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Restricted Stock and the Section 83(b) Election:

A Joint Tax Perspective

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I. Introduction

In 2003, General Electric, one of the most financially sophisticated companies in the world, and Microsoft, by almost any measure the largest user of equity-based pay, both

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announced that they would stop granting stock options to their employees (ESOs) and begin to replace those grants with grants of restricted stock. Those giants are not alone in eschewing ESO's and embracing restricted stock. According to a July 2005 survey of 340 public and private companies by Deloitte Consulting, seventy-five percent of survey respondents said they are reducing or already have reduced the number of options granted.[2] And among the eighty-nine percent of public companies that are actively considering alternatives to ESOs, ninety-two percent listed restricted stock as their first choice. Although there are no good numbers on the use of restricted stock, there is widespread agreement that restricted stock is on its way to becoming the dominant form of equity-based pay.[3]

Restricted stock is employer stock granted to an employee as part of her compensation. Although the stock is nominally owned by the employee, it is subject to the condition that if the employee leaves the firm within a period of time, usually 3 years, the stock will revert to the employer. Under Section 83(a) of the Internal Revenue Code,[4] restricted stock is neither taxable to the employee nor is it deductible by the employer at the time it is granted. Until the condition lapses and the stock vests, the stock is considered subject to a substantial risk of forfeiture, and thus not yet taxable. Only when the stock vests is the employee taxed on the grant. Once that

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[2] The decision by the Financial Accounting Standard Board (FASB), that, starting in 2005, it will require firms that issue ESOs to treat those options as an expense, was a major impetus of the shift.

[3] For evidence and arguments along these lines, see Hall (2003).

[4] All statutory references are to the Internal Revenue Code, 26 U.S.C. §§ 1 et al., as currently in effect.

happens, she is required to include in her ordinary income for the tax year that includes the vesting date the fair market value of the stock as of that date less any payments she made to her employer in exchange for the stock. Also, only once the stock has vested does the employer receive a deduction. The employer can deduct in its tax year that includes the vesting date the same amount that the employee includes.[5]

There is an important exception to the general rule in Section 83(a) that there are no tax consequences from the restricted stock grant until the risk of forfeiture lapses. Section 83(b) allows the employee to make an election, within 30 days of receiving the stock, to treat the restricted stock as if it is not subject to forfeit and thus to include it in income immediately. If the employee makes that election, she includes in her ordinary income for the tax year that includes the grant date the market value of the stock (ignoring the risk of forfeiture) as of the grant date less any payments she made for the stock. The employee then has a basis in her shares equal to the grant price, and any subsequent gain or loss is capital and taxed upon realization.[6] There are then no tax consequences to the employee if and when the stock subsequently vests.

The employee's Section 83(b) election also affects the employer. If the employee makes the election, the employer receives its deduction in the tax year that includes the grant date. Because Section 83(h) provides that the employer's deduction matches the employee's

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[5] The employer treats the stock grant as additional compensation paid to its employee.

[6] Treas. Reg. § 1.83-2(a).

inclusion,[7] the employer's deduction equals the market value of the stock (ignoring the risk of forfeiture) as of the grant date. There are then no tax consequences to the employer if and when the stock subsequently vests.

The symmetry between employer and employee breaks down if the employee makes the election and later forfeits the stock. In that case, Section 83(b)(1) provides that the employee does not receive a deduction. Specifically, the employee cannot deduct the amount she included in income as a result of her prior election,[8] which means that she will have taxable income from a transaction (grant and forfeit) that did not produce any net economic income.[9] In contrast, for the employer, a forfeiture of stock by an employee who made the Section 83(b) election produces an inclusion equal to the employer's prior deduction.[10] Thus, the employer's long-term income will accurately reflect the failed grant.

As the discussion above suggests, the use of restricted stock raises a range of tax planning issues for both employees and employers. So far, these issues have been largely ignored by consultants and commentators who usually just describe the tax treatment of restricted stock. Occasionally, they go a little further and offer simple advice. Such advice however is rarely

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[7] See also Treas. Reg. § 1.83-6.

[8] If the employee either made a payment to receive the shares or receives a payment upon surrender, then she has a capital gain or loss equal to the difference between what she receives and what she paid.

[9] Treas. Reg. § 1.83-2(a).

[10] Treas. Reg. § 1.83-6(c).

based on a systematic analysis. In this paper, I develop a framework to address the tax planning issue raised by restricted stock and provide such a systematic analysis.

I have divided these planning issues into three broad categories. The first category deals with how the employee pays for restricted stock. Employers and employees both view restricted stock grants as part of the employee's compensation. Employers do not simply give away restricted stock as a lagniappe. Instead, they reduce the value of the other forms of compensation they provide, typically current cash salary. Employees thus pay for their restricted stock grants *implicitly* through lower salaries. Employees can also pay for their shares *explicitly*. The payment is explicit if the employee makes a direct payment to the employer for the stock. Presumably, in that case, the employer paid the employee a higher salary than it would have paid her had it not required her to pay for the restricted stock. According to Professor Robert McDonald, the practice of requiring employees to pay for restricted stock is rare. However, as Professors Blouin and Carter have shown, it does occur. And according to Professor David Walker, it occurs most often with high-tech start-ups. Thus, the first set of tax-driven planning questions raised by restricted stock is should the sale be implicit or explicit? Also, if the tax-efficient pricing practice is not always the same, what determines when the pricing should be implicit and when it should be explicit?

The second set of questions concerns the Section 83(b) election. Although the statutory scheme nominally leaves the election to the employee, the employer can–as a condition of the grant–require the employee either to make or to refrain from making the election (or it can pay

the employee either to make or not make the election). Among the questions thereby raised by the Section 83(b) election are the following: Should employers leave to their employees the decision whether to make the Section 83(b) election? If not, should they prohibit or require the election as a condition of the grant? If employers should not always take the same position, under what circumstances should they take which one? Assuming the employee has the choice, should the employee make the Section 83(b) election, and if so, under what circumstances? Are the interests of the employee and the employer in making the election ever in conflict, and if so under what circumstances? If they are in conflict, are the parties jointly better of if the grant requires the employee to make the election, prohibits the election, or just leaves the choice to the employee? The answers to these questions have substantial implications for employees deciding whether to make the election and for employers in designing their grant programs.

The third group of questions concerns a real option element that arises in connection with the Section 83(b) election. Section 83(b)(2) allows the employee 30 days from the grant date to make the election.[11] However, if the employee makes the election, she pays tax on the value of the stock as of the grant date, not as of the election date. The employee then can wait 30 days before she decides whether to make the election, which is effected at old (grant date) prices. The relevant questions here include: Under what circumstances should the employee exercise the option? How valuable is the option to wait to the employee? How much does the option cost the employer? And does the option reduce or increase tax revenues?

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[11] See also Treas. Reg. § 1.83-2(b).

In studying the tax consequences of restricted stock in general, I have emphasized a joint tax planning approach. A joint perspective is appropriate – even for the Section 83(b) election, which nominally belongs to the employee – because the employer designs the grant program, and thus can decide whether to require, prohibit, or permit the election. This paper thus follows the methodology developed by Miller & Scholes (1982). It is worth mentioning here that the two most sophisticated theoretical treatments of the Section 83(b) election – McDonald (2003) and Scholes et al. (2005) – both look at the Section 83(b) election from the perspective of the employee alone. Thus, neither one takes the joint perspective that I do and that is appropriate here.

In addition, because a grant of restricted stock and the Section 83(b) election have tax as well as non-tax consequences, I have tried to be careful in making judgments about tax consequences. The method I use endeavors to make an apples-to-apples comparison by isolating the tax consequences of an action, such as issuing restricted stock or making the Section 83(b) election, by first isolating the tax consequences of that action. This I accomplish by separating out the effects of any action on such non-tax factors as before-tax cash flow, investment, capital structure and risk, and then having the employer and employee engage in offsetting transaction that eliminate the non-tax differences, so that the only difference between two otherwise identical series of transactions is taxes. Only after I have made such an apples-to-apples comparison will I discuss the tax consequences. And only after that exercise can I talk about the tax cost of an action, such as making the Section 83(b) election, when there is no offsetting transaction.

One more introductory matter. There is a planning question that arises logically prior to the questions how should employers design their restricted stock programs so as to maximize the joint benefits to both employers and employees. That is the question should employers offer restricted stock as part of their compensation packages. In Knoll (2004), I addressed that question. Under reasonable assumptions, I showed that granting restricted stock is at least as efficient from a tax perspective as paying additional cash compensation. Thus, that earlier article answered the analytically prior question in the affirmative, thereby setting the stage for this Paper.[12]

II. Explicit and Implicit Payments for Restricted Stock

Most employers that grant restricted stock implicitly charge their employees for their shares through lower salaries. The payment, however, does not have to be implicit. Instead, the employer could charge the employee for the stock and not reduce her salary by as much. For example, an employer could charge her employee nothing for her restricted shares or it could require her to pay $1000 for her shares and pay her an additional $1000. Economically, the two compensation packages are identical, but their tax treatments differ. Thus, the question arises when should the purchase of restricted stock be explicit and when should it be implicit.

In order to answer that and other questions posed throughout this Paper, it is useful to

[12] Walker (2003) also reached a similar conclusion.

consider a public company, with income tax rate, t, that is (assumed for now) constant over time. The company grants an employee one share of stock, which she will forfeit back to the company if she leaves its employ before it vests. Denote the date of the grant as T=0, and the date the share will vest as T=1. Denote the price of the employer's stock at the time of the grant as P_0 and at the time the grant vests as P_1. Assume that the employee has a personal tax rate on ordinary income of t_p, a personal tax rate on long-term capital gain of t_{cg}, and that both tax rates are assumed (for now) to remain constant over time.[13]

To simplify the discussion, I have generally assumed throughout this Paper that the employer and the employee close out their transactions at the vesting date.[14] The employee sells her restricted stock at that time, and the employer repurchases it. Accordingly, at the vesting date, the employer pays P_1 to repurchase the stock, receives a tax deduction of tP_1 and so is out-of-pocket $(1-t)P_1$. For the employee, she receives P_1 when she sells her stock, pays tax when the stock vests of t_pP_1, and so ends up with $(1-t_p)P_1$.

In contrast, assume instead that the payment is explicit. Call the amount that the employee is required to pay the employer in exchange for the stock B, with B less than or equal to P_0. B then is also the additional salary the employer must pay its employee when the purchase is explicit over the salary an equivalent employer pays an equivalent employee when the

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[13] Later on, I relax the assumption of constant tax rates.

[14] This assumption is not necessary to reach the results I report, but it simplifies both the arithmetic and the exposition. In addition, it is straightforward how to adjust the formulas for a later disposition.

purchase is implicit.

Consider the employer first. The employer receives a deduction at grant equal to the additional salary. This deduction is worth B t. In order to match the employer's cash flow at grant, which is zero, assume that the employer deposits B t in a bank account. After taxes, the bank pays interest over the vesting period at the rate r. At vesting, the employer has one share outstanding, which costs it P_1 to repurchase. At vesting, the employer also deducts the excess of the value of the stock over the payment received, which is worth t (P_1 - B). The employer also has cash in the bank of B t (1 + r). Thus, the employer that requires its employee to pay B for the stock – and thus also pays an additional B in salary – has an out-of-pocket cost at vesting of -P_1 + t (P_1 - B) + B t (1+r), which can be rewritten as -P_1 (1-t) + B t r. Thus, the employer benefits from making the purchase explicit by the amount B t r, which is just the benefit from accelerating the deduction on the explicit payment B t.

The employee's situation is the mirror image for the employer's. The employee must include the additional salary, B, she received at the grant date in her ordinary income for that year. That inclusion costs her B t_p. Assume she borrows this amount either from her employer or a lending institution or she reduces her bank balances by this amount. At vesting, the employee has one share outstanding. She sells that share for P_1. At vesting, she must pay tax on the difference between what the stock is worth at vesting, P_1, and what she paid for it at her ordinary income tax rate. That will cost her t_p (P_1 - B). She also has to repay the money she borrowed, which will cost her after tax B t_p (1 + r). Thus, the employee ends up with P_1 - t_p (P_1 -

B) - t_p B (1+r), which can be rewritten as -P_1 (1 - t_p) - B t_p r. Hence, the employer is worse off by making the purchase explicit by the amount B t_p r, which is just the cost of accelerating the inclusion of the compensation received at the grant date (B t_p).

Looked at individually, making the payment explicit benefits the employer and hurts the employee. Taken together, the parties' net benefit from making the purchase explicit is the difference, B (t - t_p) r. That expression is positive when the corporate tax rate exceeds the employee's personal tax rate (t > t_p); it is negative when the employee's personal rate is above the corporate rate (t_p > t); and it is 0 when the two tax rates are equal (t = t_p). Also, the benefit (or cost) is greatest when the payment is at a maximum, which occurs when the payment equals the price of the stock at the grant date (B = P_0).[15] Thus, the benefit is at a maximum by having employees pay the full market price whenever the corporate tax rate exceeds the personal tax rate, and otherwise having them pay nothing. The logic is simple: accelerating the tax consequences of the grant are beneficial when the deductions are worth more than the inclusions, and conversely.

Accordingly, for employers and employees in the top statutory bracket (35 percent), there is neither a joint benefit nor a cost from making the payment explicit.[16] Thus, the choice is likely a wash for top managers of large profitable firms. However, for a firm that provides restricted

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[15] That is true for (B ≤ P_0).

[16] I assume payroll taxes are not treated in a systematically different way that depends upon the election.

stock to employees not in the top bracket, there can be some joint benefit from making the purchase explicit.[17] Also, if the tax system changes in a way that causes it to resemble the post-1986 regime, with top personal rates (28%) substantially below top corporate rates (34%), there can be substantial savings from making the purchase explicit. In contrast, if the employer is not profitable and does not expect to pay corporate income tax for many years, then it is costly to make the payment explicit.

Three more points. First, the tax consequences of requiring the employee to pay the market price for restricted stock ($B = P_0$) are not the same as those that arise from making the Section 83(b) election. That is because restricted stock, whether it is explicitly paid for in whole or part, is taxed as restricted stock, not as ordinary stock held on personal account. The latter is how restricted stock is taxed after the election. Accordingly, if the employee makes the election, her subsequent gains or losses are capital and the employer experiences no tax consequences from subsequent price changes. In contrast, with an explicit purchase, the employee is still taxed at her ordinary income tax rate and the employer is still taxable on the price changes that occur prior to vesting.[18]

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[17] To hold the employee harmless, the employer would have to pay the employee additional salary to compensate for the acceleration of taxable income and possibly loan the employee the money to pay the taxes.

[18] Accordingly, making the purchase explicit then does not have the negative consequence to the employee of making an election when the purchase price is zero. That is to say and as described in the next Part, making the purchase price explicit does not subject to tax a return that would otherwise be exempt. That is why it is not inherently undesirable. In addition, the principal effect of making the purchase explicit is to accelerate the tax consequences of the compensation. That is desirable when deductions are worth more than inclusions, and conversely.

Second, when the employee makes the Section 83(b) election, the tax consequences of making the payment explicit are identical with those of keeping it implicit. If the employee makes the election, it treats the difference between the value of the stock at grant and any amount paid for the stock as ordinary income at that time (P_0 - B). Since any amount paid by the employee to the employer for stock is assumed to be matched by additional cash salary, the sum of the employee's additional cash compensation (B) and restricted stock compensation (P_0 - B) at the grant date will equal the price of the stock (P_0), regardless of the size of the explicit payment.

Third, the discussion in this Section has tacitly assumed that if the amount paid by the employee for the stock is less than the stock's market value at vesting, the difference (B - P_1) is treated as an offset to salary. That is symmetric with the treatment when the stock's market value at vesting exceeds the price paid. It is, however, not clear from the statute and regulations that this is how the parties would treat such a transaction.[19] If there is no offset, then the employee cannot deduct the excess of price over market value at vesting. Presumably, the excess goes into basis that the employee will be able to use to offset gain (or create loss) when the stock is sold. Thus, the employee is worse off because the deduction is not against ordinary income, but against

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[19] According to the Treasury Regulations, the relevant portion reads as follows:

> [T]he excess of –
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> (i) The fair market value of such property (. . .) At the time that the property becomes substantially vested, over
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> (ii) The amount (if any) paid for such property,
>
> shall be included s compensation in the gross income of such employee or independent contractor for the taxable year in which the property becomes substantially vested.

Treas. Reg § 1.83-1(a)(1).

capital gain (and possibly deferred). Furthermore, if the employee does not get an offset, the employer does not have an inclusion.[20] Thus, the employer is better off for having permanently lost an inclusion. Taken together, this will produce a net benefit whenever the corporate tax rate exceeds the capital gains preference. In such circumstances, there is a joint benefit from increasing the payment explicit that is equal to the excess of the price paid over the price at vesting and the excess of the corporate tax rate over the individual capital gain preference, $(B - P_1)(t - t_p - t_{cg})$. At the current top statutory rates, that benefit is fifteen percent on every dollar for which the amount paid for the stock (B) exceeds the market value at vesting (P_1).[21] At the time of the grant, the actual benefit is unknown (and everyone involved presumably hopes it is zero. Ex-ante, the expected benefit is larger the greater is the explicit payment and the more volatile is the employer's stock. For a typical NASDAQ company with an annual volatility of about 60 percent, the benefit is worth about 5 percent of the share price (or about 7 percent of the after-tax value of the grant) when the explicit payment is at the market price.[22]

III. The Section 83(b) Election

Although Section 83(b) vests only the employee with the power to make the election, the

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[20] CITE

[21] This is calculated as follows: $15\% = 35\% [t] - 35\% [t_p] + 15\% [t_{cg}]$.

[22] I calculated this value using the NUMA Option Calculator with an interest rate of 4.5 percent and a volatility of 60 percent. The calculator is available at http://www.numa.com.

employer can–as a condition of the grant–require the employee either to make or to refrain from making the election. The employer can also pay the employee either to make or not make the election. Blouin and Carter (2005) have shown that the inclusion of such limitations on restricted stock grants, although rare, do occur. Instead, most employers take a *laissez-faire* approach to the Section 83(b) election. They neither require nor prohibit the election as a condition of the grant, nor will they pay the employee to make or not make the grant; they simply leave that choice to the employee.

Surprisingly, there is little data on how many employees make the election. The only discussions I could find were anecdotal. McDonald (2003) provides several examples where employees made the election. And Walker (2004) states as follows:

> 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 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 market value of the stock in the fledgling venture. Thus, employees of start-ups can make a

Section 83(b) election and incur little or no current tax, and they generally do.[23]

The rest of this part focuses on whether it is in the joint interest of the employer and the employee for the employee to make the election. The argument proceeds in stages. I first consider a base case with numerous simplifying assumptions and then I relax those assumptions.

A. The Base Case

I start with the following simplifying assumptions: the employer's stock is publicly traded; both the employer's and employee's tax rates are constant over time; the employee pays nothing to the employer for her restricted stock;[24] the stock does not pay dividends;[25] and the employee does not subsequently forfeit the stock.

Employer. Consider the employer first. If the employee does not make the election, when the stock vests the employer will have one additional share outstanding (assuming that the employee did not forfeit her shares). In addition, until vesting there will have been no tax

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[23] Walker at 706 (footnotes omitted). The omitted footnotes are mostly to an email correspondence between Professor Walker and a compensation consultant.

[24] McDonald discusses this issue from the employee's perspective and concludes that the higher the portion of the market price paid by the employee, the greater the incentive for the employee to make the election. Later on, I consider the effect of explicit payments for the stock on the Section 83(b) election.

[25] McDonald discusses this issue from the employee's perspective and concludes that dividends reduce the incentive for the employee to make the election. I ignore dividends throughout this Paper.

consequences and thus no cash flow consequences to the employer from the grant. When the shares vest, the employer deducts the current market value of the granted stock, P_1, which reduces its tax liability by $t\ P_1$. At that time, the employer is assumed to repurchase the share at a cost of P_1. Thus, at vesting, the employer's cash outflow is $(1 - t)\ P_1$ (where the minus sign indicates an outflow of cash). That amount is the change in the employee's net worth from the grant.

Alternatively, if the employee makes the Section 83(b) election, the employer will receive an immediate deduction equal to the market price of one share. Thus, at the grant date, the employer will receive a deduction of P_0, which will reduce its current taxes by tP_0. The employer's net worth at vesting will depend in part on how it invests its tax savings. Denote the employer's after-tax return on the tax saving by x. At vesting, the employer will have cash on hand as a result of the grant of $t\ P_0 (1 + x)$. It will also cost the employer P_1 to repurchase the share. Thus, the employer's cash outflow at vesting, if the employee makes the election, is $-P_1 + t\ P_0 (1 + x)$ Accordingly, as commentators and consultants have frequently observed, the employer is worse off as a result of the election if its stock has increased sharply and better off if it has fallen or risen only slightly.[26] Although that observation is accurate, as far as it goes, it cannot justify the conclusion – often advanced – that the election hurts the employer if the price of its stock rises substantially, and conversely. That is because the employer can easily neutralize the tax and non-tax effects of the employee's election by investing its tax savings in its own

[26] The employer is worse off if the stock price has risen faster than its cash investment, $P_1 > P_0 (1+x)$, and conversely.

stock. If the employer then sells that stock at vesting, it will be in exactly the same position as it would have been if the employee had not made the election.

Accordingly, if the employee makes a Section 83(b) election, the employer purchases t shares of its own stock with a cash inflow from the election of tP_0. When the restricted shares vest, it then sells the purchased shares for tP_1. Section 1032 provides that a corporation is not taxed on the gain or loss it realizes from dealings in its own stock. Thus, after the sale, the employer has additional cash of tP_1. Also, at vesting, the employer repurchases the share it previously granted its employee at a cost of P_1. The cost to the employer then is $- (1 - t) P_1$. Thus, the employer is in the same position in terms of its cash flow, balance sheet, capital structure and risk exposure regardless of the employee's decision about the Section 83(b) election.

Two results follow from this demonstration that the employer can neutralize the tax and non-tax consequences of the election. First, the received wisdom–that the election hurts the employer if its stock price rises substantially, and conversely, is wrong. The election generally has no effect on the employer. Second, the overall tax efficiency of the Section 83(b) election generally depends only upon the tax consequences to the employee.

<u>Employee</u>. Turning now to the employee. Assume the employee does not make the election. There are then no cash flow consequences at grant. At vesting, the employee will pay tax of t_pP_1. If she sells her stock immediately after vesting, she will have cash of $(1-t_p)P_1$.

Alternatively, if she makes the Section 83(b) election, she will pay tax of $t_p P_0$ at the grant, and she will have a basis of P_0 in her one share. In order to match the cash flow at grant when she does not make the election, assume the employee borrows the money to pay the tax repaying the loan when the stock vests. Assume an after-tax interest rate of r the employee pays $t_p P_0$ (1+r). The employee also sells her share immediately after it vests, paying long-term capital gains tax on any gain or a getting a deduction against net long-term capital gains on any loss. Thus, upon sale, the employee will pay tax of $t_{cg}(P_1-P_0)$.[27] Hence, as a result of the grant, the employee will have no cash flow consequences at the grant date and upon sale will have additional cash flow of $(_1-t_{cg})P_1+t_{cg} P_0 - t_0 P_0 (1+r)$.

Whether the employee is better off making the election is unclear. Her wealth depends upon the stock price (P_1) at vesting. For high prices she is better off with the election, but with low prices she is better off without it. Does this means that she should make the election if she expects a substantial increase in price? Not necessarily.

The economics of the two transactions are obviously not equivalent. Most noticeably, the employee who has made the election has increased her exposure to her employer's stock. In order to answer the question – what are the tax consequences of the election to the employee? – the non-tax consequences of the election must first be eliminated.

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[27] If she does not sell the stock then, but at a later date, the ex-ante qualitative results are unchanged except that the effective capital gains rate as of the vesting date replaces the statutory rate.

Start with the number of shares the employee owns at the grant date. How many shares does she own? That might seem like a silly question, for the answer in is obviously one whether the employee makes the election or not. It is however a more subtle question, for which the answer is not always one. Consider first what happens if the employee makes the election. The employee holds one share of stock with a basis of P_0. As the market value of the share changes, the employee's portfolio changes in value. If she were to sell her share, she would have P_0 plus the product of $(1 - t_{cg})$ and any change in price. On an after-tax basis, the employee's exposure to her employer's stock is $\$(1 - t_{cg})$ for each \$1 change in price. That is the same exposure that an individual who purchases for P_0 one share of her employer's stock on her personal account (and holds that share for more than one year, so any gain or loss is long-term capital) has. It is, thus, reasonable to describe the electing employee's position as equivalent to owning one share with basis P_0.

Consider now the employee who did not make the election. She also nominally holds one share, but without any basis. Assuming she does not forfeit the stock, then at vesting, she will owe tax of tP_1. She does not have the same exposure to price changes as the electing employee. For the non-electing employee, each one dollar change in the price of her employer's stock translates into only an additional $\$(1-t_p)$ after tax, not $\$(1-t_{cg})$.

There are two ways that we could describe the non-electing employee's stock ownership. First, and most intuitively, we could say that the employee owns $(1-t_p)$ shares that are not subject to further tax until vesting. Her position in her company's stock then is the same as holding (1 -

t_p) shares in a Roth IRA and withdrawing those shares at the vesting date.[28]

Second, we could describe the non-electing employee's stock ownership in terms of an investor who bought the employer's shares on personal account at a share price of P_0. Compared to such a shareholder, the non-electing employee holds the equivalent of $(1-t_p)/(1-t_{cg})$ shares. That is because an investor who purchased $(1 - t_p)/(1-t_{cg})$ shares at P_0 would see her after-tax wealth increase by $(1-t_p)$ for each \$1 increase in the stock price.[29] However, in contrast to such a purchaser, the non-electing employee, did not pay P_0 for her shares; thus, even if the price at vesting is P_1 (so that $P_0 = P_1$), the non-electing employee will have only $(1-t_p)P_0$, not $[(1-t_p)/(1-t_{cg})]P_0$. The difference, $[(1-t_p)t_{cg}/(1-t_{cg})]P_0$, can be thought of as an amount owed by the non-electing employee at vesting. In other words, the non-electing investor can be viewed as owning $(1-t_p)/(1-t_{cg})$ shares and owing $[(1-t_p)t_{cg}/(1-t_{cg})]P_0$ at vesting.

In effect by making the election, the employee has increased her exposure to changes in the price of her employer's stock. Before the election, she would earn $1-t_p$ after-tax dollars for each dollar change in price. After the election, that figure rises to $1-t_{cg}$. Although the election does not change the number of shares she legally owns, it does change her economic exposure. The employee owns more stock after the election (1 share) than before ($(1 - t_p)/(1-t_{cg})$ shares).

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[28] That is, of course, equivalent to holding 1 share in a regular IRA and being subject to an ordinary income tax rate of t_p. That equivalence assumes that the taxpayer will withdraw her employer stock from both IRA accounts at the same date and that her tax rate is the same at both dates.

[29] The denominator reflects the capital gains tax that the purchaser would pay when she sells her shares (assumed to be at the vesting date).

Although it is usually not phrased this way, from the employee's perspective, the election is equivalent to purchasing additional shares of the employer's stock. In effect, the employee, by making the election, has purchased $(t_p - t_{cg})/(1-t_{cg})$ additional shares. The election then is more than a tax decision. It is also an investment decision, with the attendant cash flow and risk exposure consequences that an additional investment by the employee in the employer's stock ordinarily entails.[30] Expressed differently, the employee, through the election, increases her economic ownership of her employer's stock even though she holds title to the same one share both before and after the election.[31]

Because the election has non-tax consequences, the tax consequences of the election cannot be gleaned without first equalizing the employee's economic investment in her employer's stock. Instead of purchasing $(t_p - t_{cg})/(1-t_{cg})$ shares indirectly, through the election, the employee could have purchased these shares directly in the market. Buying the additional shares directly would have cost her $[(t_p - t_{cg})/(1-t_{cg})]\ P_0$, which is less than t_pP_0 – the cost of the election.[32] With the election, the employee will have cash of $(1-t_{cg})P_1$ if she sells her shares at vesting. Without the election, but with the purchase of additional shares, she will also have cash

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[30] For a typical employee, who is already too heavily invested in her employer, these non-tax consequences are likely to be mostly negative.

[31] Obviously, there would be no reason for the employee to make the election if there was no capital gains preference, $t_p = t_{cg}$, and the increased exposure would be greatest if $t_{cg} = 0$. As long as there is a capital gain preference, $t_p < t_{cg}$, the election would increase the employee's exposure.

[32] The inequality holds when the individual tax rate on ordinary income is less than 100% ($t_p < 1$) and when there is a capital gain preference for individuals ($0 < t_{cg} < t_p$).

from the sale of all of her shares of $(1-t_{cg})P_1$. However, because the election was more expensive than the purchase of additional shares, she will also have cash left if she does not make the election. That cash is $[t_{cg}\ (1 - t_p)/(1-t_{cg})]\ P_0$.[33] If she puts this cash under her mattress, she will have the same amount of cash at vesting (after selling her stock), regardless of the price of her employer's stock at that date. Whether she makes the election or not, her after-tax wealth will be $(1 - t_{cg})P_1 + t_{cg}\ P_0$.[34]

Of course, the non-electing employee can make a better investment with her excess cash than to stuff it under her mattress. If she simply deposits the proceeds in a bank account, the difference in her after-tax wealth from electing and not electing is the after-tax interest she could earn on her investment. Denoting the after-tax return over the vesting period by r, the non-electing employee will have additional cash at vesting of $[t_{cg}\ (1 - t_p)/(1-t_{cg})]\ P_0\ r$. It therefore follows that even if the employee wants to increase her holdings of her employer's stock, she still should not make a Section 83(b) election. She has a dominant strategy that involves purchasing

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[33] Given current statutory tax rates, this comes out to .24 [= (35% - 15%)/(1 - 15%)] shares. The cost to the employee of purchasing these additional shares is $.24P_0$. That is less than the cost to the employee of making the election, $.35P_0$. That leaves the employee who does not make the election with an additional $.11P_0$ to invest.

[34] The equivalence of the two positions can be demonstrated as follows: If the employee makes the election and sells her stock when it vests, she will receive P_1, pay taxes of $t_p\ (P_1 - P_0)$ and be left with $(1 - t_{cg})P_1 + t_{cg}\ P_0$. If she does not make the election and sells all of her shares when her original share vests, she will receive P_1 for her original share and pay taxes of t_pP_1. She will also sell $(t_p - t_{cg})/(1-t_{cg})$ shares for $[(t_p - t_{cg})/(1-t_{cg})]\ P_1$ and pay taxes of $t_{cg}\ [(t_p - t_{cg})/(1-t_{cg})]\ (P_1 - P_0)$, leaving her with $(1 - t_{cg})\ P_1 + [t_{cg}\ (t_p - t_{cg})/(1-t_{cg})]\ P_0$. Added to that is $[t_{cg}\ (1 - t_p)/(1-t_{cg})]\ P_0$ that she has in her mattress. Together, if she does not make the election, but instead buys additional shares, she has $(1 - t_{cg})\ P_1 + t_{cg}\ P_0$, exactly what she has when she makes the election.

additional stock.[35]

The intuition for why the election hurts the employee is easiest to grasp by going back to the more intuitive of the two answers to the question how many shares does the non-electing employee hold. That answer was that the electing employee's position is equivalent to owning $(1 - t_p)$ shares that are not subject to tax (until vesting).[36]

Using that intuition, the election converts the employee's investment in $(1 - t_p)$ shares of employer stock that is free of tax on the appreciation (or depreciation) that occurs until vesting into an investment in one share of stock that is taxable at the employee's capital gains tax rate on any subsequent price changes. Expressed differently, the election has two effects. First, through the election, the employee has increased her investment in her employer's stock by t_p shares,

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[35] In theory, instead of assuming that the non-electing employee purchases additional shares, I could have assumed that the electing employee sells shares short. That would match the non-tax consequences of making the election to those of not making the election. In the text, I match the non-tax consequences of not making the election to those of making the election. I did not use the short sale for several reasons. First, many firms discourage employees from engaging in short sales. Second, the transaction costs for short sales can be large. Third, there is a possible tax arbitrage from shorting and holding the same stock if the short side receives ordinary treatment and the long side receives capital treatment. This possibility has led to the development of anti-abuse rules for short sales that complicate the tax analysis. Because of those anti-abuse rules, the tax consequences of the election are not being isolated from those of the anti-abuse rule. If, however, the short side receives the same capital treatment as the long side, then the election with a short sale could be compared to not making the election.

[36] Note that the employee's exemption from tax on price changes prior to vesting is an application of the widely recognized result that an immediate deduction of the cost of the investment followed by a later inclusion of the investment's full amount is equivalent to exemption of the return on the investment. In effect, Section 83(a) can be seen as permitting the employee to take a deduction of P_0 at the grant date and an inclusion of P_1 at the vesting date. The former offsets an equivalent deduction.

from $1-t_p$ shares to 1 share. Thus, given a current ordinary income tax rate of 35 percent, the employee by making the election, increased her investment in employer stock by .35 shares, from .65 shares to 1 share.

Second – and this is key – the election changed the tax treatment of the employee's original investment. Without the election, the employee would have held $(1-t_p)$ shares that would not have been subject to tax on any price changes that occurred before vesting. With the election, those $(1-t_p)$ shares are now subject to tax at the long-term capital gains rate of t_{cg} on such price changes. Thus, the net cost of the election is the difference between holding $(1-t_p)$ shares tax free until vesting compared with holding the same shares subject to capital gains taxes. Denote the expected before-tax rate of return by R and assume the employee cashes out her investments at vesting, the net cost of the election then is $(1-t_p)P_0Rt_{cg}$. In words, the cost to the employee of the election is that she converts the return, R, on the after-tax grant, $(1-t_p)P_0$, from being untaxed into being taxed at the capital gains tax rate, t_{cg}. Therefore, in the base case, the election is inefficient for the employee and employer taken together because it imposes capital gains taxes on the employee's gain on the original grant until vesting, which gain would have escaped tax had the employee not made the election.[37]

[37] Although it is not apparent, these two ways of expressing the cost of the election are equivalent. In equilibrium, if the after-tax return, r, should equal to the product of the before-tax return and one minus the capital gains tax rate, $(1-t_{cg})R$. That is to say, $r = (1-t_{cg})R$. Substituting $r/(1-t_{cg})$ for R into the equation for the cost to the employee of making the election, $- t_{cg} (1 - t_p)P_0R$, that cost can be rewritten as $- [t_{cg} (1 - t_p)/(1-t_{cg})] P_0 r$. Thus, the two ways of expressing the tax disadvantage from making the election are equivalent.

B. Extensions

The discussion above was for the base case. The assumptions that define that case are as follows: the employer's stock is publicly traded; both the employer's and employee's tax rates are constant over time; the employee pays nothing to the employer for the restricted stock;[38] the stock does not pay dividends;[39] and the employee does not subsequently forfeit the stock back to the employer. These assumptions are likely accurate in many circumstances. However, when they are not accurate, the above results do not necessarily hold. To some of these issues I now turn. **THIS REPEATS EARLIER TEXT**

1. Changing Tax Rates

In the base case, I assumed that both the employee's and the employer's tax rate are constant over the period that the restricted stock is subject to a substantial risk of forfeiture. I then used that assumption to reach the conclusion that the Section 83(b) election is inefficient because it increases the employee's taxes and has no impact on the employer's. When tax rates

[38] McDonald discusses this issue from the employee's perspective and concludes that the higher the portion of the market price paid by the employee, the greater the incentive for the employee to make the election. Later on, I consider the effect of explicit payments for the stock on the Section 83(b) election.

[39] McDonald discusses this issue from the employee's perspective and concludes that dividends reduce the incentive for the employee to make the election. I ignore dividends throughout this Paper.

change over time, those conclusions do not necessarily follow. Under some circumstances, the election can be jointly efficient as shown below.

Start with the employer. When the employer's tax rate changes between grant and vesting, the employer's wealth is affected by the Section 83(b) election because it can no longer offset the effect of the election by using the proceeds generated by that election to purchase additional shares. If the employee does not make the election, then at vesting, the employer will receive a deduction worth t_1P_1, where t_1 is the corporate tax rate at vesting. If the employee makes the Section 83(b) election, the employer will receive an immediate deduction worth t_0P_0, where t_0 is the corporate tax rate at grant. If the employer then uses those proceeds to repurchase its own stock, it can buy t_0 shares. If it sells those shares when the grant vests, it will receive t_0P_1, no portion of which is taxed. Therefore, the difference in the employee's wealth if the employee makes the election is $(t_1 - t_0) P_1$. Thus, if the employer's tax rate rises over time ($t_1 > t_0$), it is hurt by the election, regardless of what happens to the price of the employer's stock.[40] On the other hand, if the employer's tax rate fell over the vesting period ($t_0 > t_1$), it is benefitted by the election.[41]

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[40] If the employer's tax rate rises, it will receive less money when it sells the shares it purchased with its tax savings from the election, $t_0 P_1$, than it would have received if the employee did not make the election, $t_1 P_1$. In such a case, the employer loses $(t_0 - t_1) P_1$ from the election.

[41] If the employer's tax rate falls, it can sell the stock it purchased with the proceeds of the election, $t_0 P_1$, for more than the deduction would have been worth at the vesting date, $t_1 P_1$, and so the employer is ahead by $(t_0 - t_1)P_1$.

When the employee's tax rate is constant and the employer's is falling, then both the employee and the employer are harmed by the election. In this case, the employee is unlikely to make the election and there is probably little need for the employer to prevent it. When however the employee's tax rate is constant and the employer's is increasing, then the employer is better off with the election, whereas the employee is worse off. Moreover, if the expected increase is large enough, then the employer's gain will exceed the employee's loss, and so there will be a joint tax benefit from the election. However, in such circumstances, the employee would not voluntarily make the election. Thus, to cause the election to occur, the employer must either require the election or pay the employee to make it.[42]

The effects of a change in the employee's tax rate are in the opposite direction of those of the employer. Accordingly, the election is more attractive to the employee when her ordinary tax rate falls, and less attractive when it rises.[43] The impact on the employee is also more

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[42] The text describes the net tax benefit (or cost) to the employee of electing as of the vesting date. The election however must be made within 30 days of the grant date, which is well before the stock vests. Thus, measured as of the grant date, the certainty equivalent benefit to the employer of the election can be rewritten as $(1+r)(t_1-t_0)P_0$, where r is the after-tax interest rate over the period that the stock is not vested. From the base case, we know that the cost to the employee from the election measured at grant is $t_pP_0[(1+r)t_{cg}-1]$. Therefore, when the increase in the employer's tax rate is sufficiently large, it will offset the cost to the employee of electing. Specifically, this will occur when $(t_{t.} - t_0) > t_p(t_{cg} - 1/(1+r))$.

[43] If she makes the election, she includes P_0 at vesting and pays tax of t_0P_0. At vesting, she has $(1-t_{cg})P_1 + t_{cg}P_{0.}$ If the employee does not make the election, then she will include P_1 at vesting and pay tax of t_1P_1. If she does not make the election, then to equate her exposures, she buys $(t_1 - t_{cg})/(1-t_{cg})$ shares and invests or borrows the excess, $[t_0 - (t_1 - t_{cg})/(1-t_{cg})]P_0$. Thus, at vesting, she will have $(1-t_{cg})P_1 + t_{cg}\,[(t_1-t_{cg})/(1-t_{cg})]P_0 + [t_0 - (t_1 - t_{cg})/(1-t_{cg})]P_0\,(1+r)$. The difference in net worth at vesting is $[(1 - t_1)/(1-t_{cg})]\,t_{cg}\,P_0 + [t_0 - (t_1 - t_{cg})/(1-t_{cg})]P_0\,(1+r)$. The employee then is better off making the election when $t_1 > [t_0(1+r)(1-t_{cg})+t_{cg}r](1-t_{cg})/(1+r-t_{cg})$. This requires $t_1 > t_0$.

complicated because the employee is harmed by the election in the base case, whereas the employer was not. Thus, in order for the election to become attractive to the employee her tax rate must rise substantially. When only the employee's tax rate is changing the costs and benefits of the election are internalized to the employee and so she has the proper incentives to make the election. When, however, the employer's tax rate is changing, the incentives are not all internalized.

2. Restricted Stock Units

The discussion so far has been for restricted stock. Some firms, including Microsoft, have taken to issuing restricted stock *units* to their employees. Restricted stock units differ from restricted stock in that the employer does not initially transfer shares to its employees, but merely the promise to provide the shares at a specific date, if those shares vest, which transfer date is subsequent to the vesting date. Restricted stock units are thus unfunded, unsecured promises to deliver property in the future. They are therefore taxed under the rules that apply to other non-qualified deferred compensation.[44] As such, the employee includes the value of her shares in ordinary income when she takes delivery, and, at that time, the employer deducts the same amount. Because restricted stock units (as opposed to the underlying stock) are not considered property, the Section 83(b) election is not available. Firms issue restricted stock units as a means

[44] This is also Section 83.

of deferring the tax consequences of the transaction to the employee beyond the vesting date.[45]

Because the units also defer the employer's deduction, it might be thought that it is more expensive for the firm to issue restricted stock units than restricted stock. However, as long as the employer's stock is publicly traded and its tax rate is constant, the employer is indifferent as to when it takes its deduction. That is because the employer can neutralize the effect of when it receives the deduction by trading in its own stock.[46]

Although the employer should be indifferent between issuing restricted stock and restricted stock units, the employee enjoys an additional tax benefit with the units. That is because the employee is never taxed on the appreciation that occurs before she is taxed on the grant. Assuming she sells her restricted stock units at delivery, and would have sold the restricted stock on the same date, then the employee's benefit from the units is the avoidance of capital gains taxes on the appreciation that occurred between vesting and delivery.[47] That benefit is also the parties' joint benefit.

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[45] The American Jobs Creation Act of 2004, which made sweeping changes to deferred compensation rules, imposed additional restrictions on using restricted stock units to defer taxes.

[46] For example, if the firm issues restricted stock units, but would prefer the cash flow pattern from restricted stock with otherwise identical terms (and without the election), it can synthesize that pattern by selling t shares at vesting for tP_1 and repurchasing those shares by using its tax savings at delivery.

[47] A non-tax consequence of restricted stock units is that the units lock employees into their employers stock for a longer time (from vesting to delivery) than the corresponding stock.. That will likely be seen as a cost to the employee and a benefit to the employer.

3. Forfeiture

The discussion above has ignored the possibility of the employee forfeiting her restricted stock back to her employee. If an employee who has not made a Section 83(b) election forfeits her stock, she can claim an ordinary loss for what, if anything, she paid for that stock.[48] If, however, the employee has made the Section 83(b) election, and subsequently forfeits the stock, then she cannot claim a loss for her basis in the stock nor can she deduct the amount she previously included in income. She can only deduct the amount, if any, that she paid for the stock.[49] Moreover, that loss is now a capital loss, not an ordinary loss.[50] Thus, the possibility of forfeiture makes the election less attractive to employees for two reasons. First, an employee who has made the election cannot deduct the amount she previously included in income if she subsequently forfeits the stock. Second, an employee who paid something for her stock (and receives less than that amount back upon forfeit) has a capital loss, whereas an employee who did not make the election has an ordinary loss.

In contrast with the employee who forfeited her stock, the employer who received a deduction because its employee made a Section 83(b) election has to include the previous deduction in income if the stock is forfeited.[51] If the employee did not make the election, there is

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[48] Treas. Reg. § 1.83-1(b)(2).

[49] Treas. Reg. § 1.83-2(a).

[50] Treas. Reg. § 1.83-2(a).

[51] Treas. Reg. § 1.83-6(c).

no such inclusion. Thus, on the employer's side there is a small tax benefit from the election if there is a forfeiture. That benefit arises because the employer's deduction preceded its offsetting inclusion. Since the timing benefit to the employer is likely to be small, whereas the cost to the employee of the election if there is a forfeiture is large, the possibility of forfeiture is likely to reduce the attractiveness of the election to the employer and employee taken together.

4. Explicit Payments for the Stock

So far, the discussion in this Part has assumed that the employee does not pay anything to her employer in exchange for her restricted stock. Although the overwhelming majority of restricted stock grants do not require an explicit payment, some employers do require such payments. This Section thus extends the discussion of the Section 83(b) election by taking into account the possibility of the employer charging the employee something (possibly, but not necessarily equal to the market value of the shares). The principal result that arises from this Section is that when the employee must make a payment, there can be a conflict of interest between the employer and the employee over the desirability of making the Section 83(b) election.

Denote by B, the amount the employee pays to her employer for one share of restricted stock. So far, in this Part, we have assumed B=0. If the employer charges its employee the market price, then $B=P_0$. If the employer sells the stock at a discount, then $0 < B < P_0$. (I am not

aware of employers selling their stock as part of a restricted stock program at a premium).

Employer Start with the employer. When the employee pays nothing for her stock, the employer can offset the economic consequences of the Section 83(b) election by using the tax proceeds generated by the election to purchase additional shares. When, however, the employee pays something for her stock, the employer can no longer neutralize the economic effects of the employee's election. Instead, the election hurts the employer. The logic behind that result is easiest to see when the employee pays the full market price for the restricted stock ($B = P_0$). In that case, if the employee does not make the election, the employer will deduct the appreciation that occurs between grant and vesting, $(P_1 - P_0)t$, which has a positive expected value. If, however, the employee makes the election, then the employer receives no tax deduction either at grant or vesting. Thus, when the employee pays the full market price, the election harms the employer by taking away the deduction for the appreciation that is expected to occur prior to vesting, P_0 t R.

That same logic applies for any payment made by an employee to her employer for restricted stock. If the employee pays B for one share, that purchase can be decomposed into paying the fair market value for B/P_0 shares and nothing for $(P_0 - B)/P_0$ shares. Since the election has no effect on the employer when there is no explicit payment and prevents the employer from deducting the return until vesting when the employee pays the fair market value, the effect of the election is to deny the employer a deduction for the appreciation on the explicitly purchased

portion of the grant. Thus, the employer's cost can be expressed as B t r. In other words, the cost to the employer of the election is losing its deduction (t) on the anticipated return (R) on that portion of the stock paid for by the employee (B).

Employee. Turning now to the employee. It too finds that its view of the election is changed by the introduction of a payment for the restricted stock. Not surprisingly, the effect of the employee is the reverse of that on the employer. The election becomes more attractive the more the employee pays. Once again, the result is easiest to see when the employee pays the full market price. In that case, there are no immediate tax consequences from the grant and election and any subsequent price changes prior to vesting are taxed at capital gains rather than ordinary tax rates. Thus, when the employee pays the fair market value of the stock, the election benefits the employee by reducing her tax rate on the appreciation that occurs through vesting by the capital gain preference. We know from before that when she pays nothing, the election hurts the employee by subjecting the appreciation on her after-tax shares to capital gains taxes. Because any intermediate payment combines these two effects, the benefit to the employee of making the election can be written as:

$$B\, t_p\, R\, (1 - t_{cg}) \; - \; P_0\, (1 - \; t_p) t_{cg}\, R.$$

The first term in the above equation is the benefit to the employee of the election and the second

term is the cost. The cost is the tax paid by the employee on the $(1-t_p)$ shares that would have been tax exempt had the employee not made the election, but which, as a result of the election are now subject to capital gains taxes. The benefit is the after-tax return on the tax savings from the payment.

Consider two special cases. First, if the employee pays nothing for the stock ($B = 0$), the cost to the employee of making the election becomes $-P_0 (1 - t_p) R t_{cg}$, which is the cost of the election as derived in the base case. Second, if the restricted stock is purchased at the market price ($B = P_0$), then the benefit to the employee from making the election becomes $P_0 (t_p - t_{cg}) R$. That expression is readily amenable to an intuitive explanation. The benefit is the employee's tax savings (the difference between ordinary income and capital gains rates) on the return from holding the stock over the vesting period.

More generally, the parties will sometimes find that their private interests in the election are in conflict. For $B > 0$, the employer is always worse with the election, and the employee might be better or worse off. Moreover, increasing B benefits the employee and harms the employer. It is also the case that the employee is definitely better off making the election when $P_0 = B$. Thus, because there is a value for B, below P_0, at which the employee benefits from the election, such conflicts can arise for any set of tax rates with a capital gains preference. Moreover, the conflict between the parties will intensify as B increases beyond that point. Although for any set of tax parameters with a capital gain preference there is always a range where the employee benefits from the election, it is not always the case that there is a range ($0 \leq$

$B \leq P_0$) where the parties jointly benefit from the election.

Whether it is ever in the joint interest of the parties for the employee to make the election depends upon the tax rates. If the capital gains preference, t_p - t_{cg}, exceeds the corporate tax rate, t, then there is a value for B ($0 \leq B \leq P_0$) above which where the parties benefit from the election. The intuition is that the benefit is the capital gain preference on appreciation between grant and vesting and the cost is the loss of the corporate tax deduction on that same return. If, however, the corporate tax rate exceeds the capital gain preference, then it is never in the joint interest of the parties to make the election. Thus, for employers at the top statutory rate today, the election is never in the joint interest of the parties. For such firms, there is no benefit from making payments explicit and if the payments are explicit no benefit from making the election.

Note that the parties gain by making the payment explicit (assuming no election) only if the corporate tax rate, t, exceeds the personal tax rate, t_p. In this case, of course, the election is always beneficial. Thus, we would expect explicit payments to be usually paired with election prohibitions. That however is not what happens. Explicit payment usually go together with an election.

5. Stock not Publicly Traded

In the base case, I repeatedly used the assumption that the employer's stock was publicly

traded to derive the results. Specifically, I showed that the employer could offset both the tax and non-tax effects of the employee's Section 83(b) election by investing the tax proceeds generated by the election in its own stock. Obviously, if the company cannot trade its own stock, it cannot neutralize the cash flow and capital structure consequences of the election. Accordingly, if the stock is not traded, the employer must do something other than repurchase its outstanding equity with the cash proceeds of the election. Under these circumstances, the employer will benefit from the election when its stock declines (or increases by only a small amount), and it makes a good investment with the cash.[52] However, it is potentially misleading to describe such any such gain or loss as a tax consequence of the election. It is more accurate to describe the result as a non-tax consequence of the employer's issuance of additional stock through the election.[53]

In addition, if the employer's stock is not publicly traded, the employee cannot increase her holdings of her employer's stock by purchasing more shares.[54] If the employee cannot

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[52] The most reasonable and common assumption in the economic literature is that the employer can invest the funds in a project with an expected net present value of zero. I ignore issues arising from the transfer of value between equityholders and creditors if the volatility of the new project does not match that of the firm. This phenomenon is called asset substitution.

[53] Viewed from this perspective, the assumption that the stock is not publicly traded does not change the qualitative tax results–the election is still inefficient from a joint tax perspective. The hypothetical transactions that I used to isolate the tax consequences of the election were a heuristic designed to illustrate what, if any, was the tax cost of the election by equalizing the non-tax consequences. Even if these transactions are not feasible, the logic of the exercise still applies and the tax consequences are still as they were described above. The election exposes the appreciation that occurs prior to vesting to tax and is therefore jointly tax efficient.

[54] The employee might however be able to purchase additional shares from the employer. If so, then, as demonstrated for the base case above, the employee is better off purchasing

otherwise purchase shares, then the only way she can effectively increase her share holdings is by making the Section 83(b) election. Obviously, such an election will turn out well for the employee when the stock appreciates substantially and poorly when it does not. Once again, it seems misleading to describe whatever the result is as a tax consequence instead of a non-tax consequence of the employee's election..

As described above, when the employer's stock is not publicly traded, the election does not have only tax consequences, it also has real consequences for both the employer and the employee. If the employer cannot repurchase its own stock, the election will, in effect, increase the number of shares the employer has outstanding, and it will increase the cash the employer must invest somewhere. Similarly, if the employee cannot buy additional shares of the employer's stock, then the election is the only way she can increase her share holdings.[55]

In effect, when the employee makes the Section 83(b) election, she is forcing the government to sell back to her some of the shares it holds through the individual income tax system. As described above in the discussion of the base case, the employee, in making the election, can be thought of as purchasing t_p shares from the government and subjecting her original $(1-t_p)$ shares to capital gain tax. In addition, when the employee makes the election, she

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additional shares from the employer than making the election.

[55] There is an obvious potential for conflict between employer and employee when the parties share expectations. If they expect the stock to sharply appreciate, the employer is hurt by issuing more shares and the employee benefits by purchasing more shares. Conversely, if they both expect the stock to fail to keep pace with the market (appropriately adjusted for risk), then the employer benefits by issuing more shares and the employee is hurt by buying more shares.

is, by that action, forcing the employer to sell t shares to the government. Obviously, if the employee's personal tax rate and the employer's corporate tax rate are equal, the employer's sale of shares equals the employee's purchase, and the parties are jointly worse off by the election, which exposes the original after-tax grant to capital gain tax. Alternatively, if the personal tax rate exceeds the corporate tax rate, the government is a net seller of shares, and conversely. Thus, if the personal rate exceeds the corporate rate and the parties expect the firm's stock to appreciate sharply, then the election might be attractive to the parties jointly.[56]

The most obvious example where the parties expect the stock to appreciate substantially is when they report the value of the stock in amount less than they believe it is worth. Such a possibility is not plausible when the form's stock is publicly traded, but it is when it is privately held. Assume the reported value of the stock is D, which might not equal the market value P_0. In order to hold the employer harmless for losing a deduction on the difference between P_0 and D, which would be worth $(P_0 - D)t$, the employer reduces the employee's salary at grant by $(P_0 - D)$ $t / (1 - t)$. As a result, all of the benefits and costs of undervaluing the employer's stock and making the election go to the employee.

When the stock was publicly traded, I derived the tax consequences of the election by first eliminating all of the non-tax consequences through a series of transactions. Such

[56] Also, if the corporate rate exceeds the personal rate and the parties expect the stock to underperform, the election might again be jointly attractive. The second possibility is remote both because given current statutory rates, there is little opportunity for $t - t_p$ to be very large and restricted stock is unlikely to be used as compensation when the parties expect its price to fall.

transactions would not be possible here, because the stock by hypothesis is not publicly traded. That is why the parties can claim that the stock's value is different than its market value.[57] With that caveat, and solely in order to isolate the tax consequences, we should assume that it is hypothetically possible to engage in such offsetting transactions while declaring a value different than the market value. After such an exercise, the net benefit to the employer (and hence to the parties jointly) is given by:

$$(P_0 - D)(t_p - t_{cg}) + P_0 (t_p - t_{cg}) R - D t_p R (1 - t_{cg}) - (P_0 - D) t (1 + r)(1 - t_p) / (1 - t).$$

The first term is the reduced tax rate on the undervalued shares; the second term is the reduced tax on the appreciation; the third term is the tax on the return from making the election; and the fourth term is the salary adjustment.[58]

Note that if the personal and corporate tax rates are equal, then it is always costly for the parties to undervalue the employer's stock and make the election. Thus, undervaluing the stock and making the election can only be a jointly attractive strategy when the personal tax rate exceeds the corporate rate. In that case, the tax benefit is at a maximum when both t=0 and D=0. In that case, the above equation becomes $P_0 (t_p - t_{cg}) (1 + R)$, which has a ready interpretation. The maximum tax benefit from undervaluing the employee's stock is the product of the

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[57] If the stock were publicly traded it simply would not be feasible to report a different value under Section 83.

[58] Note that if $P_0 = D$, the first and last terms drop out leaving only the middle two terms. Those terms simplify to the cost of the election in the base case.

employee's capital gain preference and the expected value of the stock at vesting. Given current statutory rates, that is 20 percent. It can however be as large as 35 percent if the capital gain tax can be avoided. Thus, when the employer is effectively untaxed, there can be a large tax benefit from undervaluing the employer's shares and making the election.[59]

What about the incentive to either undervalue or overvalue the stock if the employee does not make the Section 83(b) election? Note that if the employee does not make the election, the value of the stock at the grant date will not have any tax consequences for the parties. Thus, the question becomes what incentives do the parties have for valuing the stock at vesting?

Consider the price at vesting (assuming that the employee has not made the Section 83(b) election). For the employer, the only deduction it ever gets on the stock occurs at vesting and is equal to tP_1. Thus, every dollar that the stock is undervalued costs the employer t. For the employee, the result depends upon how long she plans to hold the stock. Every dollar that the stock is undervalued converts $1 of ordinary income into $1 of capital gain and defers that gain from vesting until sale. If we denote the present value of the capital gains tax (as of the vesting

[59] Why then do employer's sell their shares to employees rather than just give them to them? Because the tax consequences are the same whether the stock is priced explicitly or implicitly when the employee makes the election, there must be another reason. My guess is that "sale" is being used to beef up the claim that the price paid is the market price. However, when sales are restricted and are part of a compensation package, such sales by themselves do not establish an independent sale price. There is however an incentive to use artificially low prices when the employer's effective marginal tax rate is low or zero.

date) by t_{cg}*,[60] the employee's saving is t_p - t_{cg}*. Thus, the joint benefit from undervaluing the employer's stock at the vesting date is -t + t_p -t_{cg}*. Hence, when t_{cg}* is close to the statutory tax rate (t_p) and the personal and corporate tax rates are close together, the parties have an incentive to overvalue rather than undervalue the stock at vesting. Alternatively, when the employer's effective marginal tax rate is close to zero, there can be a strong incentive for the parties to undervalue the employer's stock. As described above, this can also provide an incentive to make the Section 83(b) election.

IV. The Section 83(b) Election: The Option to Wait

The discussion, so far, has ignored the option to wait contained within Section 83(b). Section 83(b) allows the employee up to 30 days to make the election. If the employee makes the election, she pays tax on the value of the grant as of the grant date, which is in effect equivalent to purchasing additional shares. The election, thus, contains an option element because the new shares are not purchased at the market price at the time of the election, but rather at the price as of the grant date. More specifically, by making the election, the employee can purchase (t_p - t_{cg})/(1 - t_{cg}) shares for t_pP_0. That is equivalent to purchasing the additional shares at a per share price of [1 + t_{cg} (1 - t_p)/(t_p - t_{cg})]P_0. Since that is obviously more than P_0 (for t_{cg} > 0), the option is

[60] If the stock were sold at vesting, then t_{cg}* equals t_{cg}. If the statutory capital gains tax rate is constant, then t_{cg}* falls as the time until sale increases..

initially out-of-the-money.[61]

All option contracts require at least two parties – the party that holds the option and the party that writes the option. The latter is often called the counterparty because it cash flow flow from the option is the mirror image of the first party's. With the Section 83(b) election, the counterparty to the employee is not the employer, but the government. When the employee makes the election, the government, in effect, is forced to sell $(t_p - t_{cg})/(1 - t_{cg})$ shares back to the employee. The effective sale occurs because the government reduces its tax rate on the employee's shares from the ordinary tax rate to the capital gains tax rate.[62]

The employer has also written an option. Although triggered by the employee's election, the employer's counterparty is not the employee, but the government. Moreover, the option written by the employee does not mirror the employee's held option, either in terms of the number of shares covered or their stock price. The employer has written an option to sell t_p shares of the employer's stock for $t_p P_0$. Thus, the employer's option is said to be at-the-money.[63]

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[61] It is cheaper for the employee to purchase the shares directly on her personal account than indirectly through the election because the election exposes the return on $(1-t_p)$ shares that would not have been taxed until vesting to capital gains taxes when they are sold. It is that cost that accounts for the difference between the option's exercise price and the market price of the stock at grant.

[62] The government originally obtained these shares through the tax system. By imposing a tax of t_p on the employee and including the grant within income at vesting, the government in effect required the employee to transfer t_p shares to it.

[63] The difference in the strike prices goes to the federal government, which can tax the return on $(1-t_p)$ shares at the rate of t_{cg} only if the employee makes the election.

As with any held call, the employee'soptimal strategy is usually to hold the option until right before it expires and then decide whether or not to exercise.[64] Because the employee's option is initially out-of-the-money, the price of the stock must rise for the employee to find exercise desirable. If the stock price is below the exercise price when the option expires, the option will expire without ever being exercised. As with call options generally, the option is more valuable the more volatile is the price of the underlying stock and the longer the time until expiration (which by statute is no longer than 30 days).

How much is the 30-day option worth to the typical employee? Given current statutory tax rates, the strike price is roughly 50 percent above the grant price. Thus, for it to make sense for the employee to exercise her option, the stock price must increase by roughly 50 percent over the first month. That is unlikely to occur often and so the value of the option to wait before making the election is likely to be small. For example, for NASDAQ companies that have an annual volatility of about 60 percent, the Black-Scholes value of a one month call option with a strike price 50 percent above the current market price is less than .1% of the share price. That is to say, a one month call option on one share with a current market price of $100, a strike price of $150, and an annual volatility of $60, is worth less than 10 cents. However, as the capital gains rate declines, the hurdle rate falls. For $t_{cg} = 0$, the option is issued at-the-money and any increase will suffice. Of course, one way for the employee to reduce her capital gains tax rate, which is the effective tax rate (not the statutory tax rate), is to extend her holding period on the stock. If

[64] The principal exception is when the stock pays dividends, which I have assumed throughout this Paper does not occur.

she plans to hold the stock until death (or contribute it to charity), the appreciation is never taxed and so the effective capital gains tax rate is zero. For such a grantee from a typical NASDAQ company, the value of the option to wait is worth about 7 percent of the share price, or roughly $7 on each share of $100 restricted stock.

What then are the practical implications of the insight that Section 83(b) provides the employee with an option to wait. Given current statutory tax rates, for many employees, that option is nearly valueless. Although employees could drive down their exercise prices by holding onto their stock for long periods after vesting, there is a real economic cost to the employee in terms of increased exposure to the risks of holding her firm's stock–a risk to which most employees are already overexposed. There are however two groups who might find the option valuable. The first are members of the employer's board of directors, especially directors with substantial private wealth, who are employed elsewhere, and who serve on numerous boards. Such people are better able to diversify the risk from holding the additional shares for long periods of time.[65] The second group consists of grantees who intend to contribute their shares to charity. Because such stock is never subject to capital gains tax, such an employee should treat the option as if it were granted at-the-money.

Most employers ignore the employee's option to wait. Given the option's high strike price and short maturity, the employee's option has little value in most cases. Nonetheless, for

[65] Note however that anyone who planned to hold the stock indefinitely, would still have to pay personal level capital gain tax if the employer was acquired in a taxable transaction.

employers paying corporate income tax at 34 or 35 percent, the employee's option, if exercised, will usually cost the employer more than the employee benefits.[66] The employer then has several alternatives available to it if it wants to rein in this option element. If the employer does not want to transfer additional value to the employee, it could simply eliminate the employee's option to wait by requiring the recipient to commit in advance of receiving her shares either to make the election or not.[67] Alternatively, if the employer's concern was not with transferring value to its employee, but with the fact that some of that value goes to the government,[68] it could prohibit the employee from making the election (or at least waiting to make the election) and offer to sell her a fixed amount of additional shares anytime during the month at a set price. In effect, the employer would write the option explicitly, not implicitly through the tax law.

V. Conclusion

Restricted stock is well on its way to becoming the dominant form of equity-based pay. Yet in spite of both its importance and prominence, little attention has been paid to the question how should firms design their restricted stock grants in light of taxes. By employing a joint

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[66] The employer's cost and employee's benefit are equal when the employer's tax rate equals the employee's capital gain preference, which for employers and employees in their top statutory brackets requires that $t_{cg} = 0$.

[67] This possibility is suggested by Treas. Reg. § 1.83-2(b) (stating that the election may be filed prior to the date of transfer).

[68] If the option is exercised, the employer loses more than the employee benefits (for t_{cg} positive and $t = t_p$).

parties perspective and separating tax from non-tax consequences, I have begun to answer that question. Along the way, I have identified several issues that have heretofore been ignored in the literature and expanded on several of those that have previously been identified.

First, I have identified the issue whether the employer should charge the employee for her restricted shares explicitly or implicitly. That issue has no real consequences, only tax consequences. Relative to an explicit charge, an implicit charge defers both the employer's and employee's taxes. Accordingly, making the charge explicit is beneficial when the employer's tax rate exceeds the employee's ordinary income tax rate. In addition, if the grant price exceeds the vesting price, the employee receives basis for the difference, but the employer does not have an inclusion. That asymmetry is an additional benefit that can make the election (ex-ante) attractive, even if the employee's ordinary tax rate exceeds her employer's corporate tax rate.

Second, I have looked at the employee's option under Section 83(b) to treat the grant as if it vests immediately for tax purposes. In contrast with prior authors, who have considered this election solely from the perspective of the employee, I have taken a joint perspective. Such a perspective is appropriate because the employer can – as a condition of the grant – require, prohibit or otherwise restrict the election. Starting with the employer, if there is no explicit payment, the employer can offset both the tax and non-tax consequences of the employee's election by using the proceeds of the election to buy back its own stock. In such circumstances, the tax consequences of the election to the parties depends solely upon the consequences to the employee. For the employee, the election is undesirable because it exposes the after-tax grant to

tax from the vesting date. (In contrast, if she bought shares directly, she could purchase the same number of shares for the same amount without exposing her original grant to tax.) In such circumstances, the election does not make sense for the employee alone or the parties jointly. Furthermore, when it makes sense for the employer to explicitly charge the employee for her shares, the employee will usually benefit from the election at the expense of the employer. Moreover, in order for the parties to jointly benefit from making the payment explicit, the employer will be harmed more by the election than the employee benefitted. Thus, we would expect to see the election prohibited here. Interestingly, there is only one circumstance where the election is common. That is when the employer's stock is not publicly traded. In this circumstance, when the employer's tax rate is low or zero, and the parties are optimistic about the stock, they can benefit at the expense of the government from the election. Not surprisingly, this creates an incentive for the parties to report a low value for the stock.

Third, I have identified the employee's option to wait 30 days before making the Section 83(b) election. For employees in or near the top personal income tax bracket and who expect to pay capital gains taxes on the grant in the not too distant future, the strike price is so high (about 150 percent of the grant price) that the option is likely to have little value. However, for grantees who can avoid or at least substantially defer their capital gain taxes, the strike price is close to the grant price and the option is worth about 7 percent of the grant for a typical NASDAQ company.

Finally, most of the discussion in this paper – including the conclusion – has been at the level of the trees. Looked at from the forest, the lesson that should be drawn from this Paper is

that their can be significant value added by integrating tax planning into the design of equity-based pay programs.

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