Restricted stock and Section 83(b) elections*

Jennifer L. Blouin 1315 Steinberg Hall – Dietrich Hall The Wharton School University of Pennsylvania Philadelphia, PA 19104 (215) 898 - 1266 Mary Ellen Carter 1313 Steinberg Hall – Dietrich Hall The Wharton School University of Pennsylvania Philadelphia, PA 19104 (215) 898 – 7125

First Version: July 2004 This Version: November 2004

Abstract

We examine reasons firms restrict employees' ability to accelerate the income recognition of restricted stock grants (i.e., make an I.R.C. Section 83(b) election) to determine whether firms limit this election in a manner that benefits the firm, potentially to the detriment of its executives. A comparison of a sample of firms that restrict the election to a sample of firms that does not, suggests that firms are limiting the election in an effort to minimize taxes. However, a study of actual restricted stock grants by firms that specifically prohibit or require the election provides evidence that all restrictions do not necessarily benefit the firm. Our evidence suggests that firms who prohibit the election are doing so in an effort to maximize firm tax benefits, at the expense of the employees. However, firms that require the election and pay executives bonuses to cover income taxes are losing out to these executives, perhaps in an effort to "hand-cuff" the employee to the firm.

*We would like to thank Pete Wilson, John Phillips, Doug Shackelford, Mary Margaret Frank and Stan Veliotis for their helpful comments.

1. Introduction

Academic research has examined the use of restricted stock in executive compensation (see, for example, Bryan et al. (2000), Ryan and Wiggins (2001), and Carter et al. (2004)), but these studies have ignored the tax consequences to the employees. Unlike many other forms of compensation, restricted stock has beneficial tax attributes to the employee since the employee can control the timing and possibly the amount of taxes that he/she pays in connection with the restricted stock grant.¹ I.R.C. Section 83(b) allows the employee to elect to have the grant taxed as ordinary income when it is received, rather than when it vests, and any subsequent appreciation in the stock could be taxed at the lower capital gains rates. Because the firm only receives a deduction concurrent with the employee recognizing ordinary income, firms may be motivated to limit employees' abilities to make the election in order to maximize their own tax deduction -potentially at the expense of the employee. Incorporating the Scholes et al (2002) framework to examine the role of taxes in firms' compensation decisions, we investigate the tradeoffs between the tax positions of the firm and its employees. Specifically, we investigate why firms limit the ability of restricted stock grantees to accelerate the taxation of the restricted stock grant (i.e., make a Section 83 (b) election) and the consequences of those restrictions to both the employee and the employer.

When an employer grants restricted stock to an employee, there is no current tax to the employee and no current deduction to the employer. Instead, the excess of the fair market value of such stock over the amount, if any, paid by the employee is includible in his ordinary income, and is deductible by the employer in the year when the stock is no longer subject to the restrictions (i.e., after the stock vests). Any appreciation of the stock after vesting may be taxed at favorable capital gains rates.

¹ Employees can exercise control of the timing and/or character of income in limited settings surrounding incentive stock option exercises (See Matsunaga et al (1992)) and non-qualified stock option grants (McDonald (2003)).

Under section 83(b), an employee may accelerate recognition of the income from a restricted stock grant by electing to include in gross income the fair market value (less any cash paid) of the restricted stock at grant. This income will be considered ordinary income subject to all applicable income and payroll taxes. In addition, the employer receives a corresponding deduction in the year of the election rather than in the year of vesting. If a Section 83(b) election is made, all appreciation after the date of the stock grant will be eligible for the lower capital gains treatment and will not be taxed until the stock is disposed of, regardless of when the restrictions lapse. A Section 83(b) election may be advantageous to the employee if he/she expects significant increases in stock price, as only some portion of the total income will be taxed at the higher ordinary rate and the remainder at the lower capital gains rate. Though, under that same scenario, the firm would prefer the employee not make the election, as the firm would receive the larger deduction when all income is taxed at the employee's ordinary rate.

Academic literature on the role of taxes and equity compensation is mixed. For example, the role of taxes in the use of incentive (ISO) and non-qualified (NQO) stock options is generally considered marginal (see Shackelford and Shevlin (2001) for a summary). Matsunaga, Shevlin and Shores (1992) examine the trade-off of financial reporting costs against tax benefits. They find that, holding the employee indifferent to the transaction, firms with fewer financial reporting costs are more likely to have disqualifying dispositions of ISOs and thus favorable tax treatment. Finally, there is mixed evidence as to whether the early recognition of taxes on equity compensation is optimal for the employee. Huddart (1998) provides evidence that employees exercised stock options in anticipation of tax rate increases. This evidence is consistent with employees wanting to recognize the income when tax rates are lower. On the other hand, McDonald (2003) provides a theoretical analysis of Section 83(b) and shows that the acceleration of taxes under the election is generally not optimal from the employee's perspective (his analysis does not consider the employer's perspective). However, he does acknowledge that the firm may

alter the optimality of this election to its employees by offering incentives such as loans and/or bonuses upon election.

While most companies allow the employee to decide whether or not to make a Section 83(b) election, some companies require employees to make the election and some companies prohibit employees from making the election as a condition of the restricted stock grant. We examine three reasons why companies would make such restrictions: (1) future stock returns and the potential magnitude of the tax deduction, (2) the tax paying status of the firm, and (3) the IPO "upside, limited downside" argument proposed by compensation consultants. Using our sample of 209 firms that make no restrictions, 15 firms that explicitly prohibit the election, and 22 firms that explicitly require the election from 1993-2002, we find evidence that firms prohibit the election because of tax considerations. Firms with expected stock price appreciation and firms in a high tax paying status are more likely to prohibit the election. Alternatively, firms who expect lower appreciation are more likely to require the election suggesting that a modest increase in the deduction does not outweigh the opportunity cost of the immediate deduction. However, we find no evidence that the tax paying status of the firm is related to the decision to restrict the election. Together, these results suggest that firms prohibit the election to maximize their tax benefits. However, firms requiring the election may be doing so for other non-tax related reasons.

We further explore the tax efficiency story by examining the trade-offs to the firm and to its employees that this tax minimization strategy entails. We examine 44 firms that grant restricted stock in the three years after prohibiting/requiring the election and find that these firms make such restrictions on the election consistent with maximizing their tax deductions. That is, firms that prohibit the election have larger deductions at vesting, while firms that require the election have larger deductions at the grant date. However, some of these firms also provide bonus payments to employees to cover the taxes related to restricted stock. Once we incorporate "gross-up" bonus payments, the benefits to the restrictions are not as clear. While firms that prohibit the election pay fewer taxes, employees in those firms have greater net cash outflows. Ex-post, the firm is "winning" at the employees' expense. In firms that require but do not pay bonuses, tax efficiency seems to be the objective as firms' gains are at the employees' expense. Employees in those firms are paying more tax than they otherwise would have paid were they allowed to forgo the election. However, in firms that require the election, they are, on average, *paying* cash as a result of the bonus payments and employees' net cash payments are lower as a result of the bonuses. This is consistent with our earlier findings that firms restricting the election may be doing so for other, non-tax reasons.

Our research contributes to the literature in several ways. First, unlike prior research (Matsunaga, et al., 1992) that examines the trade-off of tax benefits, our setting allows us to examine direct consequences to the employees from the firms' decisions without making assumptions on the behavior of firms and/or employees. We can observe actual restrictions imposed by the firm surrounding the grant and the resulting income consequences to employees. Second, to our knowledge ours is the first study to document these conditions placed on restricted stock grants and the consequences of those restrictions. Understanding the terms of restricted stock grants to employees is becoming increasingly important because restricted stock is beginning to play a bigger role in compensation. Recent surveys, such as The Wall Street Journal/Mercer Human Resource Consulting 2002 CEO Compensation Survey (Employee Benefit Plan Review, 2003) and a survey of high-technology companies by Mellon Financial Corp (Caffrey, 2004) document an increased use of restricted stock in compensation packages. And, this trend is expected to continue when stock options will be required to be expensed (Colter, 2004; Lublin, 2003; Lavelle, 2003).

The paper proceeds as follows: Section 2 provides background information on restricted stock and the Section 83(b) election. Section 3 develops our hypotheses. Section 4 examines firms' choice to restrict the Section 83(b) election. Section 5 provides further analysis on the consequences to restricting the election. Section 6 concludes.

2. Background

2.1 Restricted stock

A restricted stock award provides an employee stock subject to the risk of forfeiture contingent upon future performance of services or on continued employment. These awards are considered full value awards as the employee receives the full value for each share that vests, as opposed to just the increase over the exercise price, as with stock options. In most cases, the "restriction" on the ability of the employee to transfer (i.e., sell) the stock awarded passes over time, similar to the vesting period associated with stock option grants. In other cases, the risk of forfeiture ceases only after an employee works a certain number of years (i.e., cliff vesting) or based on some performance metric, rather than on a pro rata basis.

Restricted stock awards are typically included as compensation expense in the financial statements when they vest. The total amount of compensation expense recognized by the company is the difference between the purchase price (if any) of the shares awarded and the market value of the shares at vesting. The tax treatment of the restricted stock grant does not alter the recognition of compensation expense for financial reporting purposes. However, the 83(b) election does create a current tax benefit that will create a deferred tax liability. If granted restricted stock is subsequently forfeited or repurchased from the employee, the company will reverse (into income) any compensation expense previously recognized in the financial statements for those shares.

2.2 Description of Section 83(b) election ramifications

A Section 83(b) election allows the employee to accelerate the recognition of the restricted stock grant as income. Once an election is made, appreciation (decline) in the value of the stock is capital in nature. Ceteris parabis, a Section 83(b) election is seemingly tax efficient to the employee based on the spread between the tax rates on capital gains and ordinary income over the past decade.

However, there are trade-offs between the employee and the employer. First, if stock prices are expected to rise, the employee may be is better off with the Section 83(b) because the income is recognized prior to the appreciation, leading to lower taxes paid. Any subsequent appreciation is taxed at the lower capital gains rate. However, from the firm's perspective, although the election accelerates the deduction, the deduction may be greater when the stock vests rather than at the grant, even after considering the time value of money as the firm does not receive a deduction for capital appreciation after the date of election. Second, if the election is made but the employee leaves the firm and forfeits the stock, the employee receives no deduction for the forfeited stock and does not receive a refund of the taxes paid. The firm, however, has already received the deduction; if the election had not been made, the firm would not have received a deduction. In addition, if the stock depreciates over the vesting period, the employee in essence over-paid taxes on the restricted stock grant that the employee cannot fully-recover (i.e., the decline in stock price can only be recovered as capital losses whereas the income recognized was ordinary). The firm, on the other hand, has received a larger deduction than it otherwise would have had the employee not made the deduction.

Given these trade-offs between the firm and its employees, it is not surprising that firms have an interest in controlling employees' abilities to make a Section 83(b) election. If the election is made, the firm (as well as the employee) must have sufficient cash to pay payroll taxes at the grant. For the employee, this situation is even worse because the employee must also pay income tax and this is a cash-less transaction as the employee cannot sell the shares of restricted stock until a later date when the restrictions are lifted. Some employers have considered it advantageous to pay a cash bonus to the employee to pay some or all of the tax on restricted stock. Other employers loan the employee the amount needed to purchase the stock or pay the applicable tax through a recourse note secured by the underlying stock (Mayo, 2003)

Further, unlike with other forms of compensation such as salary and bonus in which the firm can determine when the tax deduction will occur, the Section 83(b) election provides

flexibility to the employee that makes it more difficult for the firm to incorporate restricted stock grants into tax planning. Firms could retain that flexibility by restricting the employee's ability to make the election. For example, when Microsoft began issuing restricted stock to its employees, it retained the ability to incorporate the grants into tax planning by issuing restricted stock "units" which do not involve any transfer of stock until the restrictions are lifted. Thus, the employee could not make the election on these shares.² We observe that other firms specifically restrict the employee's ability to make the election in the equity compensation plan or the restricted stock agreement.

Anecdotally, it appears that compensation consultants generally recommend 83(b) elections to be made for firms with relatively low stock prices (i.e., start-ups, IPOs). Experts argue that for firms with relatively high stock prices (i.e., mature firms), the risk of forfeiture or stock price decline is too great relative to the potential tax benefits (Werner and Teichman (2003), Stevens (2001), Novak (1997)).

2.3 Theory of the Section 83(b) election

McDonald's (2003) analysis of the section 83(b) election concludes that the acceleration of the income recognition is generally not optimal for the employee. His key insight is that the tax payment made at election causes the employee to lose the income from the shares he *could have owned* had he used the cash paid for taxes at election instead to purchase additional shares of the firm. Essentially, McDonald points out that the opportunity cost of the forgone earnings on the tax payment exceeds any the potential tax savings generated. Said another way, if the employee is unrestricted to trade shares of the firm outside of what he is granted in compensation, then in lieu of paying taxes early in a Section 83(b) election, the employee should instead buy shares of the firm.³

² This was reported in a July 15, 2003 correction to an earlier article (Norris, 2003)

³ See Appendix A for a numerical example.

There are two key assumptions on which McDonald's analysis hinges. We believe that the facts surrounding the restricted stock grants in our sample potentially violate both assumptions and therefore create value in employee's ability to make the election. First, it is assumed that the employee would prefer to own more shares in the company than what he has been awarded through compensation grants (i.e., he is not portfolio constrained). Core and Guay (1999) show that firms grant equity in response to deviations from optimal equity incentive levels. Thus, in our setting, after the restricted stock grant, equity incentives are optimal and the employee may not want to hold additional equity. This suggests that there is a self-imposed constraint on freely trading shares and therefore the election may be optimal.

Second, McDonald surmises that the employee can borrow funds to pay taxes, buy more firm stock or invest in the market portfolio. However, in our sample, firms who choose to provide bonuses or loans at either vesting or grant are doing so solely to cover the tax liabilities generated by the restricted stock award. Although, employees may have the option to turn down the employer loans and acquire their own to purchase additional shares, employer loans often have favorable terms as well as the potential to have the principal and/or interest forgiven over time. Therefore, in addition to the portfolio constraints discussed above, employees in practice may be constrained from using bonus/loan proceeds provided by employers to rebalance their portfolios.

3. Hypothesis Development

We expect that a firm's decision to restrict the Section 83(b) elections is related to the firm's desire to maximize the benefits of the tax deduction related to the restricted stock grant. That is, a firm would likely prohibit the election when the deduction is expected to be greater when the restricted stock vests (i.e., when the firm's stock is appreciating). Similarly, a firm would likely require the election when the deduction in the grant year is expected to be higher

than the deduction when the restricted stock vests. We examine three proxies that capture the likelihood of greater deductions either in the grant year or in the vesting years.

3.1 Future Stock Prices

Stock price movements affect the size of a firm's compensation deduction attributable to the restricted stock grant. Stock price appreciation between the grant date and the vesting date would increase the value of the restricted stock grant and thus yield a larger compensation expense. Therefore, firms would have a greater deduction at the vesting date and would thus prefer no election be made at the grant date. Alternatively, if firms expect modest stock price growth in the near term, it may be to the firm's advantage to require the Section 83(b) election. Because it is possible that the restricted stock may never vest (i.e., an employee may leave the firm before vesting), the firm may lose the opportunity for any tax deduction. Further, if there is modest stock price growth, the benefits from stock appreciation from waiting may be less than the opportunity cost of the foregone tax deduction today. This cost, combined with the risk of losing the deduction, may make requiring the election overall beneficial to the firm when stock prices are likely to have only modest appreciation.

We proxy for management's expectations of future stock prices using ex-post realized buy and hold stock prices defined as raw daily returns summed over the 12 months following the of the year of grant (or the plan year).^{4,5} We predict a positive (negative) relation between the expectations of future stock returns and firms' decision to prohibit (require) the election.

3.2 Tax Paying Status of the Firm

⁴ In subsequent tests, we plan to estimate the relation between the restriction and the future stock returns by measuring the future stock returns over the estimated vesting periods of the restricted stock grants rather than the 12 months following the agreement.

⁵ For some thinly traded firms, we had to estimate the returns using a buy and hold return using only beginning of the period and end of the period stock prices.

Firms that are in a greater tax paying status may have more incentive to restrict the election for tax planning purposes. Because a voluntary election by the employee impedes the firm's ability to plan for taxes, firms in a greater tax paying status may be more likely to prohibit or require the election depending on which might provide the greater benefit to the firm. We expect that firms in a higher tax paying status to be more likely to require the election to obtain immediate tax deductions.

While the above argument would suggest that higher tax paying status firms would be more likely to prohibit the election because such a firm would like the tax planning abilities that prohibiting the election (versus the election being at the discretion of the employee), it is possible that firms in very low tax paying status would prohibit the election. These firms likely cannot currently make full use of the tax deduction (i.e. the firm has a low current marginal tax rate or significant NOLs) and any deduction it might get today would possibly go unutilized because of the significant NOLs. By prohibiting the election, they increase the probability that they will get a higher tax benefit in the future relative to the lower benefit available today. As a result, we have no prediction on the relation between tax paying status and the likelihood of the firm prohibiting the election.

A common proxy for tax paying status is net operating losses (NOLs), as firms without NOLs are more likely in a higher tax paying status (Graham (1996), Shevlin (1990)). However, this is only one dimension of tax paying status and likely measures tax paying status with error. We incorporate five variables that capture whether the firm is likely in high tax paying status into one composite variable using principal components analysis. This method helps reduce the measurement error inherent in each individual component. The five variables we include are: (1) NO_NOL, an indicator variable equal to 1 if the firm has no NOLs (Compustat Data Item 52)⁶, (2) POS EARN, an indicator variable equal to one if the firm has positive pre-tax earnings

⁶ We began with the NOLs as reported by Compustat (Data Item 52). However, due to the know error rate in this data item, we verified all NOL amounts by reading the footnotes of the financial statements.

(Compustat Data Item 18 + Compustat Data Item 16), (3) PAY_CASH, an indicator variable equal to 1 if the firm paid cash for taxes (Compustat Data Item 317), (4) PLESKO, the trichotomous measure in Plesko (2003), and (5) ETR the firm's effective tax rate (Compustat Data Item 16/(Compustat Data Item 16+Compustat Data Item 18)).⁷ The component that results is our proxy for high tax paying status (HI TAX).

3.3 Recent IPO Firms

If stock prices are expected to have significant appreciation, the employee would have a lower tax liability if a Section 83(b) election is made. In fact, compensation consultants advocate that employees in IPO firms make the election because of the greater potential for upside appreciation and the limited potential for downside decline because of the "cheap" stock price (for example, Werner and Teichman (2003), Stevens (2001), Novak (1997)). Conversely, the IPO firm would obtain a greater deduction if no election is made because the appreciation would result in higher ordinary income and thus a higher tax deduction. If firms are seeking to maximize their tax deductions, possibly subjecting employees to a greater tax burden because of higher ordinary income, IPO firm will be more likely to prohibit the election. We have no prediction for the relation between IPO firms and the likelihood of requiring the election.

We proxy for IPO firms by using an indicator variable equal to 1 if the date of the agreement precedes the firm's first listing on CRSP and 0 otherwise.

3.5 Control Variables

Firms that are cash constrained may be unable to require an election or may be more likely to prohibit the election because the firm may have difficulty paying the required payroll and other taxes (i.e. unemployment or local taxes) in the year of the grant. We control for this

⁷ We would have liked to have included Graham's (1996) marginal tax rate (MTR) in our principle component analysis. Unfortunately, these MTRs are only available for approximately half of our sample.

possibility by including a proxy for cash flows: Operating Cash Flow less Dividends (Compustat Data Item 308 less Compustat Data Item 21) scaled by Total Assets (Compustat Data Item 6) in the year of the event, with a larger value indicating less cash constrained. We also include log of total assets in year t-1 to control for firm size.

4. Analysis

4.1 Sample selection

We obtain a sample of firms that prohibit, require or put no restrictions on Section 83 (b) elections from a search of firms' filings on Lexis-Nexis.⁸ We eliminate duplicate citations, citations for filings that provide only a general description of the tax rules surrounding Section 83 (b) elections, or citations where the references to the search string do not pertain to restricted stock grants and Section 83 (b) elections.⁹ The final sample consists of 317 firm year observations that have 401 filings. The individual filings may represent multiple compensation plans within a firm or it may represent agreements for multiple employees within a plan and/or within a firm. Table 1 provides a description of restrictions on Section 83 (b) elections in connection with restricted stock grants.

In our analysis, we classify firms as prohibiting (requiring) the election if (1) the plan or agreement explicitly states that the election is prohibited (required) as a condition of the restricted stock grant, or (2) it states that the firm will pay the employee a future (current) bonus to cover the income taxes if the employee does not (does) make the election. Finally, we include only one observation per firm year if there are multiple plans or agreements in a given year. This results in a sample composed of 15 firm year observations that prohibit the election, 22 firm year

⁸ The search string used is "form (10-k) and restricted w/1 (stock or share!) w/100 section 83 w/20 elect! and filing-date > 1997 and filing-date < 2004". This search yields 609 citations.

⁹ We deleted citations for three companies for additional reasons. One firm had a restricted stock agreement for a non-employee. A second firm's filings included a restricted stock plan for a company other than the one that filed. The third set of filings was for a company plan where the company was placed in a bankruptcy trust.

observations that require the election, and 209 firm year observations that make no restrictions between 1993 - 2002.

4.2 Research Design

To examine reasons why firms would place restrictions on Section 83(b) elections, we estimate the following logit model, separately, on (1) the sample of 15 firms that prohibit the election and the 209 firms that make no restrictions on the election, and (2) the sample of 22 firms that require employees to make the election and the 209 firms that do not restrict the election^{10,11}:

$$0,1_{i} = \alpha_{0} + \alpha_{1} F_{STKPRICE_{i}} + \alpha_{2} NO_{NOL_{i}} + \alpha_{3} IPO_{FIRM_{i}} + \alpha_{4} LNASSETS_{i} + \alpha CASH_{FL5 i} + \varepsilon_{i}$$
(1)

where:

0,1 _i	=	0 if firm i does not place restrictions on the election, 1 if firm i
		prohibits (requires) the election
F_STKPRICE _i	=	Buy and hold raw returns for one year after event year
HI_TAX _i	=	Factor derived from principal components analysis of five variables
		that capture tax status of the firm: NO_NOL (1 if firm i has no NOLs (Compustat Data Item 52) in the grant year, 0 if otherwise), POS_EARN (1 if firm i has positive pre-tax earnings (Compustat Data Item 16 + Compustat Data Item 18) in the grant year, 0 if otherwise), PLESKO (tax rates using the trichotomous measure as defined in Plesko (2003), PAY_CASH (1 if firm i pays cash for income taxes (Compustat Data Item 317) in the grant year, 0 if otherwise, and ETR (firm i's effective tax rate in the grant year measured as Compustat Data Item 16 / (Compustat Data Item 18)
IPO_FIRM _i	=	1 if event year for firm i is a year prior to or the year of going IPO, 0
		otherwise
LNASSETS _i	=	Natural log of total assets for firm i at the beginning of the year
CASH_FL _i	=	Cash from operations less Dividends/ Total assets for firm i in the year of the event

¹⁰ We estimate separately for firms that prohibit and firms that require the election because of differing predictions on our variables of interest. ¹¹ We winsorize F_STKPRICE and CASH_FL with values below (above) 5% (95%) percentile.

4.3 Findings

The univariate analysis is reported in Table 2 Panel A. Firms that prohibit the election appear to have better future stock price performance, be in a higher tax paying status and are larger than firms that make no restrictions on the election. This is consistent with prohibit firms' having optimistic beliefs that their stock prices will be increasing thereby yielding larger future tax deductions. It is also consistent with these firms caring about the tax planning benefits of restricting the election by prohibiting it. Together, it suggests that firms prohibit the election do so for efficient tax planning.

We find some support that future stock prices are lower for require firms as compared to voluntary firms. This is consistent with firms requiring the election to maximize their tax deductions today relative to the uncertainty of future, possibly lower, tax deductions.

In Panel B, we report the correlation among the independent variables. Not surprisingly, there are some significant correlations. Larger firms have higher cash flows and are more likely to be in a high tax paying status. IPO firms are smaller and have lower future returns.

In Table 3, we report the results of our multivariate analysis. The prohibit firms appear to be more sensitive to current taxes as evidenced by the positive coefficient on HI_TAX, significant at p < 0.10. This suggests that for these firms, the ability to plan around the tax deduction is important and therefore they restrict employees' abilities to make the Section 83(b) election.¹² Consistent with the univariate analysis, prohibit firms also have higher future stock returns suggesting that these firms prohibit the election today to obtain a higher tax deduction in

¹² We had differing prediction on HI_TAX and prohibiting the election. The findings in Table 3 are consistent with high tax paying firms wanting to restrict the election to facilitate tax planning. While our findings are not consistent with high tax paying firms wanting to require the election today to maximize the present value of cash flows, combined with the expectation of future stock price increases, they are consistent with these firms in high tax paying status wanting to maximize their deductions and thus the expected increase in the deduction may offset the time value of money costs of postponing the deduction.

the future. Together these finding suggest that firms prohibit employees from making a Section 83(b) election for efficient tax planning reasons.

Also reported in Table 3, stock returns are lower for requiring firms relative to voluntary firms, although the significance is p < 0.10 one-tailed. As discussed in the univariate analysis, this is consistent with these firms expecting lower future stock price appreciation (or possibly future stock price declines) and therefore requiring the election today to obtain the benefit of a potentially larger tax deduction today. Said differently, the opportunity costs of foregoing the deduction today is likely greater in these firms than any benefit they may derive from a future deduction. Surprisingly, we do not find any evidence that firms in a higher tax paying status are more likely to require the election. In fact, firms in a higher tax paying status may be less likely to require the election. This is inconsistent with the restriction on the election being for efficient tax planning reasons. Thus, for firms that require the Section 83(b) election, there is mixed evidence as to whether the requirement is tax-efficient planning. We explore this finding further in Section 5.

4.4 Robustness Tests

To examine the robustness of our results we first estimate the model using a probit estimation and our conclusions are unchanged. Second, we estimate the logit model using the more traditional measure of tax paying status, the existences of NOLs, and our conclusions are unchanged.

Overall, our results are consistent with firms' prohibiting employees from making Section 83(b) elections to maximize the tax deductions for the firm. However, we find only mixed evidence that the requirement to make the election is efficient tax planning, suggesting that there may be other reasons for such a requirement. In the next section, we further explore the tax efficiency story by examining the trade-offs to the firm and to its employees that this tax minimization strategy entails.

5. Consequences of the decision to restrict Section 83(b) elections

We examine the tax and cash flow consequences of firms' restrictions on Section 83(b) elections. When a firm requires the election and does not reimburse the employee for taxes (i.e. provide a "gross-up" bonus), the employee will have overpaid taxes, relative to not having made the election, if: (1) the employee leaves or (2) the stock price declines over the vesting period. When a firm prohibits the election and does not reimburse the employee for taxes, the employee will have overpaid taxes if the stock price increases over the vesting period because the employee pays taxes at ordinary rates for the value of the grant AND its appreciation. Recall that under the election, the appreciation over the vesting period is taxed at the lower capital gains rate.

When the firm requires the election and does reimburse the employee, there is now a tension between management and shareholders. The employee becomes better off because he/she has not paid any taxes; the firm bears all tax risk. Shareholders would only want firms to make the "gross-up" bonus when the cost to the firm of the bonus is less than the benefit of the resulting tax deduction. The firm, on the other hand, may want to make the "gross-up" payment as an additional source of compensation for the employee, irrespective of the tax benefit.

To further examine the tax-efficiency story, we examine two consequences to restricting the election. First, we estimate the tax deduction to the firm (and the corresponding taxable income to the employee) if taxes are recognized at grant (the employee makes the Section 83(b) election) and at vesting (the employee does not make the election) ignoring the bonuses. If prohibiting or requiring the election is efficient tax planning on the part of the firm, then firms that prohibit the election should have the greater tax deductions at vesting and firms that require the election, greater tax deductions at grant.

Second, we examine the cash flow consequences to the firm and its employees of these strategies. We estimate the net cash positions of the firm (tax benefit less any bonuses paid) and it employees (tax payment less any bonuses received). If the "gross-up" bonus to encourage

Section 83(b) elections is efficient tax planning, then the firm should have net cash savings from the restriction inclusive of bonus payments. If bonus payments represent some other incentive (i.e. wealth extraction) beyond tax efficient planning for the firm, then the firm should have a net cash payment.

5.1 Sample and methodology

We examine the proxy statements of 37 firms restricting, 39 with the right to restrict, or 5 that provide a loan to accompany any restriction on the election. We determine restricted stock grants to the top 5 most highly paid executives in the event year and in the subsequent two years. Of the 81 firms, 24 that prohibit the election and 20 that require the election grant restricted stock in our three-year sample period. The total value of restricted stock granted at the grant date is approximately \$173.3 million, which represents 163 different executive grants. Bonuses paid at either grant or vesting totaled \$18.4 million. We examine the terms of the grant and estimate the total value of these grants at their respective vesting dates. If the grant has not vested by the last date for which we can obtain stock prices, we assume that any remaining unvested shares vest on that day. These values at grant and at vesting provide an estimate of the deductions to the firm and the income to the employee. We estimate the tax savings to the firm by multiplying the value of the restricted grant and at vesting by 34% (our proxy for the firm's marginal tax rate). Firms that have NOLs are assumed to be in a non-tax paying position so their tax benefit from the restricted stock is set to zero.¹³ Finally, if the employee pays an amount for the restricted stock, the deduction to the firm (or income to the employee) is reduced by the amount paid. Table 4 provides the results of this analysis.

5.2 Tax deduction consequences

¹³ For parsimony, we use the presence of an NOL as our proxy for the tax paying status in this part of the paper rather than the HI_TAX contruct that we used in the previous section.

In Panel A, we report the tax deduction available to the firm (which is also the corresponding income to be recognized by the employee) before considering any bonuses if the restricted stock is taxed at grant (the employee makes the Section 83(b) election) and if the stock is taxed at vesting (the employee does not make the election). If firms restrict the election to maximize their tax deductions, then for firms that prohibit the election, the difference between the grant and vesting deductions should be negative (the vesting deduction should be larger). For firms that require the election, the difference should be positive. As reported in Panel A, the mean (median) difference in deductions, scaled by the tax deduction at grant, for firms that prohibit firms have negative (positive) differences. For firms that require the election, the mean (median) difference is 7.2% (14.5%), but not statistically different from zero. Of those 20 firms, 60.0% had positive differences. These results suggest that prohibiting the elections is efficient tax planning by the firm to increase its tax deduction, but detrimental to the employee by increasing his taxable income.

5.3 Cash flow consequences to the employer

In our sample, 11 firms pay bonuses to cover the taxes on the restricted stock. Of these 11, 2 pay bonuses when the restricted stock vests (8.3% of the firms prohibiting) and 9 pay bonuses at the grant (45% of the firms requiring). We calculate net cash flow by multiplying the deduction at grant or vesting (see Panel A) by 34% and then subtract the after tax bonus payments. Net cash flow is then scaled by the value of the restricted stock grant. As reported in Panel B, firms that prohibit the election save an average (median) of 4.9% (1.8%) more cash if the restricted stock is taxed at vesting. Further, the majority of the firms (79.2%) have negative differences, consistent with the savings at vesting being higher. Thus, even after considering bonuses, firms that prohibit the election have greater cash savings.¹⁴ This reinforces our findings in Section 4 that firms prohibit the election as part of an efficient tax planning strategy.

Firms that require the election are, on average, *paying* cash equal to 11.7% (median = 0.0%) of the value of the restricted stock grant at the grant date. This net cash outflow position results because 13 of the 20 requiring firms are not paying taxes and therefore receive no cash savings from any tax deduction related to restricted stock grants. If these firms had instead not required the election and not paid any bonuses, they would have saved, on average, 11.5% of the value of the grant in cash (approximately \$0.6 million per a firm or a 25% increase in operating cash flow). As a result, only 10.0% of the firms requiring the election are better off for having required the election and paying any bonuses.¹⁵

¹⁴ We examine whether prohibiting the election is still optimal from the firm's perspective once the time value of money is considered. For these 16 firms who prohibit the election and are paying taxes, the mean (median) deduction at vesting is 32.5% (21.0%) higher than it would have been at grant. If these shares vested at the end of three years, the firm's required rate of return would have to be higher than 9.8%. This is a conservative assumption as restricted stock frequently vests over time rather than at the end of a time period. Thus our analysis likely understates the true required return.

¹⁵ I.R.C. Section 162(m) places a limit on the deductibility of compensation for the firm. Because restricted stock grants can result from meeting a performance target or can be subject to performance vesting, firms can structure restricted stock grants to be excluded from the \$1 million limit. As such, we do not consider this limit in our analysis. Note that the 162(m) limitation does not impact the personal tax position of the executive.

This analysis suggests that after incorporating bonus payments, firms that prohibit the election remain better off for having prohibited the election, but the majority of firms that require the election and pay bonuses do not appear to be doing so for tax reasons. One possible explanation is that executives in these firms are extracting wealth from shareholders by forcing the firm to require the election and pay them for the taxes on the election, despite the election not providing tax benefits to the firm. We examine whether the percent of non-independent directors (i.e. directors who are employees, former employees, interlocks or have some business dealings with the company) on the compensation committee is higher in these firms that pay bonuses but do not appear to be paying taxes, proxied by the presence of NOLs. The seven firms that require the election, have NOLs and do not pay a bonus have a mean (median) 34.5% (33.3%) of the compensation committee as non-independent directors. Whereas the six firms that require the election, have NOLs and pay bonuses have a mean of (median) 13.9% (0.0%) of the compensation committee as non-independent directors. This difference is significant at p=0.17(p=0.17). Contrary to a story of poor governance leading to wealth extraction (and assuming the small sample size weakens the power of the test), firms with more independent compensation committees appear to be requiring the election and paying the bonuses. Perhaps these boards are attempting to "hand-cuff" the employee to the firm upon vesting of the restricted stock grant, as these employees will received the full value of their grant. In the case where bonuses are not paid, the employee is only receiving 61% (1-.39) of the value of his initial stock grant. We are in the process of further exploring whether poor-performing firms are trying to reduce employee turnover by providing extra incentives in the form of tax payments on restricted stock grants.

5.4 Cash flow consequences to the employee

We estimate net cash flow of the employee resulting from the grant by subtracting the estimated tax burden created (income at grant or vesting in Panel A multiplied by 39%, our proxy for the executive's marginal tax rate) from the after-tax bonuses. To make a fair comparison of

tax differences between vesting and grant, taxes paid at grant also include any subsequent appreciation in the stock price up to the vesting date taxed at a applicable capital gains rate (28% pre-1997, 24% for 1997 and 20% for post-1997).¹⁶ Net cash flows to the employee are scaled by the value of the restricted stock at grant.

In Panel C we examine if, in fact, employees are worse off as a result of the limitations on their ability to freely make a Section 83(b) election. In firms that prohibit the election, employees are on average worse off, since in 70.8% of the firms, the employees are paying more at vesting than they would have at grant. Note that taxes paid at grant are greater than the 39% ordinary income tax rate. This is due to the fact that in our analysis we consider all taxes owed. That is, even though the income at the grant date would be taxed at only 39%, subsequent appreciation on the stock would also be taxed to the employee at the 20% (or 28%) capital gains (This was not true for our analysis of corporate tax savings because subsequent rate. appreciation on the stock is not eligible for deduction by the firm.) In firms that require the election, employees pay significantly less tax at grant with a mean (median) savings of 11.7% (8.0%). However, 60.0% of firms have employees paying less tax suggesting that employees in firms that restrict are indifferent to the restriction. We further explore this result by partitioning firms into those that pay bonuses and those that do not. In firms that pay bonuses, employees pay minimal taxes – on average they paid net cash equal to 7.1% (median = 4.9%) of the value of the restricted stock grant. We expect the amount of taxes to be paid by employees in these firms to be close to zero or only slightly negative because the bonus is meant to compensate for all taxes at grant and the only taxes that would remain would be capital gains taxes on any stock appreciation. Employees of almost 89% of these firms are better off due to the required election and concurrent receipt of the bonus payment. In firms that do not pay bonuses, employees are

¹⁶ If stock price declines between grant and vesting, we subtract from tax payments the value of the decline times 20% or 28% depending on the time period. This calculation assumes that the employee has capital gains to offset these capital losses. As such, we bias towards understating taxes paid under this scenario. Of the 44 firms, 17 have stock price declines between grant and vesting. However the tax law allows an indefinite carryover of the capital losses lending support for our treatment of them.

generally worse off as the mean (median) tax extra tax payments are 1.6% (3.5%) of the value of the restricted stock grant.¹⁷

Overall, the results in this section corroborate the findings in Section 4. Firms prohibiting the election appear to be doing so for efficient tax planning. These firms have greater tax deductions and thus greater tax savings when the deduction is taken at vesting rather than at grant date. And, this greater tax savings for the firm come at the expense of the executive who pays greater taxes at vesting than he would at grant. The question remains: what is in this arrangement for the executive? It is possible that firms wield the power in compensation negotiations and thus the employee is just worse off. Alternatively, the executive may be made whole elsewhere in the compensation package (outside of bonuses) that is beyond our ability to detect. On the other hand, firms that require the election *do not* appear to be doing so for efficient tax planning. Including the bonuses that they pay, these firms are, on average, paying cash rather than saving cash from the tax deduction at grant. Though it is clearly not efficient tax planning, it is unclear why firms enter into this arrangement. While executives are gaining at the expense of the firm, it does not appear to be poor corporate governance. Wealth extraction would seemingly at its greatest in firms that are not paying takes but are paying bonuses. However, these firms have more "all independent" directors on the compensation committee. It may be that poor performing firms that are not paying taxes need to pay "gross-up" bonus to retain these executives.

5.5 Caveats

Our analysis is subject to the following caveats. First, we do not explicitly incorporate the time value of money and it may well be the case that although the company receives a larger deduction if the restricted stock is taxed at vesting, on a present value basis, the company may be

¹⁷ However, six of the firms who require the election without paying a bonus are awarding loans to the employees enabling them to make the tax payment. So, whether these employees are ultimately worse off is contingent on whether the firm ultimately forgives the loan.

better off having the deduction sooner. (However, our conservative analysis suggests that the cost of funds would have to be greater than 9.8% for this to be the case.) Second, we understate the taxes paid by the firm and its employees because we only consider the federal income tax rate. Even if companies are in an NOL position, they still would be required to remit payroll taxes. Furthermore, firms and employees may also be subject to state, county and city income taxes. Finally, we ignore the potential discounts employees make in valuing their restricted stock grants. Employees recognize income and firms receive a deduction based on the fair market value of the restricted stock. To the extent that the stock's transfer is limited, the value of the restricted stock should be discounted due to marketability limitations. Also, large grants could be subject to block discounts. We based our estimates of value at grant from what is reported in the proxy statements but our values at vesting are estimated using reported per share stock prices.

6. Conclusions

In this paper, we examine reasons why firms limit employees' abilities to make Section 83(b) election and the consequences of those restrictions. Under IRC Section 83(b), an employee can elect to be taxed on a restricted stock grant when it is granted, rather than wait to be taxed when the restrictions are lifted (typically, when the restricted stock vests). The election is beneficial to employees when stock prices are likely to appreciate significantly because any appreciation after the grant may be taxed at lower capital gains rates. However, this is detrimental to the firm because an appreciating firm would generate a larger compensation deduction when the restricted stock vests. This conflict between the interests of the firm and the employees, combined with the expected increase in the use of restricted stock in compensation packages, makes understanding restrictions to Section 83(b) elections an important question.

Using our sample of 209 firms that make no restrictions, 15 firms that prohibit the election, and 22 firms that require the election from 1993-2002, we find mixed evidence as to whether the restrictions (prohibit or require) are associated with efficient tax planning. Firms with

expected stock price appreciation and firms in high tax paying status are more likely to prohibit the election. Alternatively, firms who expect lower appreciation are more likely to require the election suggesting that a modest increase in the deduction does not outweigh the opportunity cost of the immediate deduction. However, we find no evidence that the tax paying status of the firm is related to the decision to restrict the election. Together, these results suggest that firms prohibit the election to maximize their tax benefits. However, firms requiring the election may be doing so for other non-tax related reasons.

We further explore whether restrictions are related to efficient tax planning by examining the cash consequences of the restrictions using 44 firms that grant restricted stock after making the restrictions. In general, we find that the restrictions allow firms to receive greater deductions at the expense of the employees who face greater income taxes, providing evidence that firms prohibit employees' abilities to make Section 83(b) elections to provide efficient tax planning. However, we find mixed evidence as to whether restricting the election is efficient tax planning. Incorporating tax "gross-up" bonuses payments in our analysis, we find that firms that require the election, on average, are *paying* cash as a result of the bonus payments because frequently these firms, though paying bonuses, cannot make full use of the tax deductions. In further analyses of firms who require the election but are not in a tax paying status, we find that firms that pay bonuses have more independent compensation committees than firms that who do not pay bonuses. This suggests that although the "gross-up" bonus payments in these firms do not reflect efficient tax planning, they do not appear consistent with wealth extraction from agency conflicts. Instead, they may represent a method to keep their managerial talent. Overall, our findings suggest that prohibiting the election may reflect efficient tax planning but requiring the election may reflect other non-tax objectives of the firm.

Appendix I

The following is a simplistic numeric example of why a section 83(b) election is not optimal to the employee. This example assumes that the restricted stock grant is shares of a firm with anticipated appreciation. An employee receives one share of restricted stock valued today at \$100 when ordinary income tax rates are 40%, capital gains rates are 15% and the after-tax risk-free rate is 5%. Suppose the stock appreciates to \$500 per share over the course of the year and that the employee intends to sell his share the day after it vests. If the employee makes the Section 83(b) election and borrows funds today to pay the taxes due at election, then the employee's after-tax cash flow would be \$398 (\$500 - (500-100)*.15 - 100*.40*(1.05)) upon sale at vesting. However, if instead of using the borrowed funds to pay the tax, the employee uses the funds (\$100*.40) to purchase additional shares of stock, the employee would receive \$434 (\$500(1-.40) + .40(500-(500-100)*.15) - .40(100*(1.05))) of after-tax cash.¹⁸

¹⁸ This is an extremely simplistic example of the phenomena documented in McDonald (2003). The correct way to think about the issue is to consider the solution of the employee's utility (wealth_maximization) problem. See McDonald (2003) Appendix A for a formal solution.

References

- Bryan, S., L. Hwang, and S. Lilien, 2000, CEO stock-based compensation: An empirical analysis of incentive-intensity, relative mix, and economic determinants, *Journal of Business* (73): pp. 661-693.
- Caffrey, A., 2004, Companies cutting back stock options, The Boston Globe, July 9, C1.
- Carter, M.E., L. Lynch and I. Tuna, 2005, The role of accounting in the design of executive compensation packages, working paper, University of Pennsylvania.
- Colter, G., 2004, Stock Options Lose Appeal as an Option, Wall Street Journal, October 12, C3.
- Core, J. and W. Guay, 1999, The use of equity grants to manage optimal incentive levels, *Journal* of Accounting and Economics 28(2): 151-184.
- Graham, J., 1996, Proxies for the marginal tax rate, *Journal of Financial Economics* 42(2): 187-221.
- Huddart, S., 1998, Tax planning and the exercise of employee stock options, *Contemporary Accounting Research* 15(2): 203-216.
- Internal Revenue Code § 83(b).
- Lavelle, L., 2003, More than one way to feed a fat cat, Business Week, November 3, p. 10.
- Lublin, J., 2003, With options tainted, companies award restricted stock, *Wall Street Journal*, March 3, B1.
- Matsunaga, S., T. Shevlin and D. Shores, 1992, Disqualifying dispositions of incentive stock options: tax benefits vs. financial reporting costs, *Journal of Accounting Research* 31(1): 37-68.
- Mayo, D, 2003, Restricted stock notes, Taw Lawyer 57(1): 61-95.
- McDonald, R., 2003, Is it Optimal to Accelerate the Payment of Income Tax on Share-Based Compensation?, working paper, Northwestern University.
- Multitude of shifts taking place in executive compensation, *Employee Benefit Plan Review* (57), June 2003, p. 35
- Norris, F., 2003, Microsoft workers will now receive stock but tax effects are complex, expensive or both., *New York Times*, July 10, p. C4.
- Novak, J., 1997, Making the most of the capital gains tax cut, Forbes, September 8, p. 202.
- Plesko, G., 2003, An evaluation of alternative measure of corporate tax rates, *Journal of Accounting and Economics* 35(2), p. 201-226.
- Ryan, H. and R. Wiggins, 2001, The influence of firm- and manager-specific characteristics on the structure of executive compensation, *Journal of Corporate Finance* 7: pp. 101-123.

- Scholes, M., M. Wolfson, M. Erickson, E. Maydew, and T. Shevlin, 2002, *Taxes and Business Strategy: A Planning Approach*. Prentice-Hall, Englewood Cliffs, NJ.
- Shackelford, D. and T. Shevlin, 2001, Empirical tax research in accounting, *Journal of Accounting and Economics* 31 (1-3), p. 321-387.
- Shevlin, T., 1990, Estimating corporate marginal tax rates with asymmetric tax treatment of gains and losses, *Journal of the American Taxation Association*, Spring: 51-67.
- Stevens, Michael, 2001, Working with stock options; clients really don't have a clue, *Practical Accountant* 34(3), p.22.
- Warner, K. and A. Teichamn, 2003, Revisiting incentive compensation, *Financial Advisor Magazine*, September.

Figure 1: Regions of income (loss) recognition when stock prices appreciate (Figure 1a) or decline (Figure 1b) when employees make a Section 83 (b) Election (red) and when they do not (blue).





Table 1: Summary of restrictions on Section 83 (b) elections for restricted stock grants for317 companies with 401 filings.

	Number of filings	Number of firm years
Explicit restrictions:		
Prohibit the election	17	14
Require the election as a condition of grant	19	18
Firms that have the right to restrict:		
Prohibiting	33	32
Requiring	5	5
Either prohibit or require	2	2
Describe the election as voluntary but:		
Pay bonus if don't make	4	1
Pay bonus if make	4	4
Describe the election as voluntary but:		
Provide loan if don't make	2	1
Provide loan if make	6	4
Election totally voluntary:		
Firm does not provide bonus or loan	214	209
Firm will pay bonus for taxes whether elect or not	12	12
Firm will provide loan for taxes whether elect or not	16	15
Does not provide sufficient information	67	-
Total	401	317

Panel A: All Filings

Panel B: Final Sample Composition

	<u>Prohibit</u>	Require	<u>Voluntary</u>
Explicit	14	18	0
Voluntary - Bonus	1	4	0
Pure Voluntary	0	0	209
Total	15	22	209

Table 2: Descriptive statistics for 209 firms not restricting the election, 15 firms
prohibiting and 22 firms requiring the Section 83(b) election

Panel A: Univariate Statisti	ics
------------------------------	-----

	Voluntary	Prohibit	Test of difference from Voluntary firms p-value (a)	Require	Test of difference from Voluntary firms p-value (a)
F_STKPRICE	24.4%	50.8%	0.11	-3.7%	0.05
	(15.5%)	(39.3%)	(0.07)	(19.1%)	(0.19)
HI_TAX	-0.052	1.119	0.01	-0.630	0.16
	(0.451)	(1.279	(0.02)	(-1.092)	(0.23)
NO_NOL	0.419	0.733	0.02	0.455	0.75
POS_EARN	0.604	0.867	0.04	0.333	0.02
PLESKO	0.174	0.272	0.01	0.129	0.18
	(0.170)	(0.340)	(0.01)	(0.170)	(0.18)
PAY_CASH	0.657	0.867	0.10	0.68	0.82
ETR	0.221	0.277	0.28	0.148	0.11
	(0.315)	(0.352)	(0.28)	(0.087)	(0.11)
IPO_FIRM	15.4%	6.7%	0.36	22.2%	0.45
LNASSETS	5.82	7.9	0.02	6.05	0.69
	(5.94)	(6.90)	(0.01)	(6.27)	(0.79)
CASH_FL	-0.002	0.061	0.16	0.009	0.78
	(0.036)	(0.061)	(0.31)	(0.030)	(0.78)

(a) t-test of difference in means (Mann-Whitney rank sum test of difference in medians).

Variable	F_STKPRICE	HI_TAX	IPO_FIRM	LNASSETS
HI_TAX	-0.001 (0.99)			
IPO_FIRM	-0.166 (0.01)	-0.125 (0.06)		
LNASSETS	0.033 (0.63)	0.390 (0.00)	-0.283 (0.00)	
CASH_FL	-0.069 (0.31)	0.548 (0.00)	-0.098 (0.15)	0.482 (0.00)

Panel B: Pearson correlations (p-values)

Variable Definitions:

F_STKPRICE _i	=	Buy and hold raw returns for one year after event year
HI_TAX _i	=	Factor derived from principal components analysis of five variables that
		capture tax status of the firm: NO_NOL (1 if firm i has no NOLs (Compustat Data Item 52) in the grant year, 0 if otherwise), POS_EARN (1 if firm i has positive pre-tax earnings (Compustat Data Item 16 + Compustat Data Item 18) in the grant year, 0 if otherwise), PLESKO (tax rates using the trichotomous measure as defined in Plesko (2003), PAY_CASH (1 if firm i pays cash for income taxes (Compustat Data Item 317) in the grant year, 0 if otherwise, and ETR (firm i's effective tax rate in the grant year measured as Compustat Data Item 16 / (Compustat Data Item 18)
IPO_FIRM _i	=	1 if event year for firm i is the year before or the year of going IPO, 0
LNASSETS _i CASH_FL _i	=	otherwise Natural log of total assets for firm i Cash from Operations less dividends / Total assets for firm i in the year of

the event

Table 3: Logit estimation of determinants of decision to restrict employees' ability to make Section 83(b) elections by 209 firms that do not restrict the election to 15 firms prohibiting and 22 firms requiring the Section 83(b) election¹⁹

Restriction	Prohibit			Require				
	Predicted Sign	Coefficient	z- statistic		Predicted Sign	Coefficient	z- statistic	
Intercept	?	-5.36	-4.10	***	?	-2.81	-2.83	***
F_STKPRICE	+	1.24	2.11	**	-	-0.77	-1.63	#
HI_TAX	?	0.45	1.77	*	+	-0.27	-1.46	#
IPO_FIRM	+	0.27	0.24		?	-0.59	-0.49	
LNASSETS	?	0.30	1.98	**	?	0.04	0.28	
CASH_FL	?	0.40	0.12		?	4.73	1.60	
Pseudo-R ² N		13% 197				14% 197		

$= \alpha_0 + \alpha_1 \text{ } \text{F}_{\text{STKPRICE}_i} + \alpha_2 \text{ } \text{NO}_{\text{NOL}_i} + \alpha_3 \text{ } \text{IPO}_{\text{FIRM}_i} + \alpha_4 \text{ } \text{LNASSETS}_i$ 0,1_i $+ \alpha CASH_{FL_{5}i} + \varepsilon_{i}$

Significant at 10% level, 2-tailed test Significant at 5% level, 2-tailed test Significant at 1% level, 2-tailed test Significant at 10% level, 1-tailed test

#

Variable Definitions:		
0,1 _i	=	0 if firm i does not place restrictions on the election, 1 if firm i prohibits
		(requires) the election
F_STKPRICE _i	=	Buy and hold raw returns for one year after event year
NO_NOL _i	=	1 if firm i has no NOLs in the grant year, 0 if firm i has NOLs
IPO_FIRM _i	=	1 if event year for firm i is the year before or the year of going IPO, 0
		otherwise
LNASSETS _i	=	Natural log of total assets for firm i
CASH_FL _i	=	Cash from Operations / Total assets for firm i in the year of the event

¹⁹ Actual sample size in the analysis is lower because of data availability.

Table 4: Examination of tax and cash flow consequences of restricting Section 83(b) elections by 24 firms prohibiting the election and 20 firms requiring the election²⁰

	Tax Deduction at Grant	Tax Deduction at Vesting	Percent Difference	p- value (a)	Percent of Firms with Positive Differences	p- value (b)	If firm is better off	
Firms Prohibiting the Election	\$2,973,229 (\$1,071,580)	\$4,045,855 (\$1,378,523)	-40.8% (-19.2%)	0.04 (0.01)	20.8%	0.00	-	
Firms Requiring	\$4,518,508 (\$488,030)	\$4,618,371 (\$809,575)	7.2% (14.5%)	0.61 (0.44)	60.0%	0.38	+	

Panel A: Reports the mean (median) tax deduction available to the firm assuming restricted stock grants are included in executives income at the grant date (election) or at the vesting date (no election) ignoring bonuses.

(a) t-test of difference in means (Wilcoxon signed-rank test of difference in medians).

(b) t-test of difference from 0.50.

the Election

Panel B: Reports the mean (median) cash savings (or cash payments if negative) by the firm scaled by value of restricted stock at grant date if restricted stock grants are included in executives income at the grant date (election) or at the vesting date (no election).

	Cash Savings at Grant	Cash Savings at Vesting	Difference	p- value (a)	Percent of Firms with Positive Differences	p- value (b)	If firm is better off
Firms Prohibiting the Election	16.4% (34%)	21.4% (31.9%)	-4.9% (-1.8%)	0.46 (0.05)	20.8%	0.00	-
Firms Requiring the Election	-11.7% (0.0%)	11.5% (0.0%)	-23.3% 0.0%	0.01 (0.02)	10.0%	0.00	÷

(a) t-test of difference in means (Wilcoxon signed-rank test of difference in medians).

(b) t-test of difference from 0.50.

Cash savings is defined as the tax credit (compensation expense x 0.34) less after-tax bonus payments made to executives (if any). If the firm has NOLs, tax credits are zero.

²⁰ The sample size is smaller than the 48 and 31 firms reported in Table 3 because some firms did not grant restricted stock in the event year or two subsequent years.

Net Cash Payment at Grant	Net Cash Payment at Vesting	Difference	p- value (a)	Percent of Firms with Positive Differences	p- value (b)	If employee is better off
-44.9% (-42.0%)	-48.0% (-44.7%)	3.0% 4.0%	0.53 (0.01)	70.8%	0.04	-
-20.1% (-24.8%)	-31.8% (-29.8%)	11.7% (8.0%)	0.02 (0.05)	60.0%	0.38	+
-7.1% (-4.9%)	-35.0% (-42.2%)	27.9% (28.1%)	0.00 (0.01)	88.9%	0.00	+
-30.8% (-26.4%)	-29.2% (-24.7%)	-1.6% (-3.5%)	0.67 (0.56)	36.4%	0.39	+
	Net Cash Payment at Grant -44.9% (-42.0%) -20.1% (-24.8%) -20.1% (-24.8%) -30.8% (-26.4%)	Net Cash Payment at Grant Net Cash Payment at Vesting -44.9% (-42.0%) -48.0% (-44.7%) -20.1% (-24.8%) -31.8% (-29.8%) -20.1% (-24.8%) -31.8% (-29.8%) -31.8% (-29.8%) -35.0% (-42.2%) -30.8% (-26.4%) -29.2% (-24.7%)	Net Cash Payment at GrantNet Cash Payment at VestingDifference -44.9% (-42.0%) -48.0% (-44.7%) 3.0% 4.0% -20.1% (-24.8%) -31.8% (-29.8%) 11.7% (8.0%) -20.1% (-24.8%) -31.8% (-29.8%) 11.7% (8.0%) -7.1% (-4.9%) -35.0% (-42.2%) 27.9% (28.1%) -30.8% (-26.4%) -29.2% (-24.7%) -1.6% (-3.5%)	Net Cash Payment at GrantNet Cash Payment at VestingDifference yalue (a) -44.9% (-42.0%) -48.0% (-44.7%) 3.0% 4.0% 0.53 (0.01) -20.1% (-24.8%) -31.8% (-29.8%) 11.7% (8.0%) 0.02 (0.05) -7.1% (-4.9%) -35.0% (-42.2%) 27.9% (28.1%) 0.00 (0.01) -30.8% (-26.4%) -29.2% (-24.7%) -1.6% (-3.5%) 0.67 (0.56)	Net Cash Payment at GrantNet Cash Payment at VestingDifference x_{alue} p- value x_{alue} Percent of Firms with Positive Differences-44.9% (-42.0%)-48.0% (-44.7%) 3.0% 4.0% 0.53 (0.01) 70.8% 60.01)-20.1% (-24.8%)-31.8% (-29.8%) 11.7% (8.0%) 0.02 (0.05) 60.0% -20.1% (-24.8%)-31.8% (-29.8%) 11.7% (8.0%) 0.02 (0.05) 60.0% -30.8% (-26.4%)-29.2% (-24.7%) -1.6% (-3.5%) 0.67 (0.56) 36.4%	Net Cash Payment at GrantNet Cash Payment at VestingDifference $1.000000000000000000000000000000000000$

Panel C: Reports the mean (median) net cash payments by the executives scaled by value of restricted stock at grant if restricted stock grants are included in executives income at the grant date (election) or at the vesting date (no election).

(a) t-test of difference in means (Wilcoxon signed-rank test of difference in medians).

(b) t-test of difference from 0.50.

Cash payment at grant is defined as the income tax payment [income recognized at grant including bonus payments (if any) *0.39 + appreciation (- decline) in stock price over vesting period *0.20] less any bonus payments made to executives (if any). Cash payment at vesting is defined as the income tax payment [income recognized at vesting including bonus payments (if any) *0.39] less any bonus payments made to executives (if any).