The Influence of Internal Revenue Code Section 162(m) on Pay Sensitivity Estimates: The Case of Section 162(m) Qualifiers and Non-qualifiers and the Value of Subjectivity in Compensation Arrangements

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Abstract We examine the impact that Internal Revenue Code Section 162(m) had on pay for performance relationships for two sets of firms- those U.S. firms that qualified their CEO's (Chief Executive Officer's) annual bonus under Section 162(m) and those that did not take such steps during the years 1992 to 2003. We hypothesize that the link between pay and objective measures of performance would improve more for the Section 162(m) qualifying firms classified as "subjective evaluators" of CEO performance in years prior to Section 162(m). We also hypothesize no change in pay for performance for those firms that did not qualify certain of their CEO's pay programs under Section 162(m). Our regression results are generally consistent with our hypotheses that states that observed pay for performance improvements associated with Section 162(m)'s passage were largely driven by firms that qualified their pay programs and which based their CEO's compensation on subjective performance measures prior to the passage of Section 162(m). We also look at the benefits (in terms of tax savings) or the loss (in terms of added tax costs) incurred by companies which qualified and those that did not qualify their CEO's annual bonus as performance based under Section 162(m). We find that the benefits from qualifying the CEO's bonus as performance based were the highest for those companies which had used subjective criteria to evaluate a CEO's annual performance prior to qualifying this compensation as performance based. To us, this suggests that subjective based performance measures have value to a company and that forfeiting the use of such measures requires that a benefit be received for doing so.

Keywords CEO Compensation, Regulation, Contracts, Corporate Governance, Subjective vs. Objective Performance Measures, Performance Measurement

1. Introduction

Pay for performance and factors that influence the extent to which pay is tied to performance continues to be an important issue in accounting. In this paper, we study one such factor, Code Section 162(m) or Section 162(m) for short, and analyze whether and to what extent this legislation affected the pay for performance relationship for a group of 500 plus CEOs (Chief Executive Officers) listed in the Forbes 800.

For those not familiar with Code Section 162(m), this tax provision was enacted by the US Congress in the early 1990's as a way to encourage companies to better tie CEO compensation to objective performance measures. Prior to the enactment of Code Section 162(m), U.S. companies (and specifically their boards of directors) could structure a CEO's compensation as they saw fit without consequence. Post Code Section 162(m), US companies that paid their CEO's in excess of \$1 million in fixed compensation could no longer tax deduct the excess compensation unless the excess payment was tied to measurable and objective performance measures.

While tax deductibility can be an enticement to change pay practices, subjectivity also has its place in compensation arrangements especially when these subjective performance measures provide information about managerial performance that otherwise cannot so easily be gained (see Kunz, [1]) or when subjective performance evaluation (and its potential for bias) has positive motivational effects (Bol [2]).

Our motivation in studying this issue stems from two sources. Our first motivation relates to the divergent

research findings for Section 162(m). For example, two separate studies by Rose and Wolfram [3] and Perry and Zenner [4] suggest opposite effects, with Perry and Zenner [4] arguing that Section 162(m) had a positive effect on pay for performance and Rose and Wolfram [3] suggesting little if any effect on compensation.

We feel that one reason for these opposite results is that these studies are largely based on a comparison of pre and post Section 162(m) pay levels and are not linked to the effects that pre-1994 compliance with Section 162(m)'s "performance-based" requirements might have had on these responses. Because of this, it is difficult to separate Section 162(m)'s effects on executive compensation from other factors that may have contributed to the changing executive compensation landscape.

To address these shortcomings, our research design includes a measure that captures some element of a firm's pre-1994 pay practices and the extent to which these practices would need to change for the firm to be Section 162(m) compliant. We derive this measure by assessing the extent to which the firm's pay practices before the enactment of Section 162(m) complied with this legislation's mandate of the use of "objective performance goals."ⁱ

As part of our research design, we also separated firms into those that qualified and those that did not qualify the annual bonus as performance based. By doing this, we are able to track Section 162(m) responses for four groups of firms, with membership in each group being based on a firm's compliance/non-compliance decision and the extent to which the firm's pre-1994 pay practices limited performance evaluation to the use of "objective performance goals." Such a design helps us capture the potential role that a company's existing performance evaluation system had on the Section 162(m) compliance choice and whether the Section 162(m) decision was affected by the existing views of the importance of subjectivity in the performance evaluation scheme.

Our research design contrasts sharply with that followed by Rose and Wolfram [3], Perry and Zenner [4], and others (including Balsam and Yin [5], and Halperin, Kwon and Catanach [6]), each of whom separated their firms into two groups based on whether the firm's CEO was earning at or near one million dollars in salary and annual bonuses. The difficulty with using this approach to assess the pay for performance effects of Section 162(m) is that this grouping variable does not capture the extent to which firms would need to alter their performance measures to qualify compensation under this legislation. Because of this, it is difficult to assess if the change in pay for performance brought about by Section 162(m) was driven by the \$1 million firms that complied with this legislation or rather by "subjective evaluators" that moved toward more "objective performance evaluation" after passage of this legislation. This understanding is important to regulators

because it provides insights into how effective tax-based legislation was in encouraging firms to move toward more legislatively favored pay practices.

Our study of this issue is also an important step in identifying the extent to which Section 162(m)'s emphasis on "objective performance goals" affected pay practices at firms that chose to not qualify their CEO's annual bonus plan under Section 162(m). Because we separate our firms based on their compliance or non-compliance with Section 162(m), we are able to identify what types of compensation practices the non-compliers with Section 162(m) followed after passage of this legislation. To our knowledge, no other paper has looked at this issue.

More recently, a number of countries have passed non-tax based legislation to encourage a better alignment of executive pay with firm performance. One of these legislative initiatives in particular, namely the "say on pay" laws (see for instance Correa and Lel [7]), have been enacted by more than 12 countries, including the US in 2008 and the UK in 2003. This legislation requires that a company's shareholders be given a vote on executive pay practices, but does not give the company's shareholders the right to alter the structure of this compensation. In contrast, Section 162(m) left pay practices in the hands of the board of directors and gave shareholders no say in these pay practices. Section 162(m) also created economic incentives (through the limitation of tax deductions) for boards to better tie executive compensation to firm performance. As such, a study of the effects of Section 162(m) provides unique insights into the pay for performance trade-off that "say for pay" studies cannot provide- including insights into how a country's tax policies might be used to alter executive pay practices in meaningful ways.

The next section of the paper develops the hypotheses tested in this paper. Section III provides an overview of the regression models and the sample used to test these hypotheses. Section IV provides regression results. Section V provides further discussion of the cost and benefit trade-offs associated with compliance or non-compliance with Section 162(m). Finally Section VI provides a summary and conclusion to the study.

2. Hypotheses Development

We anticipate that Section 162(m) compliance would have required more changes in pay for performance when firms made use of subjectivity in their compensation decisions prior to the effective date of Section 162(m). If this is indeed the case, we anticipate that the pay for performance responses would differ based on the firm's compliance decision and the pay practices in effect prior to the effective date of Section 162(m). To capture this idea more explicitly, we identify four distinct groups of firms using Figure 1.ⁱⁱ

Figure 1. Firms grouped based on their use of objective performance measures prior to the enactment of Section 162(m) and their compliance with Section 162(m).

In Figure 1, the Quadrant I firms are defined as those that: (1) evaluated their CEO's short-term performance using other than objective performance measures in the year prior to the effective date of Section 162(m) and (2) who qualified their CEO compensation as performance-based under Section 162(m) after the effective date of this legislation. Quadrant II firms are those that: (1) evaluated CEO performance using only objective performance measures prior to the effective date of Section 162(m) and (2) who qualified their CEO's compensation as performance based under Section 162(m). Quadrant III firms include those firms that: (1) evaluated CEO performance using objective performance measures as defined by Section 162(m) prior its effective date, but (2) chose not to qualify their CEO compensation programs as performance-based under Section 162(m). Finally, the Quadrant IV firms are those that (1) evaluated their CEOs based solely on objective performance measures prior to the effective date of Section 162(m) and who (2) did not qualify their CEO's compensation programs as performance-based under Section 162(m).

We expect that our Quadrant I firms would have needed to increase the CEO's pay for performance relations associated with certain objective performance measures more so than the Quadrant II firms. We expect this type of reaction since to qualify compensation as performance-based under Section 162(m), the Quadrant I firms would have needed to start evaluating the CEO using strictly objective performance measures in place of subjective performance measures. In contrast, the Quadrant II firms would not have needed to make such changes since pre-1994 they were already basing CEO pay on objective performance measures. This reasoning is summarized in the following hypothesis:

H1: The sensitivity of CEO pay to changes in firm

performance increased more for the Quadrant I firms than for the Quadrant II firms following the qualification of CEO compensation under Section 162(m).

We also expect no difference in the pay for performance relations for the Quadrant III and Quadrant IV firms following the effective date of Section 162(m). We expect this since neither firm type qualified compensation as performance-based and therefore avoided being subjected to Section 162(m)'s requirements. Further, assuming such firms were following optimal compensation programs pre-1994, then their non-compliance with Section 162(m) suggests little need to change compensation practices after the effective date of this legislation.

H2: The sensitivity of CEO pay to changes in firm performance was similar for the Quadrant III and Quadrant IV firms following 1993.

Finally, we expect that the benefits to qualifying the CEO annual bonus under section 162(m) would need to be higher for companies who prior to qualification used subjective performance measures in evaluating their CEO. Such a result is consistent with the findings that subjective performance measures have value (see Hayes and Schaefer [8], Murphy and Oyer [9], Hartmann and Slapnicar [10], Bol and Smith [11], Bol [2] and Kunz [1] and that to move away from using such measures would require some added inducements.

H3: The benefits to qualifying the CEO annual bonus under section 162(m) were higher for companies who prior to qualification used subjective performance measures to evaluate their CEOs.

3. Sample Selection and Model Design

Prior to presenting the results found from testing our hypotheses, we first describe the method used to identify our sample firms and how we measured firm compliance with Section 162(m)'s performance-based tests. We also describe the regression model used in testing the effects of Section 162(m) on pay for performance. Finally, we provide sample descriptives for the independent and dependent variables included in the regression model.

Sample Firms

The firms used in testing our hypotheses represent a subset of the companies found in the Forbes 800 list that was published on May 24, 1993. The Forbes' list is published annually and includes detailed information about compensation amounts paid to CEOs at 800 publicly traded firms. Generally, the firms contained in the survey are fairly sizable and the amounts paid to the CEO are also relatively large. For instance, the listing for May 24, 1993 indicates that the median CEO salary and bonus for the 800 listed firms equaled \$806,000 and the mean total CEO compensation totaled \$2.625 million.

Our sample excludes 284 of these 800 firms. These 284 firms were classified by the Forbes listing as being members of the banking, insurance, or utility industries. We restricted our sample in this way because firms in these three industries have historically faced greater regulation than other firms and it is known that the types of performance measures used in evaluating CEO performance are affected by the level of regulation faced by the firm (Ittner, Larcker and Rajan, [12]).

Table 1. Sample Selection from Forbes

The sample used in testing our hypotheses represents a subset of the companies found in the Forbes 800 list published on May 24, 1993. The Forbes' list is published annually and includes detailed information about compensation amounts paid to Chief Executive Officers (CEOs) at 800 publicly traded firms. The subset of the Forbes 800 used in our analyses excludes the firms that were classified by Forbes as being members of the banking, insurance or utility industries. For our sample, we also report the number of firms qualifying and firms not qualifying their annual compensation plans under Section 162(m) between 1994 and 2003 (inclusive).

	Number of firms
Forbes 800 Survey-1993	800
Firms categorized as either bank, insurance, or utility	284
Firms outside the bank, insurance, or utility industries	516
Number of firms qualifying annual compensation plans under Section 162(m) between 1994 and 2003 (inclusive)	328
Number of sample firms not qualifying their annual compensation plan under Section 162(m) between the years 1994 and 2003 (inclusive).	188
Firms included in the sample	516

The elimination of these firms reduced our sample to 516 firms. For each firm, we reviewed the annual proxy for the years 1994-2003 to determine whether each firm submitted their executive's annual bonus plan to the shareholders for vote and whether this plan was structured to comply with Section 162(m). As detailed in Table 1, out of the 516 firms included in our final sample, 328 firms qualified their annual compensation plan as performance-based between the years 1994 and 2003. ⁱⁱⁱ

We used qualification of the annual bonus and a company's willingness to qualify the bonus under Section 162(m) for separating our firms into our four quadrants. We did this for two reasons. First, as noted in Murphy and Oyer [9], "the annual bonus is the pay component most susceptible to meaningful discretion." As such, we believe that the pay practices followed when setting the annual bonus represent a good proxy for the boards overall view of the merits of subjective/objective performance evaluation. Second, we also focus on the qualification of the annual bonus, to the exclusion of the long-term compensation, because our reviews of the proxy statements indicate that if the annual bonus is qualified under section 162(m), the long-term compensation, especially options, would also be qualified. For instance, of the 331 firms that qualified their annual bonus plan, 328 of them also qualified their long-term compensation programs under Section 162(m) during the years 1994-2003.

Method Used to Ascertain Compliance with Contract Restrictions

For each of the 516 firms included in our sample, the

1994 proxy statement was reviewed. The purpose in doing this was to ascertain whether or not the firm evaluated CEO performance using "objective performance measures" as defined by Section 162(m) prior to the passage of this legislation.

Because of the passage of the SEC's rules governing executive compensation disclosures during 1992, the firm's 1994 proxy would have included a report from the compensation committee detailing their approach to setting executive compensation in general and CEO compensation specifically. The 1994 proxy also would have included a statement concerning the committee's policy toward qualifying compensation as performance-based under Section 162(m).

We reviewed each of the 516 proxies and assigned a dummy variable to each firm based on a priori compliance with Section 162(m)'s requirement limiting firms to the use of only objective performance measures. A value of zero was assigned to those firms that had pre-1994 CEO bonus plans that were based on objective performance measures. A value of one was assigned to those firms did not have such pay practices in place in the fiscal year covered by the 1994 proxy.

The Regression Models

We adopted a fixed effects regression model to study the pay for performance effects of Section 162(m). We did this because previous research has suggested that a fixed effects model is well specified for use with executive compensation data (see Perry and Zenner, 2001).

The fixed effects model used to test hypothesis *H1* is described in (1):

$$\begin{aligned} \ln(\text{Comp}_{it}) = & a_1 \ln(\text{CEOTenure}_{it}) + a_2 \ln(\text{Assets}_{it}) + a_3 \ln(\text{Long-term Compensation}_{it}) \\ & + \sum_{j=4}^8 a_j \text{Performance Measure}_{it,j} + \text{AGNC}_i * \sum_{j=9}^{13} a_j \text{Performance Measure}_{it,j} \\ & + \text{IQ}_{it} * \sum_{j=14}^{18} a_j \text{Performance Measure}_{it,j} + \text{IQ}_{it} * \text{AGNC}_i * \sum_{j=19}^{23} a_j \text{Performance Measure}_{it,j} \\ & + \text{YearDummies}_t + \text{FirmDummies}_i + \text{IndustryDummies}_i + \varepsilon_{it} \end{aligned} \quad (1)$$

The model's dependent variable, *Comp*, is measured in two ways, as either the CEO's annual bonus or the CEO's total compensation. Model (1)'s independent variables are defined as follows:

$\ln(\text{CEOTenure}_{it})$ = the natural logarithm of the number of years the current CEO of firm *i* has held the position of CEO in year *t*.

$\ln(\text{Assets}_{it})$ = the natural logarithm of firm *i*'s assets in year *t*.

$\ln(\text{Long-term Compensation}_{it})$ = the natural logarithm of the CEO's long-term compensation (total compensation minus salary and bonus) for year *t*. For the regression model in which total compensation was the dependent variable, this parameter was excluded ($\alpha=0$).

AGNC_i = 0, if firm *i* evaluated CEO performance using strictly objective performance measures in the fiscal year covered by the 1994 proxy.

= 1, otherwise

IQ_{it} = indicator variable for firm *i* at time period *t*. The indicator variable *IQ* takes a value of one in the year the firm qualified its annual bonus under Section 162(m) and thereafter. Prior to the year of qualification, the value of *IQ* for firm *i* was set at zero.

EPS_{it} and EPS_{it-1} = earnings per share, excluding extraordinary items for years *t* and *t-1* for firm *i*, scaled by the previous period's fiscal year-end stock price.

$\Delta \ln(\text{Sales}_{it})$ = the change in the logarithm of sales for year *t* for firm *i*.

$\text{Holding period returns}_{it}$ and $\text{Holding period returns}_{it-1}$ = holding period returns for years *t* and *t-1* for firm *i*.

$\text{Firm Dummies}_i = 1$ for firm *i* in year *t* and zero otherwise.

$\text{Year Dummies}_t = 1$ in year *t* and zero otherwise

$\text{Industry Dummies}_i = 1$ for firm *i* if firm *i* was a member of industry *k*, 0 otherwise.

The model used to test hypothesis *H2* is described as in (2):

$$\begin{aligned} \ln(\text{Comp}_{it}) = & a_o + a_1 \ln(\text{CEOTenure}_{it}) + a_2 \ln(\text{Assets}_{it}) + \sum_{j=3}^8 a_j \text{Performance Measure}_{it,j} \\ & + \text{AGNC}_i * \sum_{j=9}^{13} a_j \text{Performance Measure}_{it,j} + \text{I93}_{it} * \sum_{j=14}^{18} a_j \text{Performance Measure}_{it,j} \\ & + \text{I93}_{it} * \text{AGNC}_i * \sum_{j=19}^{23} a_j \text{Performance Measure}_{it,j} + \text{FirmDummies}_i + \text{YearDummies}_t \\ & + \text{IndustryDummies}_i + \varepsilon_{it} \end{aligned} \quad (2)$$

The dependent and independent variables in (2) are largely defined above with the exception of the *I93* dummy which is included to capture the lack of qualification by the Quadrant III and Quadrant IV firms.

The variable *I93* was assigned a value of 0 for years prior to 1994 and a value of 1 for all years after 1993. A similar coding was used by both Perry and Zenner [4] and Rose and Wolfram [3] as a way of measuring the changes in pay practices that occurred in 1994 and succeeding years, the years that the Quadrant III and IV firms would have been affected by Section 162(m).

The ExecuComp and CompuStat databases were used as our data sources for the CEO related variables, including the compensation, tenure metrics and the firm specific performance measures. The division of earnings by the previous year's stock price resulted in the loss of observations when ExecuComp alone was used to assign values to the earnings variable. To limit this data loss, we merged the relevant 1990 and 1991 data from CompuStat

with the ExecuComp data.

Descriptive Statistics for the Dependent Variable

Table 2- Panel A and Panel B provides descriptive statistics for our dependent variable for the years 1992-2002, the years covered by our regression models. Both Panels A and B report mean CEO salaries, annual bonuses, stock options (valued using Black-Scholes formula), and total compensation for each year. Panel A reports this information for firms that qualified their annual bonus plan as performance-based during the years 1994-2003. Panel B provides this information for those firms that did not qualify their annual bonus plans under Section 162(m) during these years.

Table 2. PANEL A Descriptive Statistics on CEO compensation for Section 162(m) qualifiers for the years 1992-2002

For each of the years presented, we report mean compensation data for the CEOs in the sample. The figures contain salary, bonus, and managerial stock options, and total compensation which is the sum of the six compensation components from the proxy statements: salary, bonus, other annual compensation, long-term incentive plan payouts, managerial stock options as valued in thousand dollars by *ExecuComp*.^a

		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Salary	Mean	711	715	734	756	780	791	828	853	863	939	949
	N	148	246	263	269	269	279	282	288	292	272	274
Bonus	Mean	581	615	765	814	928	993	1143	1263	1341	1072	1213
	N	148	246	263	269	269	279	282	288	292	272	274
Options –BS ^b	Mean	993	814	1339	1517	2265	3228	4400	5460	5999	6163	4704
	N	121	246	258	267	267	279	281	287	289	269	270
Total Comp.	Mean	2946	2745	3466	3947	4996	6551	10050	9279	10141	10280	8599
	N	121	246	258	267	267	279	281	287	289	269	270

^a Year to year fluctuations in available data is not uncommon. For instance, in Perry and Zenner (2001), the number of company years used varies by as much as 50+% over the years 1992-1997.

^b Stock options are valued using Black-Scholes formula.

Table 2. PANEL B. Descriptive Statistics on CEO compensation for Section 162(m) non-qualifiers for the years 1992-2002

For each of the years presented, we report mean compensation data for the CEOs in the sample. The figures contain salary, bonus, and managerial stock options, and total compensation which is the sum of the six compensation components from the proxy statements: salary, bonus, other annual compensation, long-term incentive plan payouts, managerial stock options as valued in thousand dollars by *ExecuComp*.

		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Salary	Mean	534	558	564	575	608	646	680	702	736	763	801
	N	72	129	137	134	128	133	126	133	132	120	116
Bonus	Mean	368	335	441	450	462	648	486	794	710	970	750
	N	72	129	137	134	128	133	126	133	132	120	116
Options –BS ^b	Mean	773	649	824	807	1384	4021	3254	3846	9730	6656	5147
	N	51	129	136	134	128	132	126	133	132	120	116
Total Comp.	Mean	2080	1825	2160	2216	3099	6296	5143	6548	12652	9851	7761
	N	51	129	136	134	128	132	126	133	132	120	116

^b Stock options are valued using Black-Scholes formula.

Consistent with Hall and Liebman [13] and Smith [14], Panels A and B indicate that performance-based pay, and particularly stock options, became a greater proportion of total compensation through the 1990s and early 2000's. Table 2 also indicates that total CEO pay levels increased markedly over these years.^{iv}

A comparison of Table 2-Panel A with Table 2-Panel B also shows that the qualifying firms paid greater salaries, bonuses, and total compensation in most of the years 1992-2002. Interestingly, however, the non-qualifiers on average paid relatively greater percentages of total compensation in the form of option grants during the years 1992-2002, a finding consistent with that discussed in Balsam and Ryan [15].

4. Regression Results

Table 3 provides the regression results found from fitting model (1) to the sample of qualifying firms. The results are presented for the sample as a whole and also for a sub-sample of firms that paid more than \$1 million in salary and annual bonus to the CEO in the years 1992-2002. ^v

To test our hypotheses **H1**, we used both the annual bonus and total compensation as our dependent variables. We included results for total compensation for two reasons. First, total compensation includes all components of pay, including those, like stock options, that provide most of the CEO incentives (Jensen and Murphy, [16]; Hall and Liebman, [17]). Second, past research, like Perry and Zenner [4] and Rose and Wolfram [3], report regression results for both the CEO's annual bonus and total compensation.

Table 3. Qualified Firms: Sensitivity of compensation to firm performance following Section 162(m) qualification

This table contains the results of a fixed effects regression using CEO bonus and total CEO compensation as dependent variables. We use the data collected from the proxy statements from 1993-2003, time series data from the *ExecuComp* database for the years 1992-2002 and *CompuStat*.

Explanatory variables	All Qualified Firms		Qualified Firms Short-term Compensation > \$1M	
	ln(Bonus)	ln(Total Compensation)	ln(Bonus)	ln(Total Compensation)
<i>ln(CEO tenure_{it})</i>	-0.922	0.131***	-1.15*	0.136***
<i>ln(Assets_{it})</i>	-10.9***	0.0201	-11.0***	0.0579
<i>Ln(Long-term compensation_{it})</i>	0.498		0.416	
<i>EPS_{it}</i>	63.2***	0.852***	168.***	1.24***
<i>EPS_{it-1}</i>	2.27	0.180	6.56	0.180
<i>Δln(Sales_{it})</i>	9.26**	0.436***	9.24**	0.400***
<i>Holding period returns_{it}</i>	0.127***	0.00269***	0.0882**	0.00255***
<i>Holding period returns_{it-1}</i>	0.0618*	0.00324***	0.0479	0.00338***
<i>AGNC*EPS_{it}</i>	4.562	-1.39	-103.**	-1.89*
<i>AGNC*EPS_{it-1}</i>	19.7	-0.739	11.9	0.746
<i>AGNC*Δln(Sales_{it})</i>	0.462	-0.247**	0.747	-0.261***
<i>AGNC*Holding period returns_{it}</i>	-0.0858*	-0.00212*	-0.0623	-0.00226*
<i>AGNC*Holding period returns_{it-1}</i>	-0.0763*	-0.00313***	-0.0677**	-0.00350***
<i>IQ*EPS_{it}</i>	-61.2***	-0.817**	-166.***	-1.21**
<i>IQ*EPS_{it-1}</i>	-11.9	-0.285	-12.3	-0.271
<i>IQ*Δln(Sales_{it})</i>	0.490	0.00239	1.02***	0.00357
<i>IQ*Holding period returns_{it}</i>	0.0754*	0.00183**	-0.113***	0.00206**
<i>IQ*Holding period returns_{it-1}</i>	0.0232	0.00209**	0.0339	0.00196**
<i>IQ*AGNC*EPS_{it}</i>	0.663	1.47	108.**	1.96*
<i>IQ*AGNC*EPS_{it-1}</i>	-9.59	-0.561	-6.00	-0.577
<i>IQ*AGNC*Δln(Sales_{it})</i>	0.131	0.0131	-0.713	-0.00434
<i>IQ*AGNC*Holding period returns_{it}</i>	0.139*	0.00114	0.123*	0.00125
<i>IQ*AGNC*Holding period returns_{it-1}</i>	0.00956	0.000680	-0.00626	0.00114
<i>Adjusted R²</i>	0.36	0.58	0.26	0.50
<i>Regression P-value</i>				
<i>Sample Size</i>	2663	2717	2583	2631

*, **, and *** represent the significance at 10%, 5% and 1%, respectively.

Our regression results indicate that prior to qualifying the annual bonus under Section 162(m), the \$1 million dollar payers included in the Quadrant I firms (i.e. the sample firms that did not evaluate CEO performance using subjective performance measures prior to Section 162(m) passage) placed less emphasis on contemporaneous earnings and holding returns when determining their CEO's annual bonus and total compensation when compared to the Quadrant II firms (i.e. the firms that did evaluate CEO performance using "objective performance measures prior to the passage of Section 162(m)). For the overall sample, these pre-qualification differences in pay sensitivities were largely limited to holding period returns.

The Table 3 results for the overall sample also show that after qualification both the Quadrant I and Quadrant II firms increased their emphasis on contemporaneous holding returns and decreased their emphasis on contemporaneous earnings when evaluating the CEO's short-term performance. The coefficient associated with the variable

*IQ*AGNC*Holding period returns* in Table 3 suggests however that the Quadrant I firms increased their emphasis on contemporaneous returns after qualification when compared to the Quadrant II firms. This result is consistent with the Quadrant I firms using Section 162(m) qualification to adjust the emphasis on holding period returns upwards to make-up for the lower levels of emphasis placed on this variable before qualification.

The results reported for the CEO's annual bonus for the sample of firms paying short-term compensation greater than \$1 million is fairly consistent with this substitution. The movement away from earnings, however, was not as great for the Quadrant I firms in this reduced sample as evidenced by the positive and statistically significant coefficient on *IQ*AGNC*EPS*. As with the overall sample, this may reflect a conscious effort by the Quadrant I firms to make up for the lower emphasis placed on these variables in years prior to qualification.^{vi}

Table 3 also reports results for total CEO compensation (see column 2 for the overall sample of qualified firms and column 4 for the sample of \$1 million dollar payers). As shown, the results indicate that the Quadrant I and Quadrant II firms shifted toward contemporaneous and lagged holding returns and away from contemporaneous earnings after qualifying the CEO's annual bonus as performance based.^{vii} However, the shift away from earnings was less acute for the Quadrant I firms paying more than \$1 million in short-term compensation. As with the results found for the CEO's annual bonus, the less aggressive movement away from earnings by the \$1 million dollar payers in Quadrant I may have been one way for these firms to compensate for their lower emphasis on earnings prior to qualification.

Table 4 provides results with respect to the Quadrant III and Quadrant IV firms.

Table 4. Non-qualified firms: Sensitivity of compensation to firm performance following Section 162(m) qualification.

This table contains the results of a fixed effects regression using CEO bonus and total CEO compensation as dependent variables. We use the data collected from the proxy statements from 1993-2003, time series data from the *ExecuComp* database for the years 1992-2002, and *CompuStat*. *POST93* is an indicator variable that takes a value of one after 1993 and a value of zero otherwise.

Explanatory variables	All Non Qualified Firms		Non Qualified Firms Short-term Compensation > \$1M	
	<i>ln(Bonus)</i>	<i>ln(Total Compensation)</i>	<i>ln(Bonus)</i>	<i>ln(Total Compensation)</i>
<i>ln(CEO tenure_{it})</i>	1.00	0.0974***	1.40	0.0789*
<i>ln(Assets_{it})</i>	-7.59	0.0937	-3.70	0.103
<i>Ln(Long-term compensation_{it})</i>	0.541		1.69	
<i>EPS_{it}</i>	28.5***	0.262	23.7**	0.255
<i>EPS_{it-1}</i>	10.1	0.172	10.0	0.218
<i>□ln(Sales_{it})</i>	4.10	0.00221	-2.62	0.290
<i>Holding period returns_{it}</i>	0.304***	0.00357	0.299***	-0.00302
<i>Holding period returns_{it-1}</i>	-0.0641	3.73	-0.0295	-0.00326
<i>AGNC*EPS_{it}</i>	184.	-0.424	205.	2.65
<i>AGNC*EPS_{it-1}</i>	99.9	0.225	44.4	-0.669
<i>AGNC*□ln(Sales_{it})</i>	11.4**	0.186	14.4**	0.161
<i>AGNC*Holding period returns_{it}</i>	-0.175	-0.00126	-0.144	0.000679
<i>AGNC*Holding period returns_{it-1}</i>	-0.0806	-0.00373	0.0677	-0.00290
<i>I93*EPS_{it}</i>	-9.02	-0.496	-3.79	-0.482
<i>I93*EPS_{it-1}</i>	-14.6	-0.116	-13.4	-0.166
<i>I93*□ln(Sales_{it})</i>	0.407	0.0251	2.74	0.0248
<i>I93*Holding period returns_{it}</i>	-0.190*	0.00149	-0.189*	-0.000775
<i>I93*Holding period returns_{it-1}</i>	0.0253	0.00124	0.113	0.00170
<i>I93*AGNC*EPS_{it}</i>	-156.	-3.09	-212.	-2.28
<i>I93*AGNC*EPS_{it-1}</i>	-172.	-0.341	-109.	-0.835
<i>I93*AGNC*□ln(Sales_{it})</i>	-1.22	-0.0155	0.0928	-0.0212
<i>I93*AGNC*Holding period returns_{it}</i>	-0.208	0.00243	0.286	0.00125
<i>I93*AGNC*Holding period returns_{it-1}</i>	0.103	0.00301	-0.0479	0.00630
<i>Adjusted R²</i>	0.37	0.36	0.23	0.29
<i>Regression P-value</i>	0	0	0	0
<i>Sample Size</i>	1254	1284	1090	1110

*, **, and *** represent the significance at 10%, 5% and 1%, respectively.

As reported in Table 4, the non-qualifying firms reduced their emphasis on contemporaneous returns when setting the CEO's annual bonuses post 1993, but the reduction was not more pronounced for either the Quadrant III or Quadrant IV firms. With regard to total compensation, we find, consistent with Hypothesis H2, that the relative increase of total CEO pay to changes in performance was not statistically different for the Quadrant III and Quadrant IV firms following 1993. These results hold for both our entire sample of firms and for the set of firms that paid their CEOs over \$1 million in salary and bonus during the years 1992-2002.

5. The Cost-benefit Trade-offs Associated with Section 162(M)

The use of pre-established and objective performance measures, as well as, formula based compensation, places limits on the subjectivity present in compensation contracts. One argument for eliminating subjectivity is that it forces firms to pay executives consistent with performance. Politically, executive compensation has proven to be "a hot button issue and holding executives accountable for firm performance is an ongoing push in corporate reform" (Dennis, [18]).

Research also has found that subjectivity reduces a manager's motivation for hard work because it enables the "evaluator to ignore certain types of performance measures that are included in the bonus plan. This allows evaluators to change bonus criteria each period giving them the opportunity to "introduce favoritism and bias into the reward system" (see Ittner, Larcker and Myer, [19], page 1).^{viii}

On the other hand, it is well documented that there are benefits from using subjective performance measures or from introducing some level of subjectivity into the CEO's performance evaluation. For instance, subjectivity can be useful in mitigating moral hazard (see Holmstrom [20]; Holmstrom, [21]).

Subjectivity may also prove useful in mitigating various other problems faced when assigning rewards based on solely quantitative performance measures. Quantitative performance measures, especially accounting numbers, distort incentives because they often fail to measure some dimension of an employee's performance. It has been noted, for instance, that using solely objective performance measures, such as firm profits, to reward performance creates incentives for managers to manipulate reported earnings (Healy, [22]).

It is also the case that most jobs involve multiple tasks that require specific employee actions and decisions.

Ideally, to properly motivate executives to take these actions, compensation contracts should use all possible information about the effect an employee has on firm outcomes, including information that is more subjective in nature (see Holmstrom and Milgrom, [23]; Feltham and Xie, [24]; Baiman and Rajan, [25]; Kaplan and Norton, [26]).

Subjectivity also allows the evaluator to exploit additional information that arises during the measurement period. Bushman, Injejikian and Smith [27], for one, argues that subjectivity improves multitask incentives and reduces the noise created when compared to evaluating an individual strictly on objective performance measures. Similarly, Hayes and Schaefer [8], Murphy and Oyer [9], Bol and Smith [11], Bol [2] and Kunz [1] all have argued that implicit contracts (contracts that allow for subjectivity in evaluation) have advantages over purely objective based contracts especially when elements of performance are not observable, when quantitative performance measures are noisier measures of management efforts, when subjective performance measures suggest that luck (good or bad) had something to do with outcomes, when leniency in assessment could have positive effects on future performance or the combination of both objective and subjective performance measures increase motivation. Such conclusions are at the heart of Gibbs, Merchant, Van der Stede and Vargus [28] which argued that "subjective performance measures complement perceived weaknesses in quantitative performance measures and prove useful in providing employees with insurance against downside risks in their pay."

In equilibrium, firms weigh the costs and benefits of introducing subjectivity into the compensation contract. When changes occur in the costs or benefits associated with subjective performance appraisal, firms may find it beneficial to alter historically favored pay practices. In the case of Section 162(m), it altered the costs associated with using subjectivity in performance evaluations by limiting the tax deductibility of executive compensation when subjectivity was present.

Table 3 and Table 4 suggest that these costs led some firms to rethink the role of subjectivity in evaluating CEO performance. For other firms, specifically firms not qualifying certain compensation as performance based, the perceived value of subjectivity may have outweighed the tax benefits accruing from qualification.

This latter view is reinforced by Table 5, which computes the amount of potential tax deductions lost by an average firm in the years 1992-2002. These lost deductions were estimated by subtracting \$1 million from the CEO's salary and annual bonus for a given year.

Table 5. Tax deduction benefit or benefit foregone for the four firm types

Tax deduction benefit or losses are calculated based on the following formula:

$$\text{Tax benefit foregone} = \begin{cases} \text{Salary} + \text{Bonus} - \$1\text{M} & \text{if Salary} + \text{Bonus} > \$1\text{M} \\ 0 & \text{if Salary} + \text{Bonus} \leq \$1\text{M} \end{cases}$$

Quadrant		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
I	Mean	393	433	551	546	681	708	1003	1210	1411	1567	945
	N	29	41	44	45	48	52	53	55	56	49	48
II	Mean	415	385	492	521	667	697	881	921	1001	723	883
	N	119	201	215	220	216	223	223	228	236	219	222
III	Mean	192	149	220	253	283	387	360	570	572	498 ^a	604
	N	54	101	107	103	97	101	92	97	92	84	80
IV	Mean	87	195	221	190	202	622	243	890	584	687	870
	N	18	28	30	31	31	32	34	36	40	36	36

Apple Computer paid CEO Steven Jobs \$43.512 million (which included a commercial jet) as a bonus in 2001. We excluded this amount from our 2001 average.

Consistent with Table 2, these estimates would suggest that the potential tax deductions lost by the non-qualifying firms were less than those of the qualifying firms. With regard to our non-qualifying firms (our Quadrant III and Quadrant IV firms), Table 5 also shows that in most of the years 1994-2002, the Quadrant IV firms incurred relatively greater losses in tax deductions when compared to the Quadrant III firms. This suggests to us that the Quadrant IV firms placed more value on subjectivity in performance evaluation than the Quadrant III firms and were more willing to forsake tax deductibility because of this.

One question raised by Table 5 is why the Quadrant III firms did not take the steps needed to qualify the annual bonus as performance-based under Section 162(m). We believe that there is a two-part answer to this question. First, the potential tax benefits from qualifying were the lowest for the Quadrant III firms. Second, we believe that it would be politically difficult for any firm to qualify compensation under Section 162(m) in one year and then try to convince shareholders to revert back to more subjective performance evaluation. Because of the low tax benefits and the potential locking-in that compliance could create, the Quadrant III firms may have wanted to keep their "options" open.

We view our Table 2 and Table 5 findings as suggesting that the arguments for and against subjectivity (or for that matter objectivity) are not one of "all or nothing." Rather, there appears to be some conscious cost-benefit trade-off when making the decision on how to evaluate performance, which for some of our firms was not altered by the potential tax savings that could have been realized from qualifying compensation as performance-based.

6. Conclusions

In this paper, we considered Section 162(m)'s requirement that CEO's be evaluated using objective

performance measures and how this affected CEO pay for performance. In performing our study, we developed a research design that considered Section 162(m)'s constraints on performance measure choice and the firm's compliance decision.

Based on our statistical tests, we were able to show that those firms that qualified their annual bonus under Section 162(m) and who evaluated CEO performance based on subjective criteria prior to the enactment of Section 162(m) made changes to compensation contracts after qualification that made their compensation contracts more in-line with those found for the objective payers. In essence, these subjective payers made changes that were more consistent with Congress's view of pay for performance as found in Section 162(m).

For those not qualifying compensation as performance-based, total CEO pay and its relationship to performance post 1993 changed very little, regardless of whether certain of the Section 162(m) tests were met prior to this legislation's effective date. For these firms, complying with the "spirit" of Section 162(m) may have been viewed as the less appealing option between those of losing tax deductibility or losing degrees of freedom when setting executive compensation.

These findings suggest that the enhanced pay for performance desired from Section 162(m) occurred for only a subset of firms. For some firms, this piece of legislation led to shifts toward an increased emphasis on shareholder returns, or in many cases, to little if any change in CEO compensation practices. What impact these changes in performance evaluation had on the CEO's incentives to manage the firm in the shareholder's interests is not known. Without such understanding, however, it is very difficult to know whether this legislation had the unintended consequences of penalizing the non-qualifying firms for "sticking to their guns" in terms of CEO performance evaluation, or whether this legislation justly rewarded the qualifying firms for making changes that

Congress believed were in the best interests of the shareholders.

Finally, we also looked at the benefits (in terms of tax savings) or the costs (in terms of added tax costs) incurred by companies which qualified and those which did not qualify their CEO's annual bonus as performance based under Section 162(m). We found that those companies evaluating their CEO based on subjective criteria prior to altering compensation contracts to meet Section 162(m)'s requirements stood to gain the most (in terms of tax savings) from such qualification. To us, this suggests that subjective based performance measures have value to a company and that forfeiting the use of such measures could not have been achieved without incentivizing such a switch.

REFERENCES

- [1] Kunz, J. 2015, Objectivity and subjectivity in performance evaluation and autonomous motivation: An exploratory study. *Management Accounting Research* 27, 1, June 2015: 27-46.
- [2] Bol, JC, 2011. The determinants and performance effects of managers' performance evaluation biases, *The Accounting Review*, 86,5, 2011:1549-1575.
- [3] Rose, N.L. and Wolfram, C., 2002. Regulating Executive pay: using the tax code to influence chief executive officer compensation. *Journal of Labor Economics* 20(2), S138-S173.
- [4] Perry, T. and Zenner, M. 2001. Pay for performance? Government regulation and the structure of compensation contracts. *Journal of Financial Economics* 62(December 2001), 453-488.
- [5] Balsam, S. and Yin, Q.J., 2005. Explaining firm willingness to forfeit tax deductions under Internal Revenue Code Section 162(m): The million dollar cap. *Journal of Accounting and Public Policy*, 24, 4, 2005: 300-324.
- [6] Halperin, R.M., Young, K.K. and Catanach, S. 2001. "The impact of deductibility limits on compensation contracts: A theoretical examination. *The Journal of the American Tax Association: Supplement* 2001, 23, s-1, 2001: 52-65.
- [7] Correa, R. and Ugur, L. 2016. Say on Pay Laws, Executive Compensation, Pay Slice and Firm Valuation Around the World. *Journal of Financial Economics* 122(3), 500-520.
- [8] Hayes, R. and Schaefer, S. 2000. Implicit contracts and the explanatory power of top executive compensation. *Rand Journal of Economics* 31, 273-293.
- [9] Murphy, K. and Oyer, P., 2003. Discretion in executive incentive contracts. Working Paper, Stanford Business School.
- [10] Hartmann, F. and Slapnicar, S. 2009. How formal performance evaluation affects trust between superior and subordinate managers. *Accounting, Organizations and Society*, 34, 6-7, August-October 2009: 722-737.
- [11] Bol, JC and Smith, SD, 2011. Spillover effects in subjective performance evaluation: Bias and the asymmetric influence of controllability, *The Accounting Review* 86, 4, 2011, :1213-1230.
- [12] Ittner, C, Larcker, D, and Rajan, M. 1997. The choice of performance measures in annual bonus contracts. *The Accounting Review* 72, 231-255.
- [13] Hall, B.J. and Liebman, J., 2000. The taxation of executive compensation. In: Poterba, J. (Ed.), *Tax Policy and The Economy*, Vol 14. Cambridge NBER and MIT Press, Cambridge, MA, 1-44.
- [14] Smith, T. 2003. Tax policy effectiveness as measured by the responses to limits placed on the deduction of executive compensation. *Advances in Taxation* 15(1): 120-144.
- [15] Balsam, S. and Ryan, D. 2007. The effect of Internal Revenue Code Section 162(m) on the issuance of stock options. *Advances in Taxation*, 18,1, 2007: 3-28.
- [16] Jensen, M. and Murphy K. 1990. Performance pay and top management incentives. *Journal of Political Economy* (April 1990), 225-264.
- [17] Hall, B.J and Liebman, H. 1998. Are CEOs really paid like bureaucrats? *Quarterly Journal of Economics*, CXIII(3), 653-691.
- [18] Dennis, A., 2004. What's next in corporate pay practices? *Journal of Accountancy* 198 (July 2004), 59-68.
- [19] Ittner, C., Larcker, D. and Meyer, M. 2003. Subjectivity and the weighing of performance measures: evidence from a balanced scorecard. *The Accounting Review* 78, 725-758.
- [20] Holmstrom, B., 1979. Moral hazard and observability. *Bell Journal of Economics* 10, 74-91.
- [21] Holmstrom, B, 1982. Moral hazard in teams. *Bell Journal of Economics* 13(2), 324-340.
- [22] Healy, P., 1985. The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics* 7, 85-107.
- [23] Holmstrom, B. and Milgrom, P. 1991. Multitask principal-agent analyses: incentive contracts, asset ownership and job design. *Journal of Law, Economics and Organization* 7, 24-52.
- [24] Feltham, G. and Xie, J., 1994. Performance measure congruity and diversity in multi-task principal-agent relations. *The Accounting Review* 69, 429-453.
- [25] Baiman, S. and Rajan, M. 1995. The informational advantages of discretionary bonus schemes. *The Accounting Review* 70, 557-579.
- [26] Kaplan, R. and Norton, D. 1996. *The Balanced Scorecard: Translating Strategy into Action*. Boston, MA: Harvard Business School Press.
- [27] Bushman, R., Indjejikian, R, and Smith, A. 1996. Individual performance evaluation. *Journal of Accounting Research* 33 (Supplement), 101-128.
- [28] Gibbs, M. Merchant, K., Van Der Stede, W., and Vargus, M. 2004. Determinants and effects of subjectivity in incentives. *The Accounting Review* 79, 409-436.

- [29] Harris, D. and Livingstone, J. 2002. Federal tax legislation as an implicit contracting cost benchmark. *The Accounting Review*, 77(4), 997-1018.
- [30] Moers, F. 2005. Discretion and Bias in Performance Evaluation: the impact of diversity and subjectivity. *Accounting, Organizations and Society*, 30(1), 67-80.
- [31] Heneman, R.L. 1986. The relationship between supervisory ratings and results-oriented measures of performance: a meta analysis. *Personnel Psychology* 39(4), 811-826.

i For purposes of Section 162(m), a performance goal includes, for example, any objective performance standard that is applied to the individual executive, a business unit or the corporation as a whole. Examples of objective performance goals include increases in stock price, market share, sales, or earnings per share.

ii Our approach to testing for the pay for performance effects of Section 162(m) varies significantly from that followed in the past. Specifically, past research measures the pay for performance effects of Section 162(m) by comparing pre and post Section 162(m) pay sensitivity estimates for firms with CEO compensation at or near the \$1 million levels with that of firms paying below this amount.

Aside from the endogeneity issues encountered when separating firms using compensation levels, the use of a \$1 million threshold fails to take into consideration the extent of the changes needed to make compensation practices compliant with Section 162(m). It also fails to consider whether firms actually made such changes. We attempt to address these issues by separating the firms into the four quadrants.

iii While some might view our sample as dated, the last data gathered was from 2002, the objectives of the study require a before and after sample, as well as a sub-set of firms that changed their pay practices along with a group that did not change pay practices in response to this tax legislation. The period from 1993 to 2002 provides a ten year window over which to study the effects of Section 162(m) while simultaneously limiting the loss of firms through mergers and acquisitions, bankruptcy, or other factors.

iv While not reported, we also separated our sample into those paying less than \$1 million in salary prior to 1994 and those paying greater than this amount. We did this to determine whether the firms that were in our sample and not affected by the \$1 million threshold exhibited increases in base salary like that reported by Harris and Livingstone [29]. We did find a significant escalation in base salary through 1998, but find less of an escalation in base salaries for years after 1998.

v We presented this information because of concerns that firms that pay less than \$1 million have "little or no probability of losing tax deductions because of Section 162(m)" and therefore could "introduce bias into our tests." We thank an anonymous reviewer for this suggestion.

vi The number of firms included in the sample from 1992 was significantly different from that from other years. One concern with this is that the firms included in the pre-test years, which includes 1992, may not also be included in the post-test years. We tracked the 1992 and 1993 firms to see whether these firms were also present in later years. We found that only 1 of the 1992 firms was not included in succeeding years and that all of the 1993 firms were included in succeeding years. We ran our tests with and without the 1992 firm and the results were as reported in Table 5.

vii Because we coded our qualification variable as 1 for all years following Section 162(m) compliance, we also coded the qualification variable so that it captured pay changes strictly for the year of qualification. The regression results found using this approach were consistent with those reported in Table 4.

viii For more on this issue see Moers [30] and Heneman [31].