

**Limiting executive compensation: the case of CEOs hired after the imposition of
162(m).**

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Abstract: This study analyzes the effect of Internal Revenue Code section 162(m) on the compensation package of CEOs. Research documents that CEO compensation has increased dramatically since the imposition of section 162(m), yet this research has not distinguished between the effects on the compensation of CEOs already in place when section 162(m) was imposed from those CEOs hired post-162(m) imposition. We focus our analysis on the compensation of CEO's hired after the imposition of section 162(m) because firms have an opportunity at that point to redesign the executive pay package. Consequently, we posit that section 162(m) will have its greatest effect when the affected companies change CEOs. In addition, we examine the individual components of the compensation package because section 162(m) can lead to differential effects on the individual components of the package. These effects can be obscured when the components are combined. In general, our results are consistent with section 162(m) restraining the compensation of CEOs appointed after section 162(m) was imposed in those firms predicted to be most affected. Our analysis also provides some evidence of an increase in the sensitivity of firm performance and pay for these CEOs. One implication of our results is that the impact of a tax provision such as section 162(m) is not immediate, but delayed, until firms have the opportunity to negotiate contracts with new CEOs.

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I. Introduction and Motivation

The Revenue Reconciliation Act of 1993 added Internal Revenue Code (IRC) section 162(m) limiting corporate tax deductions for executive compensation. This provision was designed to curb executive compensation in response to the growing concern about the perceived link between the international competitiveness of United States industry and the substantial salaries paid to United States executives (Brownstein and Panner 1992). Critics of executive pay (see for example Crystal 1992, McCarroll 1993) argued that it was excessive, both in comparison to that paid lower level employees and that paid overseas executives; and that executives were setting their own pay with no shareholder input. Congress believed that section 162(m) would reduce excessive, non-performance based compensation (U.S. Congress, House 1993).

With the intent of reducing such compensation and/or making it more responsive to firm performance, this IRC section limited the corporate tax deduction for executive compensation to \$1 million per individual but provided an exception for excess compensation that is based on performance schemes pre-approved by shareholders. Given the fact that this IRC provision was enacted to engineer social policy; specifically, to affect corporate executive compensation policy, the obvious issue is: has it done so? For example, has executive pay decreased since 1993? The answer appears to be no. Surveys and studies document that CEO compensation has risen substantially since the enactment of section 162(m). (E.g. Lublin 2003, Balsam 2002, Perry and Zenner 2001). These studies, however, did not distinguish between the compensation of executives hired after the imposition of

section 162(m) from those already in place. Materially changing the compensation package of executives to conform to IRC section 162(m) will provide benefits to the firm (e.g., tax savings from claiming the compensation deduction), but may mean a significant shift in the inherent risk of the executive's compensation package. Consequently firms and executives may be reluctant to make the change.¹ On the other hand, firms may be willing and better able to adapt the executive compensation package when hiring new executives. In this paper, we focus our analysis on this latter group of executives. This paper continues in Section 2 with a discussion of section 162(m) and the results of studies and surveys on the efficacy of section 162(m). Section 3 discusses the model and our expectations, while section 4 discusses our sample and data. The empirical results are reported in section 5 and the conclusions are in section 6.

II. IRC section 162(m)

Internal Revenue Code section 162(m) places a \$1 million cap on the annual deduction for compensation to the chief executive officer (CEO) and the next four highest compensated officers. Executive compensation generally consists of salary, fringe benefits, annual cash incentives, and long-term cash or stock-based incentives. The section 162(m) limit does not apply to (1) commissions, (2) non-taxable fringes and qualified retirement plan contributions, and (3) performance-based compensation.

¹ Balsam and Ryan (1996) examined the propensity of firms to conform their short-term bonus plans to the section 162(m) requirements. They find approximately half of the firms in their sample chose not to modify their executive compensation schemes, and that many of those that did qualify expressly stated that they reserved their right to pay nondeductible compensation. Consistent with the latter, Balsam and Yin (2005) examine the deductibility of compensation under section 162(m) finding that many firms forfeit deductions even though they qualify one or more compensation plans.

Prior to the imposition of section 162(m), most companies professed to tie short- and long-term incentive compensation to performance; however, compensation committees had substantial discretion in awarding compensation. To qualify for the performance-based exception under section 162(m), companies must develop a performance-based compensation plan that is based on the executive's attainment of one or more performance goals that were established *ex-ante* by a compensation committee composed of independent directors. The performance goals must be based on objective formulae and the material terms of the plan must be disclosed to and approved by shareholders. The compensation committee, which has the discretion to award less, but not more than the objectively determined amount, must certify that the performance goals have been met before payment is made. Any compensation awarded by the committee based on discretionary assessments of performance in excess of the objectively determined amounts is not deductible on the corporate tax return.

By definition, salary will not qualify as performance-based since it is not contingent on the attainment of any criteria. Thus, any salary amounts earned in excess of the cap are not deductible unless payment is deferred until after the executive's retirement. Annual cash bonuses will qualify under the performance based exception as long as the firm adopts and adheres to a bonus plan consistent with the section 162(m) requirements discussed above. Similarly, long-term compensation in the form of restricted stock awards will qualify only if it is granted as a result of attaining performance goals. Under 162(m), an employer can condition the grant of restricted stock on achievement of performance goals, or the employer can grant restricted stock with vesting contingent of performance goals. On the other hand, long-term compensation in the

form of stock options easily qualifies as performance-based under the regulations as long as the options have exercise prices equal to or greater than the market price at the time the award is made and the plan states the maximum number of shares that can be granted during a specified period. Thus, the compensation committee still has considerable discretion in awarding stock option compensation.

There is ample evidence that IRC section 162(m) has not had the intended impact on firm behavior. Research has shown that CEO compensation has risen, on average, post section 162(m). Perry and Zenner (2001) document increases in all components of the compensation package after 1993, with the largest increase in performance related components (bonus and stock option grants). They also document that more than half of the CEOs earning a salary in excess of the million dollar cap from 1992 to 1997 received a salary increase in the subsequent year. Balsam (2002) provides a lengthy discussion of the change in magnitude and composition of the CEO compensation package using data from the Execucomp database. He also shows that all components of CEO compensation have increased dramatically in the 1990s and notes that "... mean (median) total compensation increased from \$1,689,000 (\$997,000) in 1992 to \$8,466,000 (\$3,188,000) in 2000, an increase of 401% (220%)" (Balsam 2002, 49).² More recently, the *Wall Street Journal* reported a substantial increase in CEO compensation in 2002. "CEOs' total direct compensation jumped 15% to a median of \$3,022,505 in 2002, according to a proxy analysis...." (Lublin 2003, B1). Perhaps most interestingly, Harris and Livingstone (2002) examined firms whose CEOs earned less than \$1 million, the "unaffected firms", and found

² See Balsam (2002) pages 45 to 53 for more detail on the magnitude and relative composition of CEO compensation.

section 162(m) had the perverse effect, because it set a target, of raising the compensation of those CEOs.

It seems clear that research and anecdotal reports show that section 162(m) has not lead to a reduction in executive compensation. While the 162(m) legislation clearly had its roots in concerns about excessive compensation paid to top corporate executives, the final legislation allowed the exception for compensation tied to performance. Thus, while overall executive compensation has continued to increase, an important question is whether it has become more sensitive to company performance. The extant research provides contradictory evidence on this question. Perry and Zenner (2001) report an increased sensitivity of compensation to performance after 1993. They conclude (478), “there is a stronger relation between bonus payments and/or total pay and stock returns post-1993, and that this relation is significantly more pronounced for firms that are more likely to be affected by the regulations.” Similarly, Rose and Wolfram (2000, 201) provide some evidence that the 162(m) limit “has led firms near the \$1 million cap to restrain their salary increases and perhaps to increase the performance components of their pay packages.”

However, in a later paper, Rose and Wolfram report a different result. They (2002, S138) write “There is little evidence that the policy significantly increased the performance sensitivity of chief executive officer (CEO) pay at affected firms. We conclude that corporate pay decisions have been relatively insulated from this policy intervention.” Rose and Wolfram acknowledge that their results differ from earlier studies and they attribute the differences to methodological issues, including differences in how the studies have identified “affected” firms and executives; differences in the construction of samples; and differences in the specification of compensation equations.

There is also some anecdotal evidence suggesting that the 162(m) provision is ineffective. The *Wall Street Journal* reported that some companies are choosing to change plans in midyear, when “it becomes clear that they won’t hit the original targets.” (Drucker 2004, C1). The report cited announcements by AT&T Wireless, Cigna Corporation, Prudential Financial, Inc., and Campbell Soup Company.

In summary, what do we know about the efficacy of section 162(m) from the extant research? First, it has not led to a reduction in CEO compensation. Second, there is contradictory evidence on whether it has increased the sensitivity of the relation between executive pay and firm performance. The purpose of this study is to address the mixed results in the literature. We focus our analysis on CEO’s hired after the imposition of the section 162(m) limits. This provides a more powerful setting to examine the efficacy of section 162(m).

Why examine the compensation of CEOs hired after the imposition of 162(m)? Based on inertia, and perhaps the power of the CEO relative to the Board itself, the possibility exists that the effect of section 162(m) will best be observed when a new CEO takes over and the Board has the opportunity to draw up a new contract. That is, Boards may be unable or reluctant to change the material terms of the compensation package of CEOs already in place because such changes significantly shift the inherent risk of the CEO's compensation package. Furthermore, the literature shows that CEO compensation increases with CEO tenure and decreases in the percentage of Board members who preceded the CEO on the Board (Core et al. 1999, Main et al. 1995, Hill and Phan 1991, Wade et al. 1990)³. These studies document that with increasing tenure a CEO is able to

³ Core et al. (1999) find that compensation increases when the CEO has influence over the outside directors, as measured by the percentage of outside directors appointed by the CEO. Main et al. (1995)

influence the Board and hence influence his or her compensation package. Under the “influence hypothesis,” the CEO is said to gain influence over the Board because he or she generally nominates new Board members and, as time passes, most of the Board become loyal to the CEO.

However a new CEO would not have this “influence” over the Board. Further, there would be no shift in the inherent risk of an executive’s compensation package when that executive is initially appointed. In the initial compensation negotiations, the Board has the opportunity to include performance criteria and to draft a compensation package that reflects the requirements of IRC section 162(m). We therefore posit in this study that, all else being equal, the compensation of CEOs hired after 1994 will be more responsive to firm performance than the compensation of CEOs already in place.

Determining the efficacy of section 162(m) with respect to the pay-performance relation is problematic for a number of reasons. One major issue is that each component of the compensation package may have different drivers, and firm performance may or may not be one of those drivers. To illustrate, consider how salary and stock options respond to firm- specific performance. In general, the salary component of an executive's compensation package will have upside potential, but not downside potential except in rare and unusual circumstances. While a Board will increase an executive's salary in response to improved firm performance, rarely does the Board reduce the salary in the face of deterioration in firm performance. For example, Balsam (2002) finds that 70 percent of CEOs of the poorest performing firms (i.e., firms in the lowest decile with respect to change in income) received

found that CEO compensation was higher when the CEO’s tenure was greater than that of the chair of the compensation committee. Hill and Phan (1991) find that the relation between the change in CEO cash compensation and stock returns weakens with tenure. Wade et al. (1990) found the greater the percentage of outside board members appointed after the CEO, the more likely the CEO will have a golden parachute.

a salary increase, while only ten percent received a salary decrease. The stock option component, while ostensibly performance based, i.e., it is only valuable if the company's share price increases, may be increasing post-section 162(m) solely as a result of the bull market and not because of firm performance. For example, large grants and payouts have been observed for poorly performing firms. Boards may choose to grant large stock option awards to top executives in such poorly performing firms to motivate improved performance. Thus, *ex-ante* measurements of stock option compensation using Black-Scholes values will not be related to performance under such circumstances

In contrast, because firms can, and many have taken steps to qualify their cash bonus plans, and doing so requires an *ex-ante* link between bonus and firm performance, this relationship may become stronger after section 162(m). Still, significant cross-sectional heterogeneity in the use of performance thresholds and criteria (and the allowable use of negative discretion) may make it difficult to find such a relationship⁴. Hence, any change in the compensation package of the CEO may differ across the various components as well as on whether the CEO was appointed before or after the imposition of section 162(m). For these reasons, we examine the components of CEO compensation separately.

III. Model and Expectations

The primary focus of this study is to examine the effect of section 162(m) on newly hired CEOs in those firms affected and potentially affected by this tax law change. The form of the preexisting compensation package influences the extent to which firms are affected. Firms paying their CEO \$1 million or more in salary are most affected. Absent a

⁴ Perry and Zenner (2001) examine a random sample of 200 companies and document performance measures used. They report that most companies use some form of financial performance measure, but the

grandfathered contract executed prior to February 17, 1993, salary in excess of \$ 1 million cannot be deducted. Firms paying their CEO less than \$1 million in salary, but more than \$1 million when annual cash bonuses are included are also affected. However, as discussed above, these firms have the option of qualifying their bonus plans as performance based, hence exempting this compensation from the limit on deductions. Finally, firms that pay their CEO less than \$1 million in cash compensation (primarily salary and bonus), but more than \$1 million when stock option grants are included are minimally affected. This is because stock options grants, as long as they are issued at or above the current market price, are considered performance-based. While the firm must qualify these plans, most can do so without changing the associated incentives or risks. In contrast, reducing salary or qualifying bonus plans can change the incentives and risks of managers. Thus, firms paying cash compensation in excess of or near to the \$1 million limit are most affected and are our primary focus⁵. Similar to Rose and Wolfram (2002), we use an *ex-ante* measure to identify CEOs likely to be affected by section 162(m). Rose and Wolfram (2002) argue that using current compensation or lagged compensation to define affected CEOs introduces biases, in that the researcher misses firms that have changed/reduced their compensation in response to section 162(m).

We use a fixed effects, pooled regression model similar to Perry and Zenner (2001) to test our proposition that the compensation of CEOs hired after the imposition of 162(m) in affected firms will be lower and be more responsive to firm performance than the compensation of other CEOs. We adapt the model to allow for differential effects for CEOs hired after the imposition of 162(m).

measures used vary widely.

⁵ Rose and Wolfram (2002) also use cash compensation to define affected. They argue that to use other

$$\begin{aligned}
\text{Ln}(\text{Compensation}_{x,t}) = & \alpha_0 + \alpha_1 \text{Ln}(\text{CEO tenure}_{x,t}) + \alpha_2 \text{Ln}(\text{Assets}_{x,t}) \\
& + \sum \alpha_{3-5} \text{Performance measures}_{x,t} \\
& + \sum \alpha_{6-8} \text{Performance measures}_{x,t-1} \\
& + \alpha_9 \text{Million dollar variable}_{x,t} + \alpha_{10} \text{New}_{x,t} \\
& + \sum \beta_{1-3} \text{Million dollar variable}_{x,t} * \text{Performance measures}_{x,t} \\
& + \sum \beta_{4-6} \text{Million dollar variable}_{x,t} * \text{Performance measures}_{x,t-1} \\
& + \sum \gamma_{1-3} \text{New}_{x,t} * \text{Performance measures}_{x,t} \\
& + \sum \gamma_{4-6} \text{New}_{x,t} * \text{Performance measures}_{x,t-1} \\
& + \delta \text{Million dollar variable}_{x,t} * \text{New}_{x,t} \\
& + \sum \chi_{1-3} \text{Million dollar variable}_{x,t} * \text{New}_{x,t} * \text{Performance measures}_{x,t} \\
& + \sum \chi_{4-6} \text{Million dollar variable}_{x,t} * \text{New}_{x,t} * \text{Performance measures}_{x,t-1} \\
& + \text{Year dummies} + \text{Firm dummies} + \varepsilon_t \quad (1)
\end{aligned}$$

The dependent variables are: $\text{Salary}_{x,t}$, the natural log of salary of the CEO in company x for year t; $\text{Bonus}_{x,t}$, the natural log of the annual bonus of the CEO in company x for year t; $\text{TCC}_{x,t}$, the natural log of total cash compensation, the sum of salary and bonus of the CEO in company x for year t; $\text{ESO}_{x,t}$, the Black-Scholes value of stock options granted to the CEO in company x in year t; and $\text{TDC}_{x,t}$, the total direct compensation of the CEO in company x for year t.

The independent variables are:

Ln(CEO tenure_{x,t}) = the natural log of the number of years the CEO has been in his/her position as of year t ;

Ln(Assets_{x,t}) = the natural log of the company's total assets in year t;

Million dollar variable_{x,t} = an indicator variable taking the value of 1 if predicted cash compensation (salary plus bonus) of the CEO in company x in any preceding year exceeds \$1,000,000, and zero otherwise. Predicted cash compensation is

measures are either inappropriately narrow (e.g., salary only) or too broad (e.g., total compensation).

calculated using 1992 cash compensation as the base year and adjusting it for the average increase between year t and 1992

$New_{x,t}$ = an indicator variable taking the value of 1 if the CEO was hired after the imposition of I.R.C. section 162(m);

Performance measures

$ROA_{x,t}, ROA_{x,t-1}$ = net income before extraordinary items and discontinued operations of company x in years t and t-1, divided by total assets;

$\Delta \ln(\text{Sales}_{x,t}), \Delta \ln(\text{Sales}_{x,t-1})$ = the change in the natural log of sales of company x in years t and t-1;

Holding period returns $_{x,t}$, Holding period returns $_{x,t-1}$ = 1 year return to shareholders of company x in year t and t-1;

and **fixed effects** to control for firm and year.

The model enables us to test for the effect of 162(m) on the compensation package of CEOs hired post section 162(m) in affected firms. The coefficient associated with the indicator variable, New , measures the differential in compensation for those CEO's appointed after section 162(m) was imposed and the coefficient associated with the indicator variable, Million dollar variable, measures the differential compensation for those CEOs in firms most likely affected by the section 162(m) cap. The variables of primary interest in these models are the two-way interaction [$\text{Million dollar variable} * \text{new}$], which measures the incremental effect of section 162(m) on the level of compensation and the three-way interactions: [$\text{Million dollar variable} * \text{New} * \text{Performance variables}$] which measure the incremental effect of section 162(m) on the pay-performance relation for new CEOs in affected firms. Like Perry and Zenner (2001), we include both current and lagged income measures in the model because most firms consider firm income in determining CEO compensation (e.g., Boshen and Smith 1995; Jensen and Murphy 1990). We also include the change in current and lagged sales and 1 year shareholder returns.⁶ The coefficient on the two-way interaction, δ , tests the incremental level of pay, and the coefficients associated with the three-way interactions, χ , test the incremental pay to performance sensitivity of

⁶ In a sample of 200 companies, Perry and Zenner (2001) document that about one third of the sample

CEOs appointed post 162(m) in affected firms. If the unconditional compensation of CEOs appointed post-162(m) is reduced, we expect $\delta < 0$ and if the compensation of CEOs appointed post-162(m) is more sensitive to firm performance, we expect $\chi > 0$. This effect should be most pronounced for the annual bonus component of compensation because most firms claim to tie the bonus to firm performance.

We include CEO tenure to control for individual effects, such as experience. According to prior research (Gibbons and Murphy, 1992; Lewellen et. al., 1987) a CEO's years as CEO are related to his or her compensation. Total assets as well as firm and year dummy variables are included to control for size and year effects.

IV. Sample and Data

Sample Selection

We use data from the Standard & Poor's ExecuComp for the analysis. The ExecuComp database takes advantage of the expanded disclosures required by the Securities and Exchange Commission in 1993 and provides a fairly complete array of data items. Because less precise disclosure was required prior to 1993, it would be difficult, if not impossible to collect the same array of data for prior years. The database contains 144,108 firm year observations of executives' compensation over the period 1993 to 2004. As previously mentioned, we calculate predicted cash compensation to determine the "million dollar variable" using 1992 data. Because there is very little 1992 data in the ExecuComp database, we manually examined the proxy statements of over 1,300 firms to obtain 1992 CEO compensation data.

We eliminate all non-CEO observations and limit the observations to periods after 1994, the period after section 162(m) went into effect. We further require data be available

use some form of sales and about 20 percent use shareholder returns.

for the date that the CEO was appointed. We drop observations where the CEO's appointment was not effective on the first day of the firm's fiscal year because we do not know if that CEO's compensation is for a full or partial year. For the same reason, we drop the last year of a CEO's tenure. Unfortunately the day of appointment is not available on ExecuComp for most CEO appointments.⁷ Given this condition, the vast majority of CEOs hired in 1994 would enter our sample in 1995. To avoid having an unrepresentative sample, i.e., few CEOs classified as NEW in 1994, we choose to use 1995 as the first year for our analysis. After accounting for other missing data, the resulting sample consists of 7,051 firm year observations. Table 1 provides a summary of the sample.

Insert table 1 here

Descriptive Statistics

Table 2 shows the incidence of affected firms and newly hired CEOs in the sample. Panel A shows that about 50 percent (3,545) of the firm year observations were for CEOs hired after the imposition of 162(m). It also shows that overall about seventy percent of the firm year observations (4,903) were defined as affected by 162(m), with the percentage of affected observations increasing with time. Panel B shows that the percentage of affected firms has increased over time. This is consistent with reported compensation surveys which show executive compensation increasing throughout the 1990's. Panel C shows the distribution of the sample between new and "seasoned" CEOs by year.

Table 3 provides descriptive statistics for the sample⁸. The mean (median) salary is \$687,038 (\$656,666), mean (median) bonus is \$762,905 (\$472,500), mean (median) value

⁷ We examined the proxy statements of a sub-sample of firms with newly hired CEOs to determine if the CEO's compensation was for a full or partial year. In most cases, the CEO's start date was unclear; thus, we were not able to determine if the CEO's compensation was for a full or partial year.

⁸ The data has been winsorized at two standard deviations to control for outliers.

of stock options granted is \$2,152,190 (\$702,219), and mean (median) total direct compensation is \$4,692,560 (2,563,740). The table also provides the mean and median values for the explanatory variables.

Insert tables 2 and 3 here

V. Regression Analysis

Tables 4 through 8 give the regression results (coefficients of the independent variables and p-values) for the model. Table 4 provides the results for salary, table 5 the results for bonus, table 6 the results for total cash compensation, table 7 the results for the Black-Scholes value of stock options granted, and table 8 the results for total direct compensation. The first order variables are all one-sided, expect for new. The expected sign is positive for the million dollar variable, CEO tenure, and the performance variables. There is no sign prediction for new, so it is two sided. The two-way interactions with the million dollar variable are also one sided; the expectation for all is also positive. The two way interactions between new and the performance variables are two sided because we do not predict how new and unaffected (the million dollar variable is 0) affects the relation between pay and performance. The two-way for new times the million dollar variable is expected to be negative. The three-way interactions (performance variables, million dollar variable, and new) are all one sided and expected to be positive.

In general and consistent with prior research, we observe the following across the five regressions, (1) CEO compensation increases with tenure (the coefficient associated with CEO tenure is significant and positive in all of the regressions except for bonus); similarly, CEOs managing larger firms earn more compensation (the coefficient of the log

of assets is significant and positive in five of the six regressions); (3) CEOs hired after the imposition of section 162(m) tend to earn more compensation, on average, than CEOs already in place (the coefficient associated with the variable, new, is significant and positive in the salary, stock option and total direct compensation regressions), and (4) CEOs in firms predicted to be most affected by section 162(m) do not necessarily earn more compensation than other CEOs (the million dollar variable is significant and positive only for the salary and total cash compensation regressions).

In table 4, consistent with our expectations, we observe that the two-way interaction (new times the million dollar variable) is significant and negative. This is particularly interesting given the fact that the main effect for the variable, new, is significant and positive. This later result implies that, on average, CEOs hired after the imposition of section 162(m) earn more than their counterparts hired prior to 162(m). But, the significant and negative coefficient associated with the two-way interaction suggests that new CEOs (those hired post 162(m)) in affected firms earn less, on average, than their counterparts. This provides evidence of the efficacy of section 162(m) in restraining the non-performance component (salary) of CEO compensation in firms predicted to be affected by this tax provision. There is less evidence to suggest that 162(m) increased the pay-performance sensitivity of salary compensation. While the results show that salary is positively related to firm performance as measured by current and lagged ROA and the lagged change in sales, only one of the three way interactions (new times million dollar variable times performance measures) is significant. The interaction of lagged change in sales with new and the million dollar variable is marginally significant and positive. In summary, there is evidence that the salaries of CEOs hired post 162(m) in firms predicted to be affected have been restrained;

but there is limited evidence that the salaries of CEOs hired after 162(m) are more sensitive to firm performance than that of other CEOs.

Insert table 4 here

The results in table 5 provide evidence that CEOs' bonus compensation is related to firm performance measures. The coefficients associated with five of the six performance variables are significant and positive, including current period ROA, current and lagged change in sales and shareholder returns. However, similar to the results in table 4, we see that only one of the three way interactions is significant. Contemporaneous income (ROA) times million dollar variable times new is positive and significant. This provides limited evidence of an increase in performance sensitivity for CEOs hired in affected firms post-162(m). In addition, the two-way interaction (million dollar variable times new) is negative but not significant. It is also insignificant for the main effects of the variable, new as well as the million dollar variable. These results imply that the amount of bonus compensation of CEOs in affected firms hired after the imposition of 162(m) is not significantly different from that of other CEOs.

Insert table 5 here

The results in table 6, where the dependent variable is total cash compensation, mirror those in tables 4 and 5. Across all firms, CEO total cash compensation is positively related to firm performance (five of the six performance measures are significant and positive). With respect to CEOs hired post 162(m) in affected firms, the results show that they earn less cash compensation, on average, than other CEOs. However, the results show that there is only limited evidence to suggest a greater sensitivity of cash compensation to firm performance for those CEOs.

Insert table 6 here

An interesting result in table 7 is the significant and positive coefficient associated with the variable, new. The result is especially interesting in light of the fact that the two-way interaction variable (new times million dollar variable) is not significant. This supports the proposition that firms make significant grants of stock options when hiring new CEOs.

Table 8 shows that, across the entire sample, CEO total direct compensation is related to firm performance. The coefficients of five of the six performance measures are significant and positive. In addition, the coefficient associated with the variable, new, is positive and significant. This implies that new CEOs earn more compensation, on average, than their more seasoned counterparts. As discussed above, this may be a function of stock option grants made to CEOs early in their tenure. On the other hand, the coefficient associated with the two-way interaction, (new times the million dollar variable) is significant and negative. This is consistent with our expectation and demonstrates that the total compensation of CEOs hired after the imposition of section 162(m) in firms predicted to be affected is reduced relative to other CEOs. Furthermore, there is some evidence of an increase in the pay performance sensitivity for new CEOs in affected firms. Two of the three-way interactions (million dollar variable times new with lagged income (ROA) and lagged change in sales) are significant and positive.

Insert tables 7 and 8 here

VI. Conclusion

This paper examined the effect of the adoption of IRC section 162(m) on the CEO compensation package. Although section 162(m) was intended to curb CEO compensation, published survey data shows that all components of CEO compensation have increased dramatically during the period since its adoption. These surveys suggest that 162(m) has had no appreciable effect on CEO compensation. In this paper, we focus our analysis on the compensation of CEOs hired after the imposition of section 162(m) in those firms predicted to be affected by this tax provision. We believe that focusing on the compensation of CEOs hired after the imposition of 162(m) provides a more powerful setting for observing the efficacy of 162(m). We posit that 162(m) will be more effective for these CEOs because firms have more flexibility to structure compensation to the requirements and spirit of section 162(m) when designing a new contract. Our results, based upon regression analysis, indicate that the compensation of these CEOs has been constrained in comparison to their peers and that there is some evidence of an increase in the sensitivity of firm performance and pay for these CEOs. One implication of our results is that the impact of a tax provision such as section 162(m) is not immediate, but delayed, until firms have the opportunity to negotiate contracts with new CEOs.

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TABLE 1
Sample Selection

CEO observations on the Execu Comp during the period 1995-2004	16,028
Less: Firms without data on 1992 cash compensation	(7,405)
Less: Missing date of becoming CEO	(257)
Less: First or last year as CEO	(1,278)
Less: Missing other variables	(37)
Total firm-year observations used in the regression	7,051

TABLE 2

Panel A: Frequency of New by Million dollar variable

	Predicted Cash Comp < \$1million	Predicted Cash Comp > \$1million	Total
New = 0, CEO hired pre 162(m)	1,291	2,215	3,506
New = 1 CEO hired post 162(m)	857	2,688	3,545
Total	2,148	4,903	7,051

Panel B: Frequency of Million dollar variable by Year

Year	Predicted Cash Comp < \$1million	Predicted Cash Comp > \$1million	Total
1995	357	391	748
1996	331	446	777
1997	269	503	772
1998	278	517	795
1999	211	539	750
2000	182	521	703
2001	187	518	705
2002	181	549	730
2003	121	570	691
2004	31	349	380
Total	2,148	4,903	7,051

Panel C: Frequency of New by year

Year	New = 0, CEO hired pre 162(m)	New = 1, CEO hired post 162(m)	Total
1995	657	91	748
1996	592	185	777
1997	521	251	772
1998	457	338	795
1999	381	369	750
2000	295	408	703
2001	220	485	705
2002	178	552	730
2003	148	543	691
2004	57	323	380
Total	3,506	3,545	7,051

Where $New_{x,t}$ = an indicator variable taking the value of 1 if the CEO was hired after the imposition of I.R.C. section 162(m); and Million dollar variable $_{x,t}$ = an indicator variable taking the value of 1 if predicted cash compensation (salary and bonus) of the CEO in company x is greater than \$1,000,000, and zero otherwise;

TABLE 3
Descriptive Statistics
(n=7,051)

Panel A: The whole sample

Variables	Mean	Std Dev	1 st Quartile	Median	3rd Quartile
Salary	687.038	295.106	461.300	656.666	900.000
Bonus	762.905	884.807	152.873	472.500	1029.150
Total Cash Compensation	1457.190	1077.910	699.500	1117.280	1899.150
Black Scholes Value of Option Grants	2152.190	3816.750	81.231	702.219	2356.500
Total Direct Compensation	4692.560	5888.190	1224.810	2563.740	5517.740
CEO tenure	7.213	6.136	2.000	5.000	10.000
Assets	11133.500	24701.440	722.421	2263.600	8727.260
ROA	0.046	0.074	0.016	0.044	0.082
Change in Sales	405.365	2920.770	0.000	31.989	241.001
Holding Period Returns	0.204	0.549	-0.090	0.144	0.385

Where compensation variables are in thousands, assets and change in sales are in millions, tenure is in years, and ROA and holding period returns are in percentage terms. Variables are as originally reported, i.e., not in constant dollars.

TABLE 4
Regression results

Dependent variable is Ln(Salary)

<i>Explanatory Variables</i>	<i>Coefficient</i>	<i>P-Value</i>
Constant	3.6690	<.0001
Ln (CEO tenure)	0.0482	<.0001
Ln (Assets)	0.1531	<.0001
ROA_t	0.0013	0.0132
ROA_{t-1}	0.0017	0.0068
ΔLn (Sales)_t	0.0022	0.4338
ΔLn (Sales)_{t-1}	0.0710	0.0091
Holding period returns_t	-0.0248	0.9994
Holding period returns_{t-1}	-0.0117	0.9268
ROA_t times million dollar variable	-0.0005	0.7861
ROA_{t-1} times million dollar variable	-0.0015	0.9793
ΔLn (Sales)_t times million dollar variable	-0.0468	0.9862
ΔLn (Sales)_{t-1} times million dollar variable	-0.0765	0.9644
Holding period returns_t times million dollar variable	0.0341	0.0027
Holding period returns_{t-1} times million dollar variable	0.0151	0.1098
Million dollar variable	0.0783	<.0001
New	0.0730	0.0003
ROA_t times new	-0.0014	0.0681
ROA_{t-1} times new	-0.0009	0.3270
ΔLn (Sales)_t times new	0.0060	0.8056
ΔLn (Sales)_{t-1} times new	-0.0973	0.0462
Holding period returns_t times new	0.0205	0.1010
Holding period returns_{t-1} times new	0.0127	0.3377
Million dollar variable times new	-0.0913	<.0001
ROA_t times million dollar variable times new	0.0010	0.1108
ROA_{t-1} times million dollar variable times new	0.0011	0.1121
ΔLn (Sales)_t times million dollar variable times new	-0.0301	0.8059
ΔLn (Sales)_{t-1} times million dollar variable times new	0.0904	0.0763
Holding period returns_t times million dollar variable times new	-0.0286	0.9454
Holding period returns_{t-1} times million dollar variable times new	-0.0192	0.8555

Note: The first order variables are all one-sided, except for new. The expected sign is + for the million dollar variable, CEO tenure, and the performance variables. There is no sign prediction for new, so it is two sided. The two-way interactions with the million dollar variable are also one sided, the expectation for all is also +. The two way interactions between new and the performance variables are two sided because we do not predict how new and unaffected affects the relation between pay and performance. The two way for new times the million dollar variable is expected to be negative. The three-way interactions (performance variables, million dollar variable, and new) are all one sided and expected to be positive.

TABLE 5
Regression results

Dependent variable is Ln(Bonus)

<i>Explanatory Variables</i>	<i>Coefficient</i>	<i>P-Value</i>
Constant	4.5395	0.0063
Ln (CEO tenure)	-0.0880	0.9452
Ln (Assets)	0.0952	0.1140
ROA_t	0.0234	<.0001
ROA_{t-1}	-0.0101	0.9412
ΔLn (Sales)_t	0.3375	0.0034
ΔLn (Sales)_{t-1}	0.6070	0.0168
Holding period returns_t	0.4860	<.0001
Holding period returns_{t-1}	0.5186	<.0001
ROA_t times million dollar variable	-0.0062	0.8540
ROA_{t-1} times million dollar variable	0.0062	0.1834
ΔLn (Sales)_t times million dollar variable	0.0965	0.3164
ΔLn (Sales)_{t-1} times million dollar variable	-0.5942	0.9300
Holding period returns_t times million dollar variable	0.6412	<.0001
Holding period returns_{t-1} times million dollar variable	-0.0127	0.5434
Million dollar variable	0.0827	0.2454
New	-0.0530	0.7838
ROA_t times new	-0.0112	0.1280
ROA_{t-1} times new	0.0166	0.0475
ΔLn (Sales)_t times new	0.2674	0.2471
ΔLn (Sales)_{t-1} times new	0.2995	0.5181
Holding period returns_t times new	0.0305	0.7975
Holding period returns_{t-1} times new	-0.3511	0.0052
Million dollar variable times new	-0.1000	0.2607
ROA_t times million dollar variable times new	0.0104	0.0927
ROA_{t-1} times million dollar variable times new	-0.0155	0.9597
ΔLn (Sales)_t times million dollar variable times new	-0.1305	0.6534
ΔLn (Sales)_{t-1} times million dollar variable times new	-0.2115	0.6377
Holding period returns_t times million dollar variable times new	-0.3823	0.9880
Holding period returns_{t-1} times million dollar variable times new	-0.0418	0.5958

TABLE 6
Regression results

Dependent variable is Ln(Total Cash Compensation)

<i>Explanatory Variables</i>	<i>Coefficient</i>	<i>P-Value</i>
Constant	4.0130	<.0001
Ln (CEO tenure)	0.0442	<.0001
Ln (Assets)	0.1837	<.0001
ROA_t	0.0049	<.0001
ROA_{t-1}	-0.0013	0.8428
ΔLn (Sales)_t	0.0473	0.0277
ΔLn (Sales)_{t-1}	0.1610	0.0023
Holding period returns_t	0.0527	0.0002
Holding period returns_{t-1}	0.0718	<.0001
ROA_t times million dollar variable	-0.0008	0.7395
ROA_{t-1} times million dollar variable	0.0008	0.2705
ΔLn (Sales)_t times million dollar variable	0.0222	0.2900
ΔLn (Sales)_{t-1} times million dollar variable	-0.1531	0.9723
Holding period returns_t times million dollar variable	0.1791	<.0001
Holding period returns_{t-1} times million dollar variable	0.0576	0.0065
Million dollar variable	0.0348	0.0722
New	0.0456	0.2348
ROA_t times new	-0.0032	0.0274
ROA_{t-1} times new	0.0022	0.1895
ΔLn (Sales)_t times new	0.0583	0.2038
ΔLn (Sales)_{t-1} times new	0.0173	0.8510
Holding period returns_t times new	0.0345	0.1435
Holding period returns_{t-1} times new	-0.0399	0.1100
Million dollar variable times new	-0.0523	0.0457
ROA_t times million dollar variable times new	0.0032	0.0212
ROA_{t-1} times million dollar variable times new	-0.0018	0.8485
ΔLn (Sales)_t times million dollar variable times new	-0.1014	0.9386
ΔLn (Sales)_{t-1} times million dollar variable times new	0.0486	0.3419
Holding period returns_t times million dollar variable times new	-0.1249	0.9999
Holding period returns_{t-1} times million dollar variable times new	-0.0581	0.9552

TABLE 7
Regression results

Dependent variable is Ln(Black-Scholes Values of Stock Options)

<i>Explanatory Variables</i>	<i>Coefficient</i>	<i>P-Value</i>
Constant	-9.3556	<.0001
Ln (CEO tenure)	0.1127	0.0680
Ln (Assets)	0.8344	<.0001
ROA_t	-0.0050	0.7461
ROA_{t-1}	0.0075	0.2000
ΔLn (Sales)_t	0.2868	0.0467
ΔLn (Sales)_{t-1}	0.4674	0.1167
Holding period returns_t	-0.0402	0.6554
Holding period returns_{t-1}	0.2860	0.0032
ROA_t times million dollar variable	0.0000	0.4994
ROA_{t-1} times million dollar variable	0.0016	0.4311
ΔLn (Sales)_t times million dollar variable	0.0985	0.3613
ΔLn (Sales)_{t-1} times million dollar variable	-0.9228	0.9524
Holding period returns_t times million dollar variable	0.4170	0.0046
Holding period returns_{t-1} times million dollar variable	-0.3258	0.9788
Million dollar variable	-0.0561	0.6333
New	1.0446	<.0001
ROA_t times new	0.0069	0.4949
ROA_{t-1} times new	-0.0115	0.3158
ΔLn (Sales)_t times new	-0.3465	0.2749
ΔLn (Sales)_{t-1} times new	-1.2613	0.0476
Holding period returns_t times new	0.0232	0.8873
Holding period returns_{t-1} times new	-0.2164	0.2099
Million dollar variable times new	-0.2122	0.1610
ROA_t times million dollar variable times new	-0.0019	0.5709
ROA_{t-1} times million dollar variable times new	0.0059	0.3141
ΔLn (Sales)_t times million dollar variable times new	0.3685	0.2088
ΔLn (Sales)_{t-1} times million dollar variable times new	1.6198	0.0249
Holding period returns_t times million dollar variable times new	-0.1721	0.7700
Holding period returns_{t-1} times million dollar variable times new	0.2721	0.8747

TABLE 7
Regression results

Dependent variable is Ln(Total Direct Compensation)

<i>Explanatory Variables</i>	<i>Coefficient</i>	<i>P-Value</i>
Constant	2.1193	<.0001
Ln (CEO tenure)	0.0810	<.0001
Ln (Assets)	0.3768	<.0001
ROA_t	-0.0002	0.5553
ROA_{t-1}	0.0042	0.0211
ΔLn (Sales)_t	0.0852	0.0155
ΔLn (Sales)_{t-1}	0.2807	0.0010
Holding period returns_t	0.0318	0.0857
Holding period returns_{t-1}	0.1462	<.0001
ROA_t times million dollar variable	0.0011	0.2689
ROA_{t-1} times million dollar variable	-0.0023	0.8541
ΔLn (Sales)_t times million dollar variable	0.0587	0.1798
ΔLn (Sales)_{t-1} times million dollar variable	-0.3156	0.9933
Holding period returns_t times million dollar variable	0.1951	<.0001
Holding period returns_{t-1} times million dollar variable	-0.0165	0.6721
Million dollar variable	-0.0156	0.6586
New	0.2178	0.0004
ROA_t times new	0.0023	0.3288
ROA_{t-1} times new	-0.0054	0.0406
ΔLn (Sales)_t times new	-0.1300	0.0761
ΔLn (Sales)_{t-1} times new	-0.4015	0.0063
Holding period returns_t times new	0.0039	0.9172
Holding period returns_{t-1} times new	-0.0756	0.0577
Million dollar variable times new	-0.0883	0.0371
ROA_t times million dollar variable times new	-0.0006	0.5950
ROA_{t-1} times million dollar variable times new	0.0045	0.0561
ΔLn (Sales)_t times million dollar variable times new	-0.0284	0.6067
ΔLn (Sales)_{t-1} times million dollar variable times new	0.4016	0.0176
Holding period returns_t times million dollar variable times new	-0.1506	0.9975
Holding period returns_{t-1} times million dollar variable times new	0.0296	0.2941