively traded U.S. companies. The authors excluded companies with incomplete data or NOL carryforwards.
164 See id. at 21.
Rather, they found that repurchases were correlated and contemporaneous with option exercise. In addition, this study found that option exercise was associated with reduced real investment by issuing firms. If option issuers delta hedged grants or if the cash conserved as a result of option grants generated large, after-tax cash flows, one would not expect to see a decrease in real investment associated with option exercise. Thus, this evidence undermines the delta hedging hypothesis and suggests that in the late 1990s, when stocks were booming, the returns on freed-up cash did not keep pace with the leveraged returns enjoyed by optionees.

In a further study, Kathleen Kahle examined repurchase activity in the early to mid-1990s. Her data suggest that firms repurchase shares prior to and in anticipation of option exercise. She found that repurchase activity was significantly and positively related to the number of exercisable options outstanding but not to the number of unexercisable options. In her data set, however, repurchases tended to occur not in the year of exercise, but in a prior year. Together, these results suggest that firms repurchase shares to manage dilution associated with anticipated option exercise. These results are not consistent with delta hedging, since there would be no reason to distinguish between exercisable and unexercisable options for hedging purposes. However, these results do suggest that firms realize some tax benefit in a rising market by purchasing replacement shares prior to option exercise.

Additionally, Scott Weisbenner tested an earnings per share ("EPS") management explanation for share repurchase associated with stock options. His theory was that managers are concerned about reported EPS and, specifically, about diluted EPS, which is a widely accepted benchmark for comparing corporate performance and, in some cases, a factor in executive compensation. Weisbenner expected to find that repurchases occurred after

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165 See Bens et al., Real Investment Implications, supra note 151, at 374.
166 See id. at 377.
167 See id. at 383.
168 But see Wayne Guay, Discussion of Real Investment Implications of Employee Stock Option Exercises, 40 J. ACCT. RES. 395, 404-05 (2002) (questioning the economic significance of the reduction in real investment observed by Bens and his colleagues).
169 See Kahle, supra note 151, at 244.
170 See id. at 255.
171 See id. at 250. But see Amromin & Liang, supra note 151, at 527 (finding that including the number of options outstanding in their regressions had a positive but insignificant effect on explaining repurchase activity, and arguing that Kahle failed to control for new option grants).
172 See Kahle, supra note 151, at 254-55.
173 See id. at 255.
174 See WEISBENNER, supra note 151, at 1. The author's sample consisted of 826 companies that represented 70% of NYSE market capitalization and 90% of share repurchases during 1994. Id. at 14.
175 See id. at 6-8. Basic EPS is calculated by dividing earnings by the number of shares
option grant but before exercise, as outstanding options diluted EPS in a rising market. His evidence is consistent with this theory. Specifically, Weisbenner found that share repurchases in a given year were more closely associated with option grants in each of the three years preceding that year than with option grants in that particular year. While gradual repurchase of shares between grant and exercise also could support a delta hedging theory, that theory predicts that a delta hedging firm would repurchase the majority of the shares underlying the options at the time of grant. But this is not supported by Weisbenner’s data. Rather, Weisbenner’s data suggests that the bulk of the cash that is freed up by issuing options is invested elsewhere for at least several years following option grant.

Anecdotal evidence further supports the view that EPS management lies behind much of the observed repurchase activity. Fred Weston and Juan Sui have reported on two surveys elucidating reasons for share repurchase. In one survey, 39% of respondents cited “[I]mprov[ing] earnings per share numbers” as their motivation; in the other survey, 30% cited “[o]ffset[ting] dilution from exercise of options” as their rationale. In the first survey, 21% of respondents cited “[r]educe costs of employee stock option plans” as a reason for repurchase, but as the authors note, this response is somewhat ambiguous. Outstanding. Diluted EPS adjusts for the effect of outstanding options, among other factors. The treasury stock method is used to adjust EPS for options. This method assumes that the exercise price and tax benefit associated with exercise are used to repurchase shares. Thus, an at-the-money option has no effect on diluted EPS at the time of grant, since the exercise price and market price are equivalent. Once the option moves into the money, however, dilution arises under the treasury stock method. Even an option that is deeply in the money never dilutes EPS one for one with the number of underlying shares. See id. at 5-6.

See id. at 22.

See id. at 23-24; see also Bens et al., Employee Stock Options, supra note 151, at 68-75 (finding evidence that repurchases are explained by the effect of outstanding options on diluted EPS).

See WEISBENNER, supra note 151, at 23, 39 tbl.8.

Amromin and Liang estimated an initial hedge ratio of 0.7 for their sample, implying that these firms should have repurchased 70% of shares underlying options in the year of grant in order to explicitly delta hedge the options. See Amromin & Liang, supra note 151, at 527. Weisbenner, however, estimated that total stock repurchases averaged less than 50% of options exercised, which would equate to an even smaller fraction of options issued. See WEISBENNER, supra note 151, at 23.

See Weston & Sui, supra note 151, at 33.

See id. at 55 tbl.14, 56 tbl.15.

See id. at 55 tbl.14. A difficulty with an EPS management explanation for share repurchase is that buybacks often reduce EPS, even over a fairly short horizon. Buybacks reduce the denominator of EPS, but they also reduce investment earnings, which reduces the EPS numerator. Thus, the overall effect of share repurchase on EPS depends on a company’s P/E ratio and its incremental investment returns. Generally, the management of a firm with a high P/E ratio would have to be quite myopic to believe that share buybacks
As evidenced by the research, a significant number of U.S. companies repurchase shares as a result of option programs. Despite considerable study, however, the timing of share repurchase remains unclear. Amromin and Liang's recent study improves on some of the previous analyses and makes a strong case that implicit delta hedging is prevalent among large, consistently profitable firms, which supports significant grant-year repurchase and tax-advantaged option programs.\(^{183}\) But even their data suggests that much of the cash that is freed up as a result of compensating employees with options is invested elsewhere. Moreover, there is significant empirical and anecdotal evidence supporting a financial reporting incentive for repurchase, specifically managing diluted earnings per share, which indicates delayed repurchase, interim taxable investment of the freed-up cash, and reduced net tax advantage. Additional empirical work is needed, but the weight of the evidence today suggests that even firms that repurchase shares as a result of granting options do not repurchase in a fashion that would generate an aggregate global tax advantage.

b. **Investment in Operations**

The studies discussed in the previous section attempted to explain the connection between options and share repurchase programs and focused on firms that were likely to buy back shares.\(^{184}\) However, while share buyback programs are common, they are not ubiquitous. Many firms compensate employees with equity because they have exhausted their access to external funding or such funding has become prohibitively expensive. These firms simply cannot afford to buy back shares. Instead, these companies invest the cash conserved through stock or option grants in operations or expansion and thus presumably generate a taxable return.

Anecdotal evidence suggests that start-ups and even established but fast-growing young companies often invest the cash saved through the issuance of options in operations or acquisitions and accept that dilution of existing shareholders will be a consequence of option exercise. For example, in July 2000, just prior to the dot-com crash, the *Wall Street Journal* reported that the intrinsic value (the market value of underlying stock less the exercise price) of outstanding options issued by S&P 500 companies was $570 billion.\(^{185}\) Astoundingly, six technology companies—Microsoft, Cisco, Yahoo, America Online, Sun Microsystems, and Broadcom—were responsible for one-third of

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\(^{183}\) See Guay, *supra* note 168, at 399-400.

\(^{184}\) See *supra* note 158 and accompanying text.

\(^{185}\) For example, Bens and colleagues examined a subset of the S&P 500 firms that had positive earnings (and thus were cognizant of EPS) and that had cash (and thus were able to repurchase shares). See Bens et al., *Real Investment Implications, supra* note 151, at 368.

this option exposure. While Microsoft actively manages its options exposure through stock repurchases and derivatives transactions, two of these six companies, Cisco and Yahoo, reported that they had no plans to repurchase shares. Cisco stated that it was not concerned about dilution because its financial results had been "amazing" (ah, blissful ignorance) and shareholders continued to approve the issuance of additional stock. Yahoo said that it did not buy back stock, focusing instead on expansion through acquisitions. It is possible that Cisco and Yahoo would have simply issued shares to the public and maintained the same level of internal investment had they paid their employees with cash instead of equity, but it seems likely that equity compensation increased their access to equity capital at least to some extent.

Another mid-2000 anecdotal report of aggressive share repurchase activity at Microsoft, Adobe, and Dell noted that, by contrast, "[t]he great bulk of young dot.com companies do not have the cash—or the borrowing capacity—to buy back stock" and that such companies "have to spend whatever cash they have on business development."

Although there is no direct statistical evidence of companies investing cash conserved through stock and option grants in operations or expansion, anecdotal reports and conversations with knowledgeable parties suggest that this is a very common practice.

c. Derivative Transactions

As an alternative to delta hedging, companies that wish to perfectly hedge option grants could purchase equivalent call options. A number of option issuers have purchased calls in conjunction with selling put options, but I have seen no evidence, even anecdotal, of firms simply purchasing calls with the freed-up cash. On the other hand, companies frequently sell put options without buying calls, ostensibly as a means of funding share repurchase

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186 See id.
187 See id.
188 See id.
189 See id.
190 As discussed infra Part IV.B.3, seasoned equity offerings are relatively rare because such offerings are taken as a signal of bad news. Thus, although no one has studied the relationship between stock option grants and equity offerings, we can be relatively confident that they are not perfect substitutes.
192 Recall that call options provide the holder with a right to purchase, while put options provide the holder with a right to sell.
193 See James J. Angel et al., Using Exchange-Traded Equity Flex Put Options in Corporate Stock Repurchase Programs, 10 J. CORP. FIN. 109 (1997) (reporting a consensus among option traders that at least 10% of public companies repurchasing shares sold put options in conjunction with their buyback programs).
programs. Although put sales generate tax-free profits in a rising market, these sales should be viewed as speculative and not as hedges of compensatory option grants.

Dell, Amgen, and EDS reportedly have sold put options and purchased call options in conjunction with compensatory option-related share repurchases.194 This combination of transactions is known as a collar because the result is to ensure that the company will be able to buy back shares within a relatively narrow band of prices. Imagine that a company’s shares are trading at $40 on the date of an option grant. The company could purchase the underlying shares at that point for $40 each. Alternatively, the company could sell puts with a lower strike price (say $35) and purchase calls with the proceeds of the puts at a higher strike price (say $45). If the company’s shares are trading above $45 when the compensatory option is exercised, the company can exercise the call and repurchase shares at $45. However, if the shares fall below $35 on the exercise date, the puts will be exercised and the company will be forced to pay an above-market price for shares that it does not even need (since the compensatory option will not be exercised). If the share price winds up between $35 and $45, neither the put nor the call will be exercised, but the company is ensured of paying no more than $45 per share.

Presumably, companies undertake these collar transactions instead of simply purchasing the underlying shares because they wish to preserve cash between the date of option grant and exercise.195 If share prices appreciate prior to compensatory option exercise, the effect of putting on a collar is similar to simply hedging with calls. A company’s profit on the call will not be taxed under § 1032. In addition, a company that funds calls by selling puts will have additional cash on hand at the time of grant, because the cash conserved by issuing compensatory options is not used to purchase the calls. This cash presumably is invested in operations or expansion.

Undertaking a collar, however, is very different from simply buying calls in a down market. A company that buys calls in conjunction with compensatory option grants sees both instruments expire unexercised if the market price remains below the strike price. Yet, a company that has undertaken a collar may be forced to purchase shares at an above-market price even though the compensatory option will never be exercised and no dilution would have occurred in any event.196


195 Collars also make sense if the company is not sure that it will want to repurchase the shares. As long as the share price remains within the collar, neither option will be exercised, and the company will have the opportunity, but not the obligation, to repurchase shares at a price within the collar.

196 See Brown, supra note 194, at 98 (noting that when the “collar” strategy backfired, EDS was forced to buy back its own shares at a loss); Gary McWilliams, Deals and Deal
Thus it seems that undertaking a collar is a very imperfect hedge of a compensatory option grant. The collar works fine as long as prices rise, but it produces a costly result if prices fall. From a tax standpoint, the collar looks like a call in a rising market, but the company suffers a non-deductible loss if prices fall. In any event, compensatory option-related collars seem to be quite rare. The fact that they exist at all does reveal one important thing, however. Companies can purchase calls on their own stock as a way of hedging compensatory option grants. What is surprising is that companies uniformly fail to hedge in this fashion.

As noted, the more common derivative response to compensatory option grants and repurchase plans is the sale of puts. Microsoft has been a leader in this regard, collecting more than $2 billion from the sale of put options between 1995 and 2000.197 A recent study of SEC Edgar filings indicates that 83 firms issued puts in conjunction with share repurchase programs between January 1994 and March 1999.198 Proceeds from the sale of puts also are tax free under § 1032, and the rationale for selling puts is that the premiums collected can be used to help fund share repurchase. This plan works well in a rising market. Microsoft’s put program reduced its average buyback price by almost $3 per share in the 1995-2000 period.199

Put programs, however, appear to be more akin to speculation than hedging. Selling a put produces a fixed premium. If share prices rise dramatically, compensatory option exercise will cost a company much more than it has collected from selling puts. If share prices fall, the compensatory option will expire unexercised, but the put seller will be forced to buy shares at an above-market price, and the loss will not be deductible.

From a tax perspective, selling puts does generate a tax-free premium, but the tax savings to the company in a rising market are much less than those associated with purchasing calls. There is, moreover, the question of what the company does with both the cash received on the sale of the puts and the cash conserved by issuing compensatory options in lieu of cash compensation in the first place. Presumably, these funds are invested in operations or expansion and generate a taxable return. Thus, selling puts does not appear to produce anything close to the tax efficiency resulting from simply buying calls with the cash conserved from issuance of compensatory options.

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Makers: Dell Pays Hefty Price for its Own Shares—Strategy to Fund Plan for Workers Pay Puts Squeeze on Cash Flow, WALL ST. J., June 19, 2001, at C16 (discussing how Dell’s “collar” approach resulted in a buyback of its own shares at almost twice the market price).

197 See Rebecca Buckman, Microsoft Takes Lessons From an Old Economy Stalwart, WALL ST. J., Oct. 6, 2000, at C1; Virginia Munger Kahn, Stock Options: No Ifs, Calls, or Puts?, CFO MAG., Oct. 12, 2000, at 145.


199 See Kahn, supra note 199, at 145. The precise figures reported in the article are $2.1 billion collected from puts, reducing the average repurchase price by $2.74 per share.
2. Management of Compensatory Stock Grants

As shown above, a corporation can hedge a deferred or restricted stock grant by purchasing shares equal in value to the after-tax cost of the foregone cash compensation (or issuing that many fewer shares). This hedge will leave the firm indifferent between cash and stock on an after-tax basis and eliminate any basis risk. Additionally, investing the freed-up cash in the business provides an adequate return to satisfy the deferred equity compensation obligation if the company's after-tax investment return matches its stock return.

Perhaps because of the recent national obsession with stock options, there is almost no research on corporate management of compensatory stock grants, despite the fact that stock remains a significant element of executive compensation and is growing in importance. In the one study to consider compensatory stock, Christine Jolls found no positive correlation between executive restricted stock grants and share repurchase activity. However, this result is somewhat ambiguous. It could imply that restricted stock grants replaced public stock offerings and had no net effect on corporate investment or capitalization. But the failure to repurchase shares following restricted stock grants could also suggest increased ownership dilution and greater internal or external investment or reduced borrowing.

3. Equity Compensation as a Substitute for Public Equity Offerings

Thus far, this article has considered empirical evidence that sheds light on the question of what companies that issue stock or options do with the cash that is saved. Another possibility, though, is that equity compensation substitutes for public share sales, in which case no cash is actually freed up as a result of the compensatory grant. Analytically, refraining from selling shares is equivalent to repurchasing shares, but the two cases present very different empirical predictions. A company that substitutes equity compensation for equity sales would not be expected to buy back shares in addition, and vice versa.

I have found no empirical studies examining the relationship between reliance on equity compensation and recourse to public equity markets. However, equity offerings made subsequent to IPOs, known as seasoned

200 Joseph R. Rich, a compensation specialist with Clark/Bardes Consulting, reported that his technology clients had shifted CEO equity compensation from 80% options and 20% restricted stock in 2001 to 65% options and 35% restricted stock in 2002. See McGeehan, supra note 31.

201 See generally JOLLS, supra note 151. Jolls did find a significant relationship between executive stock options and share repurchase, which she attributed to executive option holders' preference for repurchase over dividends. See id. at 3. More recent studies suggest that EPS management may be a primary motivation for compensatory option-related repurchase. See supra Part IV.B.1.a. If dilution drives repurchase, one would expect that restricted stock grants also would lead to share repurchase. Stock grants tend to involve many fewer shares than option grants, however, so this effect may be difficult to discern.
TAX ADVANTAGES OF EQUITY COMPENSATION

equity offerings, are viewed in the market as a signal of bad news and "last resort" financing. As a result, seasoned equity offerings by mature public companies are fairly rare. Thus, while the possibility cannot be ruled out and more empirical research is warranted, it seems unlikely that mature firms commonly substitute equity compensation for public equity sales.

Moreover, to the extent that companies repurchase shares in conjunction with stock option grants, either contemporaneously or subsequently, one can conclude that they are not substituting equity compensation for public share sales. If they intended for option grants to replace public share sales, there would be no reason to repurchase the shares on the market.

C. Empirical Evidence on the Impact of Tax Status on the Use of Equity Compensation

A number of researchers have investigated the variance observed in the use of deferred equity compensation among U.S. companies. Generally, these studies have attempted to determine whether agency theory explanations for the use of deferred equity compensation can be supported empirically. But these studies also have considered financial constraints, such as liquidity, tax status, and earnings management considerations, as potential explanatory variables and thus shed light on the impact of tax status on the use of equity compensation. Again, the evidence is mixed, but the weight of the evidence suggests that loss-making firms do not disproportionately rely on equity compensation.

In a 1995 study, David Yermack investigated stock option awards made to CEOs of 792 large (Fortune 500) U.S. companies between 1984 and 1991. Among other potentially explanatory variables, Yermack considered corporate liquidity (proxied by payment of dividends) and tax status (proxied by net operating loss carryovers). Yermack found that liquidity was a statistically significant variable. Cash poor firms tended to use options in lieu of cash compensation as expected. Yermack also found that firms with NOL carryovers were more likely to utilize options, but this relationship was not statistically significant.

Similarly, Steven Matsunaga failed to find a statistically significant relationship between the use of stock options and marginal corporate tax rates. Matsunaga's study examined option grants made to employees of 123

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204 See id. at 246-47.
205 See id. at 259 tbl.6, 263.
206 See id.
large companies between 1979 and 1989.\textsuperscript{208} Stephen Bryan, LeeSeok Hwang, and Steven Lilien found limited support for the proposition that loss-making companies rely more heavily on deferred equity compensation.\textsuperscript{209} Their 2000 study focused on stock option and restricted stock awards made to CEOs of 1700 S&P 500, S&P MidCap, and S&P SmallCap firms between 1992 and 1997. For the entire sample and for the subset of non-S&P 500 firms, decreasing marginal tax rates bore a positive and statistically significant relationship to reliance on options. For S&P 500 firms, the sign was right, i.e., reliance on options increased with decreasing marginal tax rates, but the relationship was not statistically significant. The sign was wrong, however, in their restricted stock regressions. Although not statistically significant, restricted stock use tended to increase with increasing marginal tax rates. This study did find statistically significant support for many agency theory predictions related to stock and option awards.\textsuperscript{210}

In an investigation of stock option grants made to non-executive employees, John Core and Wayne Guay also found evidence suggesting that corporate tax rates affect the use of deferred equity compensation.\textsuperscript{211} Examining data for 1994 through 1997, Core and Guay found that firms with positive taxable income and no NOLs relied less heavily on option compensation than other firms.\textsuperscript{212}

Unlike the previous studies, Brian Hall and Jeffrey Liebman focused specifically on the connection between taxation, both personal and corporate, and the use of stock options.\textsuperscript{213} Their study analyzed fifteen years of data on the largest publicly traded U.S. companies. Overall, Hall and Liebman concluded that tax rates “have had at most a modest impact on the composition of pay.”\textsuperscript{214} In their cross-sectional analyses, combined employer and employee tax burdens provided little or no explanatory power.\textsuperscript{215}

\begin{itemize}
\item \textsuperscript{208} See id. at 6-7.
\item \textsuperscript{210} For example, firms with abundant investment opportunities and volatile earnings tended to rely more heavily on CEO stock options, while firms with high CEO stock ownership tended to rely less heavily on CEO options. See id. at 663.
\item \textsuperscript{211} See John E. Core & Wayne R. Guay, \textit{Stock Option Plans for Non-Executive Employees}, 61 J. Fin. Econ. 253, 275, 278 tbl.7 (2001).
\item \textsuperscript{212} See id. at 260, 264, 275. See also Patricia M. Dechow et al., \textit{Economic Consequences of Accounting for Stock-Based Compensation}, 34 J. Acct. Res. 1, 16, 17 tbl.3 (1996) (finding a correlation between NOLs and use of options in a sample of 4752 firms for fiscal year 1992).
\item \textsuperscript{213} See HALL \& LIEBMAN, supra note 7.
\item \textsuperscript{214} See id. at 27.
\item \textsuperscript{215} See id. at 19.
\end{itemize}
V. SYNTHESIS AND REFORM ALTERNATIVES

Having analyzed the economics of equity compensation and reviewed the available empirical evidence concerning employer hedging practices, we are now in a position to assess the overall effects of equity compensation and to briefly consider possible tax reforms in light of this analysis. Although taxpayers currently do not appear to be subsidizing equity compensation programs of profitable firms in aggregate, this could quickly change if delta hedging of option grants becomes more common. In addition, the potential for delivering tax advantaged equity compensation raises fairness concerns and could undermine the creation of broad-based savings plans. These phenomena could potentially justify alternative approaches to the taxation of equity compensation. This part considers some of the costs and benefits of these alternatives. I conclude that modest reform in the taxation of equity compensation, such as the imposition of a special employee-level tax on equity gains, may be justified.

A. Synthesis of Theory and Empirical Evidence

This section synthesizes the theory developed in Parts II and III and the empirical evidence described in Part IV into an overall assessment of the global tax implications of equity compensation.

1. Equity Compensation Use by Profitable, Taxable Companies

Substituting equity compensation for cash can be tax advantageous for profitable, taxable companies. At the employee-level, equity compensation effectively results in an exemption of outside investment earnings from tax. This exemption is beneficial if stock prices appreciate but is disadvantageous if prices fall or, in the case of options, fail to rise significantly. All else being equal, the effect of the exemption should be a wash. But all else is not equal. Employees’ use of capital losses is limited. Favorable ex post adjustments to poorly performing equity compensation plans are common. And stock prices drift upward over time. Each of these factors make appreciated equity compensation positions more likely than not. Thus, at the employee level, equity compensation provides an expected tax advantage. Of course, this does not necessarily imply that employees who receive equity compensation in lieu of cash will themselves enjoy the full employee-level tax advantage. The tax advantage may be retained by employers who issue equity of lesser value reflecting the tax advantage or split between employers and employees in some fashion. See infra Part V.B.

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and, as a result, a global tax advantage can be assured if employers delta hedge NQSO grants by dynamically purchasing and selling their own shares with the freed-up cash and borrowed funds or purchase equivalent options on a fraction of the shares underlying the NQSO. Stock grants can be perfectly hedged by simultaneously purchasing shares on the market or reducing planned market issuances. The foregoing strategies ensure a global employer/employee tax advantage, and they also ensure that shareholders will be indifferent between compensating employees with cash or pre-tax equivalent equity compensation. Other employer investments may be tax advantaged in the sense that the fisc bears the cost of the employee-level exemption but will not ensure shareholder indifference, e.g., simply buying back shares with the cash saved through issuing NQSOs. Still other employer investment strategies may result in shareholder indifference even though they fail to generate a global tax advantage, e.g., internal investments that generate large after-tax returns. However, given the difference between corporate and individual capital gains tax rates, many alternative employer investments will actually produce a global tax disadvantage (and a windfall for the fisc) and a significant shareholder shortfall.

The weight of the empirical evidence suggests that stock options programs result in significant incremental taxable corporate investment and that firms fail, on average, to manage options programs in such a way as to ensure a global tax advantage. Two recent studies have found evidence consistent with partial delta hedging by large, profitable firms, but these and other studies and much anecdotal evidence indicate that many profitable firms delay or forego share repurchase. (Even the most supportive study found that sample firms failed to initiate delta hedging of 40% to 75% of the shares underlying options in the year of grant.) Presumably, the cash that is conserved by compensating employees with options and not immediately invested in company stock is invested in a taxable fashion. Cash-constrained firms understandably invest such cash in operations or expansion; other firms may do the same or simply increase their cash investments expecting to repurchase shares at some point in the future. Firms apparently do not hedge option grants by purchasing call options.

In addition, there is no evidence that deferred or restricted stock issuers systematically repurchase shares. Companies that compensate with stock and fail to repurchase shares could in effect (if not in intention) be using equity grants as a substitute for public stock sales, or the result could be increased internal or external investment or reduced borrowing. This is an important open question, since the impact on issuers and the fisc are very different. In the former case, no additional corporate tax is generated, and the activity is net tax advantaged from the perspective of employers and employees. In the latter case, the tax revenue associated with employer investments may more than offset the tax savings enjoyed by equity recipients. However, while this is

217 It seems unlikely that all firms that issue stock and options and fail to repurchase
an open question empirically, it seems unlikely that firms that fail to manage options programs so as to ensure a global tax advantage would do so with respect to stock compensation programs.

More empirical evidence is needed to establish the amount and timing of share repurchase relative to option grants (and to determine the full effects of stock compensation). All we can say with certainty at this point is that, in aggregate, companies issuing NQSOs are not taking full advantage of the opportunity to shift the tax cost of equity compensation to the fisc. Some companies may be fully delta hedging option grants while others are not. In aggregate, however, it does not appear that taxpayers are subsidizing option compensation or that such compensation generates an aggregate global tax advantage.

2. Equity Compensation Use by NOL Companies

Taxable companies with large net operating losses that foreseeably extend several years into the future can provide compensatory stock or options to their employees and invest the freed-up cash in any fashion while effectively avoiding tax on investment earnings. As a result these firms might be tempted to substitute equity compensation for cash solely to take advantage of the employee-level exemption of investment earnings, and systematic exploitation of this opportunity could present a serious risk to the fisc. On the other hand, however, NOL companies have plausible non-tax justifications for providing deferred equity compensation in lieu of cash. Start-up companies, for example, often will be both cash poor and generating NOLs early in their life cycles.

Surprisingly, perhaps, it does not appear that NOL companies systematically exploit this opportunity. While again less than conclusive, the weight of the available empirical evidence does not indicate a significant difference in deferred equity compensation use by tax-paying and NOL companies. Thus, while taxpayers do indeed subsidize equity compensation programs of effectively tax-exempt employers, the magnitude of the subsidy is much less than it could be. Equity compensation use by such firms bears close watching, however, particularly in a sustained economic downturn.

B. Equity Compensation Taxation—Possible Reforms

The potential global tax advantage associated with equity compensation raises several concerns that could potentially justify changes in the way equity compensation is taxed. Foremost is the possibility of taxpayer subsidy. The aggregate cost to the fisc may currently be small or nonexistent, but increased

would have issued shares to meet cash compensation obligations. It is more likely that the net effect of equity issuance without repurchase is to put more shares on the market and leave more net cash in the hands of issuing firms. If this is so, then issuing firms in aggregate would have more funds invested (internal or external) and/or less debt than they would have had absent equity compensation. See supra Part IV.B.3.
delta hedging of option grants could result in large aggregate subsidies. Second, the ability to deliver tax-advantaged compensation to employees in this fashion undermines companies’ incentives to provide broad-based qualified savings plans. Anti-discrimination rules applicable to qualified savings plans are meant to harness the greed of executives and lead to the formation of these broad-based tax-advantaged plans. But if companies and executives can achieve similar results through equity compensation, there is less incentive to offer qualified programs.\textsuperscript{218}

Third, if some companies take advantage of this subsidy by delta hedging, for instance, and others do not, there may be no aggregate burden on the fisc, but horizontal equity issues may arise. However, in my view, horizontal equity is a relatively minor concern here. I see no reason at all to be concerned if companies are able to delta hedge and simply choose not to. If the failure results from a lack of expertise or advice, I have some sympathy, but the equity compensation tax rules (and delta hedging techniques) are not so complex as to render them unfair. Moreover, while it is true that companies with cash constraints that prevent them from hedging equity grants and taking advantage of §1032 may be penalized relative to firms that hedge, it seems likely that many of these cash constrained firms will be start-ups with little or no taxable income and will not bear tax on their incremental investments in any event.

Fourth, there is a more general question of fairness. Although equity plans reach down further through organizations than they used to, high-income taxpayers receive the bulk of equity compensation grants. Why should such top-heavy programs be available for subsidy by the fisc?\textsuperscript{219} Why should what is still largely executive compensation be tax advantaged?

In thinking about this issue, one must consider the division of tax costs and benefits between employees and employers. Equity compensation results in an employee-level tax advantage, but that does not necessarily mean that employees who are paid with equity enjoy the tax advantage. The advantage could be retained by employers who reduce the value of equity compensation granted to reflect the expected tax benefit, or it could be split between the parties. Obviously the vertical equity concern is of much greater importance if one thinks that equity compensation recipients themselves enjoy a significant portion of the tax benefit.

There are several reasons to expect that senior executives, who are compensated in large part with equity, capture much of the employee-level tax advantage. First, some equity programs are elective, such as the typical deferred stock plan. Participants are permitted to select the amount of cash compensation they will forego in favor of deferred stock units. To overcome employees’ risk aversion, these plans often provide that a dollar of foregone

\textsuperscript{218} See Halperin, supra note 7, at 540-41 (making the same point with regard to tax-advantaged nonqualified deferred compensation).

\textsuperscript{219} See id. (describing the use of nonqualified deferred compensation as an unwarranted and unintended subsidy to high income individuals).
TAX ADVANTAGES OF EQUITY COMPENSATION

Cash compensation will result in a credit for more than a dollar’s worth of stock. Given the risk bearing premia, it is impossible to determine how the employee-level tax advantage is being divided, but the fact that the program is elective tells us something. Executives who choose to participate clearly believe that the company shares or options they receive are worth more after tax than the foregone cash.

Second, even when equity compensation is not elective, it is often negotiated between senior executives and human resources departments. Thus, the implications of an elective program hold even when the equity grant technically is non-elective. Put another way, even if employers and executives actually bargain over the retention of the employee-level tax advantage, it is unlikely that employers would be able to appropriate 100% of the tax benefit.

Finally, as shown, equity compensation provides an employee-level tax advantage on an expected value basis, but the benefit is far from certain. The advantage depends on several factors, principally an inability to fully utilize capital losses in a down market. Whether there is an actual employee-level tax advantage in any particular case will depend on the recipient’s other investments, among other factors. Given the uncertainty and the likely diversity in prospects between employees, it would be difficult for employers to capture the employee-level advantage in negotiating compensation contracts. For all of these reasons, it seems likely that executives retain a significant fraction of the expected employee-level advantage of equity compensation.

This section examines several possible alternatives for the taxation of equity compensation in light of concerns about the potential for increased hedging and taxpayer subsidies, possible effects on qualified plan formation, horizontal equity, and vertical equity.

1. Grant Date Taxation

If one believed that the deferral of tax associated with equity compensation was resulting in an unacceptable level of taxpayer subsidy, that subsidy could be directly eliminated by taxing equity compensation at grant, just like cash compensation. Cash compensation-equivalent taxation could be achieved by taxing the employee at grant on the value of the grant and on payout on the difference between the value at payout and grant.\(^{220}\) The employer would be entitled to equivalent deductions at grant and payout. Such a system yields the “right” result for employees and reduces vertical equity problems and the threat to broad-based qualified plans. Vertical equity is restored because top executives, who receive the bulk of equity grants, are taxed just like rank and file employees, who tend to be cash compensated. The threat to broad-based qualified plans is reduced because equity clearly is not tax advantaged if taxed

\(^{220}\) Presumably, the grant date value of the compensation would be taxed at ordinary income rates, while the gain taxable at payout would be eligible for capital gains rates.
at grant like cash. On the other hand, grant date taxation would not eliminate the disparity between employers who do and do not hedge equity grants, but, as suggested above, horizontal equity may not be a significant concern in this area. More importantly, grant date taxation would introduce a difficult and troubling ability-to-pay problem, particularly for cash-constrained, new economy companies and their employees.

Whether equity compensation is taxed at grant or payout, employers effectively invest on behalf of employees. Under either scheme, tax-paying employers that invest freed-up cash in their own equity and all effectively tax-exempt employers would generate tax-free returns, while other employers that invest in operations or other taxable instruments would incur corporate level tax on their gains. The only way to truly level the playing field among tax-paying employers would be to repeal § 1032, i.e., require companies to pay tax on gains realized in trading their own equity. Moreover, in order to level the playing field between tax-paying and effectively tax-exempt employers, we would have to find a way to subject the equity compensation-related investment gains of the latter to tax.

In addition, grant date taxation would severely burden cash-constrained firms and their employees. For many start-up firms, equity grants—stock or options—make up the lion’s share of employee compensation. Employees often receive little or no cash compensation in the early years as their employers funnel all available cash into the business. Taxing equity compensation at grant would require such firms to reduce investment in the business and pay more cash compensation so that their employees could pay the tax on the equity compensation. There is certainly no tax reason to discourage start-ups from deferring compensation in this manner.

Given the paucity of evidence suggesting that profitable companies manage equity compensation in such a way as to generate an aggregate global tax advantage and taxpayer subsidy or that NOL companies disproportionately take advantage of equity compensation, the radical step of switching to grant date taxation of equity compensation probably is not warranted. In fact, such a switch could result in a windfall for the Treasury (versus the cash compensation alternative) and an unfair tax burden for shareholders of some

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221 Theoretically, the corporate-level tax cost associated with imperfectly hedged equity grants should be borne by the recipients, thus offsetting the employee-level tax benefit, restoring vertical equity, and reducing the threat to broad-based plans. However, it is far from clear that such transfers occur. See infra notes 228-229 and accompanying text. We can be much more confident (although still not 100% certain) that taxes paid by equity recipients will be borne by these individuals.

222 Halperin’s proposal for the taxation of nonqualified deferred compensation would accomplish this result. See infra Part V.B.2.

223 See supra Part IV (discussing empirical evidence).

224 Halperin has suggested other problems with grant date taxation of deferred compensation, including measurement, bunching of income, and a lack of employee understanding of accrual taxation. See Halperin, supra note 7, at 541-42.
companies. Firms that properly hedged equity grants would be indifferent versus cash compensation, but shareholders of firms that continued to issue equity to employees and invest freed-up cash in taxable investments would face a double whammy—grant date taxation of employees and corporate taxation on amounts effectively invested on behalf of those employees.

2. Special Corporate Tax on Equity Compensation Gains

Dan Halperin has proposed an alternative way of taxing deferred compensation that equates to grant date taxation and solves the ability-to-pay problem. Essentially, Halperin suggests taxing the employer on the investment return on deferred compensation at the employee’s tax rate. See id. at 544-50. Such a scheme could also be applied to equity compensation. Although the tax rate would ideally be tied to individual tax situations, Halperin suggests that maximum marginal rates could reasonably substitute, and presumably, capital gains rates would apply to deferred equity compensation, such as deferred or restricted stock or stock options. See id. at 544-45. Because equity compensation does not result in a segregated investment fund, it would be necessary to estimate the compensation and gain components of equity compensation payouts to implement Halperin’s proposal.

Aside from solving the ability-to-pay problem, Halperin’s proposal shares some of the pros and cons of grant date taxation. While the proposal certainly protects the fisc and taxpayers, given incomplete employer hedging of equity grants, it may in fact unduly favor the fisc and produce greater tax revenue than the cash compensation alternative. It also fails to solve the horizontal equity problem. Moreover, this approach is less likely to eliminate vertical inequities and the threat posed by equity compensation to broad-based plans because gains would be taxed at the employer level and not the employee level. If senior managers who receive a disproportionate share of equity compensation do not bear the tax on investment gains directly, they may not bear it at all. Companies and executives may discount or ignore the corporate-level tax (and employee-level benefit) in trading off equity against cash compensation and approve too much equity from the shareholders’ perspective or price it too cheaply. See generally Bebchuk et al., supra note 118 (arguing that managers use their power over boards of directors to maximize their compensation within an outrage constraint). Because shareholders and analysts are unlikely to realize that unhedged equity

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225 See id. at 544-50.
226 See id. at 544-45. Halperin’s analysis deals with nonqualified deferred compensation, but the approach is equally applicable to equity compensation. This tax would apply to effectively tax-exempt as well as tax-paying employers.
227 As Halperin explains, unless deferred compensation amounts are segregated from general corporate funds, it would be necessary to estimate investment returns applicable to these amounts. Halperin suggests that either average corporate investment returns or the returns promised to participants could be used for this purpose. See id. at 545-48.
228 See generally Bebchuk et al., supra note 118 (arguing that managers use their power over boards of directors to maximize their compensation within an outrage constraint). Because shareholders and analysts are unlikely to realize that unhedged equity
deductible senior management salaries and the golden parachute rules suggests that top executives often do not internalize corporate costs associated with their own compensation.229

3. Special Employee-Level Deferral Tax on Equity Compensation

The agency problem that is inherent in applying Halperin’s approach to equity compensation could be lessened (while still achieving the effect of grant date taxation and avoiding the ability-to-pay problem) by applying a special employee-level tax, rather than an employer-level tax, to equity compensation gains. Because the employee-level advantage of equity compensation is equivalent to the exemption of outside investment gains from tax,230 the effect of grant date taxation can be duplicated by taxing the recipient on the gain component of equity compensation at payout.

Under this alternative, employees would pay ordinary income tax on equity compensation payouts (or upon vesting, in the case restricted stock) and an additional surtax on the estimated gain component of that payout. To mirror the effect of cash compensation or grant date taxation, the rate of tax on the gain component should be set equal to the capital gains tax rate multiplied by one minus the ordinary income rate. Consider a deferred stock grant under the assumptions of Example 1 above.231 Assuming tax rates of 35% on ordinary income and 15% on capital gains, an employee who is credited with $100 deferred compensation at Time 1 and receives cash or stock worth $250 at Time 2 would first pay ordinary income tax on the entire payout in the amount of $87.5. In addition, the $150 gain would be taxed at the special rate of 9.75%, adding $14.62 to the employee’s tax bill. This would result in total compensation results in an employee-level benefit and corporate-level cost, the employee-level tax advantage represents nicely camouflaged compensation. See id. at 789-93 (discussing the camouflage of excessive executive compensation).

229 It is widely recognized that the one million dollar “cap” on salaries under § 162(m) has little effective bite and that the limitations of this rule can be easily avoided with a little planning. See, e.g., Alden & Akresh, supra note 40, at 119. Nonetheless, many CEOs continue to receive straight salary far in excess of the one million dollar deduction limit. See Executive Pay: A Special Report, N.Y. TIMES, Apr. 6, 2003, § 3 at R8 (reporting that 17% of CEOs in their survey received salary in excess of $1.25 million). It is very unlikely that CEOs would continue to receive cap-busting salaries if they were forced to internalize the corporate cost, given the ease with which the cap can be avoided. In addition, the current trend in dealing with the golden parachute limitations under § 280G is to gross-up executives for any tax incurred as a result of the provision. Such gross-ups can result in tax costs for companies that are takeover targets that vastly exceed the benefits enjoyed by the executives. See, e.g., Bruce A. Wolk, The Golden Parachute Provisions: Time for Repeal?, 21 VA. TAX REV. 125, 139-42 (2001). In such cases, executives clearly are not internalizing the corporate costs associated with parachute gross-up.

230 See supra Part II.A.1.

231 See id.

232 0.15 x (1 - 0.35) = .0975.
tax of $102.12 and leave the employee with $147.88, which is the same as the employee's cash compensation/outside investment result. As with the Halperin proposal, a special employee-level deferral tax equates to grant date taxation (good), protects and perhaps over-protects the fisc (good or bad), and fails to resolve the horizontal equity problem (bad, but perhaps unimportant). Significantly, however, the special tax falls directly on the employee, which makes it more likely that the employee will actually bear the tax and less likely that executives would use equity compensation as a substitute for qualified plans. Thus, this approach is more likely to eliminate vertical equity concerns and minimize the threat of equity compensation to broad-based plans.

4. Repeal § 1032

As noted, the only way to ensure equality between tax-paying employers that hedge equity grants with equity and those that do not would be to repeal § 1032 and tax employers on gains (and losses) achieved in trading their own equity. Al Warren has suggested repeal of § 1032 with respect to option gains and losses as one means of dealing with the discontinuity between the current treatment of such options and the taxation of employee stock options. But delta hedging of employee stock options with stock is much

233 See supra Part II.A.1 (calculating the tax consequences of an employee's gain on cash compensation investment). Note that this special deferral tax could (and should) apply to losses as well as gains.

234 Also, like the Halperin proposal, a special employee-level tax on equity gains would require estimation and reporting of those gains. Currently, employees need only report the payout from deferred stock, the value of restricted stock at vesting, or the difference between share value and strike price on the exercise of an option. See supra Part I. Estimating investment gains should not be too difficult, however. Stock gains can be estimated by simply comparing the market price of employer stock at payout or vesting and grant. The grant date value of options would have to be calculated using an option pricing model, such as the Black-Scholes model, but companies are going to be required to make such calculations anyway for financial reporting purposes.

235 Of course, powerful executives may be able to shift such a cost directly or indirectly back onto the company, but the initial incidence of the surtax matters if one believes that visibility is an important factor in constraining executive compensation. It should be more difficult for executives to achieve gross-ups of personal taxes than to ignore corporate tax levies on their compensation. See Bebchuk et al., supra note 118, at 789-93 (discussing the camouflaging of executive compensation with the object of avoiding the outrage threshold).

236 Halperin suggests that tax-paying employers also can reduce taxation on investment gains by employing the dividend received deduction under § 243. See Halperin, supra note 7, at 540. However, delta hedging with employer stock appears to be the primary means of providing tax-advantaged equity compensation.

more prevalent than hedging options with options.238 Thus, full § 1032 repeal would be needed to level this particular playing field (if such leveling is desired), and full repeal is unlikely. Moreover, even full repeal of § 1032 would not affect the ability of effectively tax-exempt employers to provide tax advantaged equity compensation.

5. Assessment

The available empirical evidence does not support radical reform of equity compensation taxation. It seems clear that some subsidization and horizontal inequity is present, but the evidence by no means suggests a crisis for the fisc, and it is possible, given the current large difference between individual capital gains and corporate tax rates, that the fisc actually benefits as a result of companies substituting equity compensation for cash.

However, there are reasons for taxpayers and policy makers to be concerned. Increasing evidence of delta hedging of options may reflect increased delta hedging (as opposed to increased detection). If equity compensation threatens to result in a significant drain on the fisc in years to come, reform may be warranted. In my view, the most appropriate reform would be the imposition of a special employee-level deferral tax on estimated equity compensation gains. As with Halperin’s corporate-level investment tax proposal, this employee-level tax would simulate grant date taxation without causing an ability to pay problem. However, an employee-level tax is more likely to result in the recipients actually bearing the burden of the tax and thus is less likely to lead to excessive equity use by greedy senior executives. As a result, an employee-level surtax is more likely to eliminate the vertical equity problem and the threat of equity compensation to broad-based plans.

Of course, the imposition of any additional tax on equity compensation would have some effect on the use of equity versus cash compensation. Such a move may be resisted by those who believe that companies’ use of equity as incentive devices should be encouraged and not discouraged.239 In my view, however, it is up to equity advocates to justify a tax subsidy, even a potential subsidy, for equity compensation versus cash compensation, the natural base case. If equity compensation provides valuable incentives it should be able to bear cash compensation-equivalent taxation at least as long as we avoid imposing tax at the time of grant, which could be an undue burden. We want to make sure, in other words, that equity is being granted for incentive purposes and not as a tax shelter.

238 See supra Part IV.B.1.a.
239 If resistance to the rationalization of the accounting for equity compensation is any indication, and I think it is, we can be quite sure that equity compensation advocates will resist the imposition of additional taxes. See Bebchuk et al., supra note 118, at 813-14 (discussing managerial resistance to the rationalization of options accounting).
CONCLUSION

Is equity compensation tax advantaged? The answer really depends on one's perspective. In an abstract sense, equity compensation is tax advantaged, and companies can ensure an actual global tax advantage, at least on an expected value basis, by properly hedging equity grants. In fact, the potential exists under U.S. tax rules for employers and employees to substitute deferred equity compensation for cash as part of a deliberate tax minimization strategy. Such a strategy would provide employees with a virtually unlimited IRA-like savings vehicle without imposing any cost or risk on shareholders.

The evidence suggests, however, that this is not being done. In practice, profitable companies do not perfectly hedge equity grants, and in aggregate, their equity compensation programs appear to result in incremental taxable corporate investments that offset the employee-level tax advantage. Often these equity compensation programs are more costly for employers than cash compensation of equivalent pre-tax value and result in greater overall tax receipts rather than less. In addition, while equity compensation provided by employers with large, continuing losses is tax advantaged, surprisingly, this opportunity is not fully exploited.

In my view, this real world perspective matters most for tax policy. The paucity of evidence suggesting significant taxpayer subsidization of equity compensation does not support wholesale abandonment of the current tax scheme in favor of grant-date employee taxation. At most, the available evidence might support a supplemental employee-level tax imposed at vesting or payout that would offset the benefit of deferral but would not impose an undue burden on companies and employees that elect equity compensation. By making it more difficult for equity recipients to avoid the cost of the tax, such a system would tend to increase vertical equity between senior executives, who receive the bulk of equity compensation, and rank and file employees. In addition, this approach would reduce the threat of equity compensation to broad-based qualified plans.

However, the lack of evidence of wholesale taxpayer subsidization does not mean that no one should be concerned about the tax implications of equity compensation. Shareholders of companies that grant options and invest the cash conserved in a taxable fashion should question why the firms are paying their employees with options instead of cash. From a global tax perspective,

240 Given the complexity of the transactions and hedging strategies discussed in the foregoing pages, some readers may find the lack of explicit tax minimization wholly unsurprising. However, as anyone who works in the field of executive compensation will confirm, executives take their own compensation very seriously and are not afraid to expend significant resources on consultants and tax lawyers who can help them design advantageous compensation schemes. As a result, I find the lack of explicit tax minimization somewhat surprising, particularly for the executives of firms with large NOL positions that can most easily take advantage of the opportunity to defer compensation and tax.
this choice appears ill-advised. The private parties—the employees, the shareholders, or both in some combination—bear the cost of the incremental corporate tax. Perhaps the incentives created by options more than offset the global tax costs, but shareholders should recognize that equity programs managed in this way are not tax advantaged and should force management to justify them on some other basis.

Let me close with a plea for more empirical research in this area. Tax policy makers would greatly benefit from more studies investigating employer hedging of stock and option grants. There are several good studies investigating the relationship between employee stock options and share repurchase programs, but the outcomes vary significantly—some support and some effectively refute a delta hedging hypothesis. This conflict should be resolved. Moreover, we know virtually nothing about the relationship, if any, between the use of equity compensation and public share sales, which could be just as important.