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Restructuring Charges and CEO Cash Compensation: A Reexamination

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ABSTRACT: Prior research generally concludes that compensation committees completely shield executive compensation from the effect of restructuring charges on earnings. In contrast, we find that after controlling for the growth in annual inflation-adjusted CEO cash compensation, compensation committees only partially shield CEO compensation from the adverse effect of restructuring charges on earnings, on average. In further analyses, we identify factors associated with cross-sectional differences in the extent of shielding. Specifically, we find that compensation committees appear to: (1) *completely shield* initial and subsequent restructuring charges for CEOs with long tenure, provided that the firm had not recorded a charge in the two immediately prior years; (2) provide *no shielding* of subsequent restructuring charges taken by short-tenured CEOs if the firm reported a prior restructuring charge within two years of the current charge; (3) and *partially shield* the other categories of restructuring charges. Overall, this study provides evidence that compensation committees evaluate the context of each restructuring in determining the extent to which they will intervene to shield executive compensation from the effect of these charges.

Keywords: *executive compensation; restructuring charges; compensation committee.*

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Data Availability: *A list of the firms is available from the authors. All other data are available from public sources identified in the text.*

I. INTRODUCTION

Compensation committees administer corporate executive annual incentive compensation plans. These committees decide whether and how to modify GAAP-based accounting income in determining executive compensation. To obtain insights into the role accounting information plays in this compensation decision, we investigate the degree to which compensation committees assess the context of a specific income item—restructuring charges—when deciding whether to shield CEO compensation from the adverse effects of the restructuring charge on current period income. For example, do prior restructuring charges, the length of the CEO's tenure, and the magnitude of the charge influence these compensation decisions?

Dechow et al. (1994) (hereafter DHS) make an important contribution to the literature by providing the first empirical evidence that compensation committees intervene to modify GAAP-based income in determining executive compensation. DHS also provide evidence suggesting that this intervention depends on certain contextual factors. For example, they show that compensation committees are less likely to shield executive compensation when the firm is a frequent restructurer, and that the longer the CEO has been in office, the more likely the compensation committee will shield his compensation from the effect of restructuring charges.

We extend DHS's analysis in two respects. First, we reexamine their specific conclusion that, on average, compensation committees fully shield chief executive officers' (CEOs') cash-based compensation from the earnings effect of restructuring charges.[1] (In fact, their empirical evidence is consistent with CEOs being awarded additional bonus pay for undertaking restructurings.) Second, we also extend DHS's contextual factor analysis by providing finer insights into how the frequency of reported restructuring charges, temporal proximity of prior restructuring charges, and CEO tenure influence whether compensation committees provide full, partial, or no shielding of CEO cash compensation from restructuring charges. Hence, our analysis provides insights into how these factors affect CEO compensation.

Our results confirm DHS's main conclusions that compensation committees intervene to modify the income number used to determine CEO compensation, and that this intervention depends on the tenure of the CEO and the number of restructurings the firm has reported. However, our detailed analyses differ from DHS's more specific conclusion that compensation committees fully shield executive compensation from the effect of restructuring charges. Rather, our analysis suggests that compensation committees, on average, only partially shield CEO compensation from the negative effect of restructuring charges on current period earnings. The primary explanation for this difference between the two studies' results is that we control for the annual inflation-adjusted growth in executive compensation. DHS does control for inflation by using Consumer Price Index (CPI) deflators. However, because CEO cash compensation growth has routinely exceeded the inflation rate since the late 1960s, firm-specific time-series models of executive compensation should control for this temporal trend in executive compensation.

[1] *Shielding* is the degree to which compensation committees add the restructuring charge back to income before setting earnings-based bonuses. *Full shielding* implies that they add 100 percent of the charge back to income, while *no shielding* implies that they add none of the charge back. *Partial shielding* implies that they add part of the restructuring charge back to income before setting executive earnings-based bonuses.

Given the magnitude of this compensation trend, we reexamine how restructuring charge frequency and CEO tenure affect the extent to which compensation committees shield CEO compensation from the adverse effects of restructuring charges on earnings. Our analysis shows that the degree of shielding depends not only on the frequency of reported restructurings, but also on their historical pattern. Specifically, we find that compensation committees fully shield CEO compensation from the effect on earnings of the firm's initial restructuring charge. The treatment of subsequent charges, however, depends on their temporal proximity to any previously reported restructuring charges. If the restructuring charge occurs within two years of a prior charge (a temporally proximate subsequent charge), then our results suggest that compensation committees do not shield CEO compensation from the charge. If, however, more than two years have elapsed since the prior charge (a temporally nonproximate subsequent charge), then our results indicate that compensation committees partially shield CEO compensation from the restructuring charge.

Our results are generally consistent with DHS's evidence that the longer the executive's tenure, the more compensation committees shield executive compensation. However, even after controlling for CEO tenure, we find that the degree of shielding depends on whether the restructuring is an initial charge, a temporally nonproximate subsequent charge, or a temporally proximate subsequent charge. That is, our evidence suggests that the degree of shielding is a joint function of the length of CEO tenure and the historical pattern of the firm's reported restructurings. Specifically, we find that compensation committees appear to (1) completely shield initial and temporally nonproximate restructuring charges for CEOs with long tenure, (2) provide no shielding of temporally proximate subsequent charges taken by short-tenured CEOs, and (3) partially shield the other categories of restructuring charges.

In summary, prior research generally concludes that compensation committees completely shield executive compensation from the adverse effect on current period earnings of potentially value-enhancing restructurings (DHS; Gaver and Gaver 1998). Our results, however, suggest that compensation committees do not view all restructurings favorably. This is consistent with prior research's conclusions and anecdotal evidence that restructurings are not always value-enhancing (Brickley and Van Drunen 1990; Carter 2000; Atiase et al. 2001; Lopez et al. 2002), and that some managers appear to use restructuring charges to manage earnings from one period to another (Moehrle 2002; Levitt 1998). Our evidence suggests that compensation committees evaluate the context of individual restructurings in determining the degree to which they will intervene to protect executive compensation from the effect of these charges. We interpret our evidence as suggesting that compensation committees assess a compensation penalty on the CEO in contexts where the restructuring charge is more likely to be opportunistic.

We have organized the remainder of the paper as follows. Section II develops the research design. Section III presents the sample selection and descriptive statistics. Section IV presents empirical results, and Section V briefly summarizes and concludes.

II. RESEARCH DESIGN

Base Model

DHS use the following firm-specific time-series model of CEO compensation:

$$COMP_t = \beta_0 + \beta_1 ADJ\_INC_t + \beta_2 R\_CHARGE_t + \epsilon_t \quad (1)$$

where:

$COMP_t$ = the CEO's cash compensation (salary and bonus) in year t, in inflation-adjusted dollars;

R_CHARGE_t = the restructuring charge in year t, in inflation-adjusted dollars; and
ADJ_INC_t = pre-restructuring charge income, computed as $INCOME_t - R\_CHARGE_t$, where $INCOME_t$ equals earnings before tax, extraordinary items, and the results of discontinued operations in year t, in inflation-adjusted dollars.

Like DHS, we define CEO compensation (COMP) as base salary plus bonus, and exclude other components of executive compensation, such as stock options. We focus on CEO cash compensation to facilitate comparison with DHS and Gaver and Gaver (1998), and because the bonus component of cash compensation typically requires achievement of a target annual earnings mark.[2] We inflation-adjust all amounts in our analyses to 1989 dollars based on the CPI published by the Bureau of Labor Statistics.

Although we retain the DHS focus on cash compensation, we incorporate two additional determinants of executive compensation. First, Gaver and Gaver (1998) establish that the effect of one dollar of positive income exceeds the effect of one dollar of loss on CEO cash compensation. DHS address this by eliminating loss-year observations in a robustness test. In contrast, we follow Gaver and Gaver (1998) and estimate a separate loss-year earnings coefficient.

Second, executive compensation has increased faster than the rate of inflation (Byrne 1991; Muckian 1993; Pratt 1996; Romani 1997). The ratio of executive compensation to that of hourly wage earners is a common benchmark. For instance, data reported in Smart (1999) imply that, at a minimum, the ratio of average CEO cash compensation to average factory worker pay nearly doubles from 42 in 1980 to 81 in 1998.[3] Murphy (1999) reports that the average annual growth in inflation-adjusted CEO cash compensation is 2.6 percent from 1970 to 1996 and 3.5 percent from 1982 to 1996. Byrne (1991) suggests that earnings growth can explain only a portion of this growth in compensation.

In firm-specific time-series models of CEO compensation, failure to allow for this trend may mask the true effect of a determinant of CEO compensation that is correlated with time. In our case, we estimate firm-specific time-series compensation models over an extended period characterized by a marked increase in (real) CEO compensation, 1970–1997. Moreover, the compensation determinant in which we are most interested—restructuring charges—also increases over time. Specifically, no restructuring charges occur in the sample until 1982, and the median charge (in time) does not occur until 1992.[4] Thus, it is important to control for this upward trend in CEO compensation to assess the degree to which compensation committees shield executive compensation from the effect of restructuring charges.

We control for the trend in inflation-adjusted CEO cash compensation by developing an out-of-sample index. We randomly select 100 nonrestructuring firms in the *Forbes* annual compensation survey for each year in our time-series (1970–1997). From these randomly selected firms, we record the out-of-sample median CEO cash compensation for each year

[2] During the time period we examine (1982–1997), cash compensation is, on average, approximately 72 percent of total compensation (Murphy 1999). However, by the end of our study period, equity-based compensation had increased to approximately 50 percent of total CEO compensation.

[3] The measure of compensation in Smart (1999) is total CEO compensation. However, Smart (1999) also indicates that in 1998, cash compensation amounts to only 20 percent of total executive compensation. Using that 20 percent estimate, we estimate that, at a minimum, the ratio of average CEO cash compensation to average factory worker pay rose from 42 in 1980 to 81 in 1998.

[4] The untabulated Pearson correlation between year and restructuring charge frequency is 0.87 (significant at the 0.0001 level). The correlation between year and mean inflation-adjusted CEO compensation is 0.92 (significant at the 0.0001 level).

in our time-series. We then use the out-of-sample medians to measure the annual growth in inflation-adjusted CEO cash compensation (TREND) as the median inflation-adjusted CEO cash compensation in year t divided by the median inflation-adjusted CEO cash compensation in 1970.[5]

Thus, we modify Equation (1) to form our base model as follows:

$$COMP_t = \alpha_0 + \alpha_1 POS\_INC_t + \alpha_2 NEG\_INC_t + \alpha_3 R\_CHARGE_t + \alpha_4 TREND_t + \epsilon_t \quad (2)$$

where:

POS_INC_t = ADJ_INC_t if ADJ_INC_t is positive, and 0 otherwise;
NEG_INC_t = ADJ_INC_t if ADJ_INC_t is negative, and 0 otherwise; and
$TREND_t$ = out-of-sample median inflation-adjusted compensation in year t divided by the out-of-sample median inflation-adjusted compensation in 1970.

Our estimates of Equation (2), like those of DHS, also include a first-order autocorrelation term.

We examine the degree of shielding using the DHS two-hypothesis framework. Defining α_1 as the (weighted average) mean of the firm-specific POS_INC coefficients and α_3 as the (weighted average) mean of the firm-specific R_CHARGE coefficients, if α_1 exceeds α_3 and α_3 is less than or equal to zero, then compensation committees completely shield CEO compensation from the effect of restructuring charges.[6] If α_1 exceeds α_3 and α_3 is greater than zero, then compensation committees partially shield CEO compensation from the effect of restructuring charges. Finally, if α_1 is less than or equal to α_3 and α_3 exceeds zero, then compensation committees do not shield executive compensation from the effect of restructuring charges.

Historical Pattern of Reported Restructurings Model

DHS report evidence suggesting that the more restructurings the firm undertakes, the less likely compensation committees are to shield CEO compensation. The DHS analysis, however, leaves several questions unresolved. First, because DHS find that the coefficient on restructuring charges is negative (i.e., that, on average, managers receive a bonus for undertaking a restructuring), it is not clear how to interpret evidence that compensation committees provide ''less shielding'' for repetitive restructurings. Thus, we directly assess whether compensation committees fully, partially, or do not shield CEO compensation from the earnings effect of repetitive restructuring charges. Second, DHS report the average effect of restructuring frequency on CEO compensation, per restructuring firm. However, our analysis probes deeper and investigates whether compensation committees treat restructuring charges differently within the same firm depending on the firm's historical pattern of the reported restructurings.

We expect compensation committees to shield initial restructuring charges more than subsequent restructuring charges. Probing further, we also expect the historical pattern of

[5] Our inferences are robust to several other measures of TREND. First, we use the same method to calculate TREND described above, except we use the median CEO cash compensation of the sample firms rather than out-of-sample medians. Second, we use the year-to-year percentage change in median CEO cash compensation, using both the out-of-sample medians and the sample medians. Last, we use year (70, 71,...,97) and the square root of year as measures of TREND.

[6] We weight the coefficients in inverse proportion to their standard errors, consistent with the Z-statistic in DHS. Appendix A describes this weighting process and documents its linkage to the Z-statistic.

prior restructuring charges to affect the compensation committee's willingness to shield the CEO from the adverse effects of subsequent restructuring charges. Specifically, we expect compensation committees to view a subsequent charge after one in the immediately preceding two years (i.e., a temporally proximate subsequent charge) as less deserving of special treatment than a restructuring charge for which the prior charge occurred several years in the past (i.e., a temporally nonproximate subsequent charge). Thus, we separately identify the compensation effect of initial, temporally nonproximate subsequent, and temporally proximate subsequent charges, to evaluate how the historical pattern of the firm's restructuring charges affects compensation committees' propensity to shield CEO compensation from the effect of a contemporary restructuring charge.

We examine multiple restructuring charge firms by estimating the following expanded version of Equation (2):

$$\begin{aligned} COMP_t = {} & \zeta_0 + \zeta_1 POS\_INC_t + \zeta_2 NEG\_INC_t + \zeta_3 TREND_t + \zeta_4 INITIAL\_RC_t \\ & + \zeta_5 SUB\_NONPROX\_RC_t + \zeta_6 SUB\_PROX\_RC_t + \epsilon_t \end{aligned} \quad (3)$$

where:

INITIAL_RC = R_CHARGE_t if the restructuring charge is the first the firm reported during the test period (1982–1997), otherwise 0;[7]

SUB_NONPROX_RC = R_CHARGE_t if the restructuring charge is subsequent to the initial charge the firm reported during the test period (1982–1997), *and* the firm did not report a previous restructuring charge in the two years prior to year t, otherwise 0; and

SUB_PROX_RC = R_CHARGE_t if the restructuring charge is subsequent to the initial charge the firm reported during the test period (1982–1997), *and* the firm reported a previous restructuring charge in the two years prior to year t, otherwise 0.

Equation (3) allows us to estimate directly the mean compensation effect of each type of charge (initial, temporally nonproximate subsequent, and temporally proximate subsequent) for the sample of multiple restructuring firms. We then repeat DHS-based tests for each category. That is, we test for partial shielding with respect to each type of restructuring charge by evaluating whether the mean coefficient for each type of charge exceeds zero. We further test whether the compensation effect differs among the three categories of charges by testing for differences among the coefficients for the three different restructuring charge classifications. Evidence that the coefficient on temporally nonproximate subsequent charges (ζ_5) or temporally proximate subsequent charges (ζ_6) is greater than the coefficient on initial charges (ζ_4) would support our contention that the historical pattern of reported restructurings affects the degree to which compensation committees shield CEO compensation from contemporaneous charges. That is, the frequency of reported restructuring charges and the temporal proximity of previously reported restructuring charges decrease the degree to which compensation committees shield CEO compensation from contemporary charges. A higher coefficient for temporally proximate (ζ_6) relative to temporally nonproximate (ζ_5) subsequent charges would indicate that recent prior restructuring charges

[7] Our design assumes that the initial charge (INITIAL_RC) in our data set (1982–1997) actually represents the initial restructuring charge the firm reported. To assess the validity of this assumption, we examined each sample firm's financial statements for the three years prior to 1982. That examination revealed only one restructuring charge reported by our sample firms for that three-year period (RCA, 1981: $230 million charge).

further reduce the extent to which compensation committees shield executive compensation from current restructuring charges.

CEO Tenure Model

DHS posit that the longer the executive's expected horizon with the firm, the more likely the compensation committee will shield him from the effect of restructuring charges. Consistent with this argument, they show that the coefficient on restructuring charges is negatively associated with the number of years the executive has been in office. However, the DHS design does not indicate whether compensation committees fully, partially, or do not shield firms that have CEOs with long vs. short tenure. We therefore extend the DHS analysis by modifying Equation (2) as follows:

$$\begin{aligned} COMP_t = {} & \theta_0 + \theta_1 POS\_INC_t + \theta_2 NEG\_INC_t + \theta_3 TREND_t + \theta_4 LTENURE\_RC_t \\ & + \theta_5 STENURE\_RC_t + \epsilon_t \end{aligned} \quad (4)$$

where:

$LTENURE\_RC_t$ = R_CHARGE_t if the charge is taken in year t by a CEO whose tenure in year t is at or above the median tenure of all CEOs who have reported a restructuring charge in the sample, otherwise 0; and

$STENURE\_RC_t$ = R_CHARGE_t if the charge is taken in year t by a CEO whose tenure in year t is below the median tenure of all CEOs who have reported a restructuring charge in the sample, otherwise 0.

We define the tenure of the CEO as *long tenure* (LTENURE_RC) if the number of years the executive has been the firm's CEO (as of the year of restructuring) is at or above the median tenure (seven years) of all CEOs in the sample in the year the firm records a restructuring charge. Similarly, a CEO has *short tenure* (STENURE_RC) if the number of years he has been the firm's CEO (as of the year of restructuring) is below the median tenure of all CEOs in the sample in the year the firm records a restructuring charge. Evidence that the coefficient on LTENURE_RC (θ_4) is smaller than the coefficient on STENURE_RC (θ_5) would suggest that compensation committees shield compensation of CEOs with longer tenure to a greater degree than compensation of CEOs with shorter tenure.

III. SAMPLE SELECTION AND DESCRIPTIVE STATISTICS

The full sample consists of firms that took at least one restructuring charge between 1982 and 1997. Restructuring charges arose along with the restructuring of the U.S. manufacturing industry in the 1980s, and DHS (1994, 149) indicate that *Accounting Trends and Techniques* did not even disclose restructuring charges in the list of disclosed losses prior to 1982. Thus, consistent with DHS, we start our search for restructuring charges in 1982. We received initial restructuring observations in our sample for the years prior to 1990 from Professor Mark Huson. For the years 1990 to 1994, we identified restructuring charges by searching the National Automated Accounting Research System (NAARS) using the search strings ''restruct!'' ''unusual,'' and ''special.'' For years after 1994, we search the Lexis-Nexis Academic Universe Business News database using the same search strings. To facilitate the collection of compensation data, we exclude firms identified in this search that are not among the *Fortune* 500 firms in 1992.

We estimate the compensation-earnings relation on a firm-by-firm basis using all (annual) compensation and earnings data available for the period from 1970 through 1997.[8] Hence, we have a maximum of 28 time-series observations for each firm. We require that the firm have a minimum of 15 years of compensation data to remain in the test sample. In addition, the firm must report at least one restructuring charge during its compensation time-series and have the data on Compustat necessary to estimate all equations.

Forbes reports salary and bonus data for CEOs of firms in any of their top 500 listings for the years 1970 through 1997.[9] When *Forbes* does not report the compensation of a CEO for a particular year, we manually collect the CEOs' cash compensation from the appropriate proxy statement.[10] We obtain financial statement data from the 1997 Compustat annual industrial files. Compustat does not separately report restructuring charges; therefore, we collect the dollar amounts for all restructuring charges directly from the annual income statement.

These data requirements result in a final sample of 129 firms reporting a total of 426 restructurings.[11] The mean and median years of compensation data for our sample are 26 and 28, respectively.

Table 1, Panel A reports that the number of restructuring charges ranges from a low of 4 in 1983 to a high of 44 in 1992. Panel A also reveals that our sample firms' inflation-adjusted CEO cash compensation increased dramatically over time. The mean inflation-adjusted cash compensation in 1982 was $653 thousand, whereas by 1997 the figure had more than doubled to over $1.4 million, an increase of 118 percent. The growth in inflation-adjusted CEO cash compensation is consistent with Murphy's (1999) evidence and with anecdotal media reports (Romani 1997; Pratt 1996; Muckian 1993; Byrne 1991). This dramatic growth highlights the importance of controlling for the trend in inflation-adjusted executive compensation when estimating time-series executive compensation models.

Panel B of Table 1 details the number of restructuring charges reported per firm. Of the 129 firms in the sample, only 27 firms (approximately 21 percent of the sample) report a single restructuring. More than 60 percent of the sample (78 firms) report three or more restructurings during the 16-year period from 1982 to 1997.

Table 2 reports descriptive statistics for the years in which sample firms report a restructuring charge. We use the CPI to inflation-adjust all amounts to 1989 dollars in this table. In the year of restructuring, our sample CEOs have been in office an average (median) of 8.65 (7.0) years. The sample generally consists of large firms, with mean total assets, market value of equity, and CEO cash compensation averaging $8.7 billion, $5.5 billion,

[8] To establish that our results are not significantly affected by including compensation and earnings data from the 1970 to 1981 time period, we reestimate all models using compensation and earnings data limited to the years 1982 through 1997 (maximum of 16 observations per firm). The results from these tests (not reported) are quantitatively and qualitatively similar to those reported in the paper.

[9] We limit our identification of restructuring firms to a search of the *Fortune* 500, as reported by NAARS, in order to facilitate the collection of CEO compensation data from the compensation survey of the *Forbes* 500. NAARS identifies firms that are listed in the *Fortune* 500, but not the *Forbes* 500. However, firms listed on the *Fortune* 500 and *Forbes* 500 consist of large public corporations.

[10] We collect compensation data from proxy statements if there are less than six years of missing compensation data from *Forbes* needed to complete the minimum of 15 years required. If more than five years of compensation data are missing, we exclude the firm from the sample.

[11] Our final sample excludes eight outlier firms identified by estimating Equation (2) on the 137 sample firms with complete data. Based on this analysis, we eliminated eight firms with a restructuring charge coefficient, R_CHARGE, that is three standard deviations greater than or less than the median restructuring charge coefficient of all firms in the sample. We reran all tests with the 137 firms that have complete data. The results of those tests (not reported) are quantitatively and qualitatively similar to those reported.

TABLE 1
Distribution of Restructuring Charges over Time and by Firm, and Mean Inflation-Adjusted CEO Cash Compensation over Time

Panel A: Distribution of Restructuring Charges and Mean Inflation-Adjusted CEO Cash Compensation by Fiscal Year

Year	*Number of Restructuring Charges*	*Mean Inflation-Adjusted CEO Cash Compensation ($Thousands)*[a]
1982	6	653
1983	4	739
1984	21	791
1985	30	804
1986	35	933
1987	30	922
1988	24	996
1989	19	1,030
1990	20	1,043
1991	34	967
1992	44	1,050
1993	41	1,055
1994	24	1,220
1995	34	1,251
1996	30	1,357
1997	30	1,425

Panel B: Number of Restructuring Charges Reported per Firm over the 1982–1997 Period

Restructuring Charges per Firm	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*Total*
Number of firms	27	24	32	15	12	9	4	3	1	2	129

[a] We adjust all dollar amounts to 1989 equivalent dollars based on the CPI.

TABLE 2
Descriptive Statistics on 426 Restructuring Charges Reported between 1982 and 1997[a]

	Mean	*Standard Deviation*	*Lower Quartile*	*Median*	*Upper Quartile*
COMP ($THOUSAND)	996	644	604	872	1,201
TENURE (YEARS)	8.65	7.33	3	7	12
ASSETS ($MILLION)	8,654	20,743	1,685	3,256	7,923
MARKET VALUE ($MILLION)	5,488	9,068	1,065	2,384	5,983
R_CHARGE ($MILLION)	−243	464	−213	−78	−27
INCOME ($MILLION)	301	954	−14	121	424
ADJ_INC ($MILLION)	549	989	75	232	680
R_CHARGE/ASSETS	−0.048	0.104	−0.051	−0.028	−0.009
R_CHARGE/MARKET VALUE	−0.121	0.438	−0.079	−0.031	−0.012
R_CHARGE/ADJ_INC[b]	−0.823	2.913	−0.675	−0.248	−0.114

[a] We adjust all dollar amounts to 1989 equivalent dollars based on the CPI.

[b] Descriptive statistics on R_CHARGE/ADJ_INC excludes 61 restructurings where ADJ_INC is negative in the period in which the firm records a restructuring charge. These 61 restructuring observations were taken by 35 firms.

COMP = CEO cash compensation (salary and bonus) in inflation-adjusted dollars;
TENURE = the number of years the CEO has been in office in the year of the restructuring charge in year t;
ASSETS = total assets in year t, in inflation-adjusted dollars;
MARKET VALUE = market value of equity in year t, in inflation-adjusted dollars;
R_CHARGE = the restructuring charge in year t, in inflation-adjusted dollars;
INCOME = earnings before tax, extraordinary items, and the results of discontinued operations in year t, in inflation-adjusted dollars; and
ADJ_INC = INCOME − R_CHARGE.

and $996 thousand, respectively. The average restructuring charge of $243 million has a significant effect on the firm, averaging 4.8 percent of total assets, 12.1 percent of market value, and 82.3 percent of pre-restructuring charge income.[12]

IV. EMPIRICAL RESULTS

Empirical Tests of the Base Model: Equation (2)

Table 3 reports coefficient medians, weighted means, and Z-statistics from our 129 firm-specific estimations of Equation (2).[13] Consistent with DHS and Gaver and Gaver (1998), the weighted mean (median) POS_INC coefficient of 1.16 (0.98) is significantly positive at the 0.01 level. The weighted mean (median) coefficient on R_CHARGE of 0.64 (0.55) is also significantly positive, suggesting that compensation committees, at most, only partially shield CEO compensation from the effect of restructuring charges. We also find

[12] We do not compute the ratio of restructuring charge to pre-restructuring charge income for the 61 cases with negative pre-restructuring charge income.

[13] In addition to the parametric Z-statistic described in Appendix A, we also employ the nonparametric Wilcoxon signed rank test, a test of differences in location, to assess the significance of the coefficients and coefficient differences.

TABLE 3
Results from 129 Firm-Specific Regressions of CEO Cash Compensation on Income and Restructuring Charges, 1982–1997

Equation (2): $COMP_t = \alpha_0 + \alpha_1 POS\_INC_t + \alpha_2 NEG\_INC_t + \alpha_3 R\_CHARGE_t + \alpha_4 TREND_t$ [a]

	Predicted Sign	*Median*[b]	*Weighted Mean Coefficient*	*Z-Statistic*[c]
POS_INC, α_1	+	0.98**	1.16	32.01**
NEG_INC, α_2 (n = 67)[d]	?	0.01	−0.17	−0.73
R_CHARGE, α_3	+	0.55**	0.64	5.09**
TREND, α_4	+	254.34**	278.94	70.38**
POS_INC − R_CHARGE, $\alpha_1 - \alpha_3$	+	0.32**	0.51	3.10**
Adjusted R^2		0.61		
Number of Observations		26		

*, ** Significant at 0.05 and 0.01, respectively.

[a] COMP = CEO cash compensation (salary and bonus) in inflation-adjusted dollars;
R_CHARGE = the restructuring charge in year t, in inflation-adjusted dollars;
ADJ_INC = INCOME − R_CHARGE, where INCOME equals earnings before tax, extraordinary items, and the results of discontinued operations in year t, in inflation-adjusted dollars;
POS_INC = ADJ_INC if ADJ_INC > 0;
NEG_INC = ADJ_INC if ADJ_INC < 0; and
TREND = inflation-adjusted CEO cash compensation growth index.

[b] The significance levels indicated in the Median column are based on the Wilcoxon signed rank test.

[c] Appendix A describes the weighted mean and Z-statistic calculations.

[d] Of the 129 firms in the sample, 67 firms experienced at least one loss in the sample time period (1970–1997). Accordingly, the mean and median for this coefficient are based on only 67 observations.

that the weighted mean (median) POS_INC coefficient is significantly higher than the coefficient on R_CHARGE (p-value < 0.01). That is, our results suggest that while compensation committees do place some weight on restructuring charges in determining CEO compensation, they place less weight on restructuring charges than on positive pre-restructuring charge income.[14] Hence, we conclude that compensation committees, on average, partially shield CEO compensation from the earnings effect of restructuring charges.[15]

[14] We focus on how the restructuring charge component of income affects CEO cash compensation, in years when the firm reports positive income, because Gaver and Gaver (1998, 245) establish that the relation between firm income and CEO cash compensation is essentially nullified in years when the firm reports a loss. However, we reran Equation (2) including a loss year dummy × restructuring charge interaction term to investigate whether compensation committees treat restructuring charges differently in years in which the firm reports a loss. The coefficient on the interaction term is not significantly different from zero. In other untabulated analyses, we find that the weighted mean (median) difference between the coefficients on NEG_INC and R_CHARGE is insignificant, estimated on the subsample of 35 firm-years in which both a loss and restructuring charge are recorded. This result suggests that compensation committees treat restructuring charges recorded in years when the firm reports a loss, in a manner consistent with the other components of losses.

[15] In additional tests, we partition the restructuring charge variable in Equation (2) based on the magnitude of the charge (large charge above the median and small charge below the median of all charges) and reestimate the regression. Results (not reported) suggest partial shielding for both large (above-median) and small (below-median) restructuring charges. We did not find a statistically significant difference between the coefficients on large and small charges.

Table 3 also reveals the importance of controlling for the temporal trend in inflation-adjusted CEO cash compensation. Consistent with our expectation, the weighted mean (median) coefficient on TREND is positive and highly significant (0.01 level). That is, our results suggest that the most important determinant of inflation-adjusted CEO cash compensation is the passage of time. Consequently, it is important to control for this temporal trend in firm-specific time-series compensation models.[16]

DHS conclude that, on average, compensation committees *completely shield* CEO compensation from restructuring charges. Their results further suggest that CEOs are awarded bonus pay that increases proportionately with the magnitude of the restructuring charge. The evidence we report in Table 3 is inconsistent with that conclusion. The primary difference between our results and the DHS results is that DHS report a significantly negative coefficient on R_CHARGE, whereas we report a significantly positive coefficient on R_CHARGE. To isolate the reason for this difference, we replicate the DHS analysis in Appendix B. This replication reveals that the primary explanation for the difference between our results and DHS stems from our control for TREND, which Table 3 shows is the most significant variable in our firm-specific CEO compensation model. Thus, the specific DHS conclusion that compensation committees *completely* shield CEO compensation from the effects of restructuring charges appears to be a spurious result of a correlated omitted variable—the dramatic increase in inflation-adjusted CEO cash compensation over time.

Empirical Tests of the Historical Pattern Model: Equation (3)

Our empirical tests of Equation (3) include only the subsample of 90 firms reporting more than one restructuring charge and at least one temporally proximate subsequent restructuring charge. These 90 firms recorded a total of 371 restructuring charges over the sample time period. The mean initial (INITIAL_RC), temporally nonproximate subsequent (SUB_NONPROX_RC), and temporally proximate subsequent (SUBSEQ_PROX_RC) restructuring charges are $191, $290, and $180 million, respectively. Most of the initial charges (57 out of 90) occur in the pre-1990 time period, whereas most of the temporally proximate subsequent (151 out of 228) and temporally nonproximate subsequent (50 out of 57) charges occur post-1989. However, in an untabulated supplemental analysis, we find no significant evidence of a between-decade shift in the restructuring charge coefficient for any of the three types of charges.

Panel A of Table 4 reports estimates for the Equation (3) specification. The weighted mean (median) coefficient for INITIAL_RC is insignificant at conventional levels. Thus, our evidence suggests that compensation committees fully shield CEO cash compensation from the adverse effects of initial restructuring charges.[17] In contrast, the weighted mean (median) coefficients for both types of subsequent charges, SUB_NONPROX_RC and SUB_PROX_RC, are positive and significant at the 0.01 level, indicating that compensation committees do not fully shield subsequent charges.

Panel B of Table 4 reports results for tests of differences among the Equation (3) coefficient estimates. Consistent with the Panel A inference that compensation committees

[16] Prior research establishes that CEO compensation increases with firm size (Bliss and Rosen 2001). Thus, we reestimate all models including firm size (log of total assets) as an additional independent variable. The results of these tests (not reported) are qualitatively and quantitatively similar to the results reported throughout the paper.

[17] In an untabulated analysis, we estimate the mean restructuring charge coefficient for the 27 firms that experience only one restructuring charge over the sample period. The weighted mean R_CHARGE coefficient is 0.20 and the associated Z-statistic is 0.49, suggesting that compensation committees fully shield CEO compensation from the adverse effects of a single restructuring charge. Hence, compensation committee treatment of these one-time charges appears indistinguishable from the treatment accorded initial charges by multiple restructuring charge firms.

TABLE 4
Results from 90 Firm-Specific Regressions of CEO Cash Compensation on Income and Initial, Temporally Nonproximate Subsequent, and Temporally Proximate Subsequent Restructuring Charges

Equation (3): $COMP_t = \zeta_0 + \zeta_1 POS\_INC_t + \zeta_2 NEG\_INC_t + \zeta_3 TREND_t + \zeta_4 INITIAL\_RC_t + \zeta_5 SUB\_NONPROX\_RC_t + \zeta_6 SUB\_PROX\_RC_t$ [a]

Panel A: Coefficient Estimates

Coefficient	*n*[b]	*Median*[c]	*Weighted Mean Coefficient*	*Z-Statistic*[d]
POS_INC, ζ_1	90	1.02**	1.23	29.62**
NEG_INC, ζ_2	48	−0.01	−0.19	−0.60
TREND, ζ_3	90	284.15**	290.37	68.81**
INITIAL_RC, ζ_4	90	0.13	0.14	0.93
SUB_NONPROX_RC, ζ_5	52	0.35*	0.46	2.54**
SUB_PROX_RC, ζ_6	90	0.62**	0.90	3.95**
Adjusted R^2	90	0.57		

Panel B: Tests of Panel A Coefficient Differences

Coefficient Difference	*n*[b]	*Median*[c]	*Weighted Mean Difference*	*Z-Statistic*[d]
POS_INC − INITIAL_RC, $\zeta_1 - \zeta_4$	90	0.87**	1.09	6.30**
POS_INC − SUB_NONPROX_RC, $\zeta_1 - \zeta_5$	52	0.73**	0.61	2.88**
POS_INC − SUB_PROX_RC, $\zeta_1 - \zeta_6$	90	0.15	0.33	0.49
INITIAL_RC − SUB_NONPROX_RC, $\zeta_4 - \zeta_5$	52	−0.21	−0.25	−1.09
INITIAL_RC − SUB_PROX_RC, $\zeta_4 - \zeta_6$	90	−0.73**	−0.76	−3.67**
SUB_NONPROX_RC − SUB_PROX_RC, $\zeta_5 - \zeta_6$	52	−0.37**	−0.43	−2.50**

*, **Significant at 0.05 and 0.01, respectively.

[a] COMP = CEO cash compensation (salary and bonus) in inflation-adjusted dollars;
R_CHARGE = the restructuring charge in year t, in inflation-adjusted dollars;
INITIAL_RC = R_CHARGE_t if the restructuring charge is the first reported by the firm during the test period (1982–1997), otherwise 0;
SUB_NONPROX_RC = R_CHARGE_t if the restructuring charge is subsequent to the initial charge (INITIAL_RC) reported by the firm during the test period (1982–1997) and the firm did not report a previous restructuring charge in the two years prior to year t, otherwise 0;
SUB_PROX_RC = R_CHARGE_t if the restructuring charge is subsequent to the initial charge (INITIAL_RC) reported by the firm during the test period (1982–1997) and the firm reported a previous restructuring charge in the two years prior to year t, otherwise 0;
ADJ_INC = INCOME – R_CHARGE, where INCOME equals earnings before tax, extraordinary items, and the results of discontinued operations in year t, in inflation-adjusted dollars;
POS_INC = ADJ_INC if ADJ_INC > 0;
NEG_INC = ADJ_INC if ADJ_INC < 0; and
TREND = inflation-adjusted CEO cash compensation growth index.

[b] n is the number of firm-specific parameters used to compute the test statistics.

[c] The significance levels indicated in the Median column are based on the Wilcoxon signed rank test.

[d] Appendix A describes the weighted mean and Z-statistic calculations.

at least partly shield CEO cash compensation from the effects of restructuring charges, the weighted mean (median) POS_INC coefficient is significantly larger than both the INITIAL_RC and SUB_NONPROX_RC coefficients at the 0.01 level. Taken together with the insignificant coefficient on INITIAL_RC and the significantly positive coefficient on SUB_NONPROX_RC, this evidence indicates that compensation committees fully shield CEO compensation from the earnings effect of initial restructuring charges, and partially shield CEO compensation from the earnings effect of temporally nonproximate restructuring charges. In contrast, the weighted mean (median) difference between the POS_INC and SUB_PROX_RC coefficients is statistically indistinguishable from zero. Hence, we find no evidence that compensation committees shield executive compensation from temporally proximate subsequent charges.

The tests of differences among the restructuring charge coefficients confirm that the weighted mean (median) SUB_PROX_RC coefficient is significantly larger than both the INITIAL_RC and the SUB_NONPROX_RC coefficients. In contrast, the difference between the SUB_NONPROX_RC and INITIAL_RC coefficients is not significant at conventional levels. Hence, our results suggest that compensation committees shield initial and nonproximate restructuring charges to a greater extent than proximate restructuring charges that occur shortly after a prior restructuring charge.

Empirical Tests of the CEO Tenure Model: Equation (4)

DHS report evidence suggesting that the longer the CEO's tenure with the firm, the more the compensation committee will shield the executive from the adverse effect of restructuring charges. Table 5 reports estimates of our Equation (4) specification that further probes whether compensation committees fully shield, partially shield, or do not shield compensation of CEOs with long vs. short tenure, after controlling for the growth in inflation-adjusted CEO cash compensation.

The weighted mean (median) coefficients for both LTENURE_RC and STENURE_RC are positive and significant at the 0.05 level or better, and POS_INC is significantly greater (p-value $<$ 0.01) than both LTENURE_RC and STENURE_RC. Taken together, these results suggest that compensation committees partially shield CEO cash compensation from the earnings effect of restructuring charges, whether the CEO has been in place for a short or long period of time. Contrary to DHS and our own expectation, however, we find no significant difference between the weighted mean and median coefficients on LTENURE_RC and STENURE_RC, after we control for the growth in inflation-adjusted CEO cash compensation.[18]

Combined Historical Pattern and CEO Tenure Model

Table 4 reports evidence that the degree to which compensation committees shield executive compensation from the adverse effects of restructuring charges depends on the firm's historical pattern of reporting restructurings. Contrary to our expectations, however, Table 5 reports that the extent of shielding does not differ significantly between CEOs with short tenure vs. long tenure. However, it is possible that differences in the number and pattern of reported restructuring charges confounds our analysis of the effects of CEO tenure. To disentangle the effects of CEO tenure from the effects of the firm's historical

[18] Defining LTENURE_RC and STENURE_RC based on the CEOs in the upper quartile and lower quartile of the sample yields identical inferences. In addition, although prior research suggests that new CEOs engage in "big bath" behavior (Strong and Meyer 1987; Elliott and Shaw 1988; Pourciau 1993), in supplementary analyses we found no evidence that compensation committees shield executives in their first year in office to a greater extent than executives who have been with the firm for a longer time period.

TABLE 5
Results of 129 Firm-Specific Regressions of CEO Cash Compensation on Income and Restructuring Charges for CEOs with Long Tenure vs. Short Tenure

Equation (4): $COMP_t = \theta_0 + \theta_1 POS\_INC_t + \theta_2 NEG\_INC_t + \theta_3 TREND_t + \theta_4 LTENURE\_RC_t + \theta_5 STENURE\_RC_t$ [a]

	n [b]	*Median* [c]	*Weighted Mean Coefficient*	*Z-Statistic* [d]
POS_INC, θ_1	129	1.00**	1.18	33.75**
NEG_INC, θ_2	67	−0.03	−0.14	−0.52
TREND, θ_3	129	264.20**	284.55	71.39**
LTENURE_RC, θ_4	73	0.49*	0.40	2.47**
STENURE_RC, θ_5	108	0.69**	0.72	4.01**
POS_INC − LTENURE_RC, $\theta_1 - \theta_4$	73	0.55**	0.96	4.19**
POS_INC − STENURE_RC, $\theta_1 - \theta_5$	108	0.41**	0.45	2.63**
LTENURE_RC − STENURE_RC, $\theta_4 - \theta_5$	53	0.16	0.26	1.58
Adjusted R^2		0.58		

*, ** Significant at 0.05 and 0.01, respectively.

[a] COMP = CEO cash compensation (salary and bonus) in inflation-adjusted dollars;
R_CHARGE = the restructuring charge in year t, in inflation-adjusted dollars;
LTENURE_RCt = R_CHARGE_t if the charge is taken in year t by a CEO whose tenure in year t is at or above the median tenure of all CEOs who have restructuring charges in the sample, otherwise 0;
STENURE_RCt = R_CHARGE_t if the charge is taken in year t by a CEO whose tenure in year t is below the median tenure of all CEOs who have restructuring charges in the sample, otherwise 0;
ADJ_INC = INCOME − R_CHARGE, where INCOME equals earnings before tax, extraordinary items, and the results of discontinued operations in year t, in inflation-adjusted dollars;
POS_INC = ADJ_INC if ADJ_INC > 0;
NEG_INC = ADJ_INC if ADJ_INC < 0; and
TREND = inflation adjusted CEO cash compensation growth index.

[b] n is the number of firm-specific parameters used to compute the test statistics.

[c] The significance levels indicated in the Median column are based on the Wilcoxon signed rank test.

[d] Appendix A describes the weighted mean and Z-statistic calculations.

pattern of reported restructuring charges, we integrate our analysis of the historical pattern of reported restructurings into our analysis of the effect of CEO tenure as follows:

$$\begin{aligned} COMP_t = {} & \lambda_0 + \lambda_1 POS\_INC_t + \lambda_2 NEG\_INC_t + \lambda_3 TREND_t + \lambda_4 LT\_INITIAL\_RC_t \\ & + \lambda_5 LT\_SUB\_NONPROX\_RC_t + \lambda_6 LT\_SUB\_PROX\_RC_t \\ & + \lambda_7 ST\_INITIAL\_RC_t + \lambda_8 ST\_SUB\_NONPROX\_RC_t \\ & + \lambda_9 ST\_SUB\_PROX\_RC_t. \end{aligned} \quad (5)$$

The prefix LT_(ST_) indicates that the firm recorded a restructuring in a year when the CEO's tenure is at or above (below) the median tenure of the CEO in the restructuring charge year for our sample of 426 charges. All other variables are as previously identified.

Equation (5) allows us to directly estimate the compensation effect of each type of charge (initial, temporally nonproximate subsequent, and temporally proximate subsequent) for the sample of 90 multiple restructurers, conditional on the length of the CEO's tenure. Table 6 reports summary statistics for our firm-specific estimations of Equation (5). The weighted mean (median) coefficients on LT_INITIAL_RC and LT_SUB_NONPROX_RC are not significant at conventional levels, consistent with full shielding. On the other hand, the weighted mean (median) coefficients on the other restructuring charge classifications are all significantly positive at the 0.05 level or better. Thus, our evidence suggests that compensation committees fully shield CEOs with long tenure for all restructuring charge types except temporally proximate subsequent restructuring charges. The evidence further suggests that compensation committees, at best, only partially shield short-tenured CEOs' compensation from the effect of any of the three kinds of restructurings. Overall, the Table 6 results are consistent with compensation committees providing a benefit to long-tenured CEOs in the degree to which they shield executive compensation from occasional restructuring charges.

Panel A of Table 7 reports results for tests of differences between the POS_INC coefficient and the restructuring charge coefficients reported in Table 6. The weighted mean (median) POS_INC coefficient is significantly greater than the coefficients on long-tenured initial ($\lambda_1 - \lambda_4$), long-tenured temporally nonproximate ($\lambda_1 - \lambda_5$), long-tenured temporally proximate ($\lambda_1 - \lambda_6$), and short-tenured initial ($\lambda_1 - \lambda_7$) restructuring charges at the 0.05 level or better, indicating significant shielding of all restructuring charges taken by long-tenured CEOs and initial charges taken by short-tenured CEOs. The weighted mean (median) POS_INC coefficient is insignificantly different than the coefficients on short-tenured temporally nonproximate ($\lambda_1 - \lambda_8$) and short-tenured temporally proximate ($\lambda_1 - \lambda_9$) restructuring charges, suggesting that compensation committees provide little, if any, shielding of cash compensation from subsequent restructuring charges taken by short-tenured CEOs.

The short-tenured restructuring charge coefficients reported in Table 6 uniformly exceed their long-tenured counterparts, consistent with less shielding for short-tenured CEOs compared to long-tenured CEOs. However, Panel B of Table 7 reports that this difference is significant (at the 0.01 level) for only the temporally nonproximate subsequent ($\lambda_5 - \lambda_8$) and temporally proximate subsequent ($\lambda_6 - \lambda_9$) restructuring charge classifications.[19] These coefficient differences reveal that, in contrast to the insignificant results in Table 5, a more fully specified model supports DHS's conclusion that compensation committees provide more shielding for long-tenured CEOs—at least for those CEOs that take multiple restructuring charges.

Consistent with Table 4, for both the long-tenured and short-tenured CEOs, the weighted mean restructuring charge coefficient is smallest for initial restructuring charges and greatest for temporally proximate subsequent charges. Panel C of Table 7 shows, however, that these differences are not significant at conventional levels for the long-tenured CEOs. In contrast, for the short-tenured CEOs, the temporally proximate subsequent restructuring charge coefficient is significantly higher than the coefficients on both initial ($\lambda_7 - \lambda_9$) and temporally nonproximate subsequent ($\lambda_8 - \lambda_9$) restructuring charges, indicating that the frequency of reporting restructuring charges and the temporal proximity of

[19] The Z-test reported in Panels B and C of Table 7 differs slightly from the tests reported elsewhere in the paper. This portion of the analysis uses the two-sample form of the Z-statistic described in Appendix A, not the within-firm Z-test employed elsewhere in the paper. We use the two-sample form of the Z-test for this analysis, because most firms do not have initial, proximate, and nonproximate restructuring charges taken by a CEO with short tenure and (in other years) taken by CEOs with long tenure.

TABLE 6
Results from 90 Firm-Specific Regressions of CEO Cash Compensation on Income and Initial, Temporally Nonproximate Subsequent, and Temporally Proximate Subsequent Restructuring Charges, Conditional on Whether the Restructuring Charge is Reported by a CEO with Long vs. Short Tenure

Equation (5): $COMP_t = \lambda_0 + \lambda_1 POS\_INC_t + \lambda_2 NEG\_INC_t + \lambda_3 TREND_t + \lambda_4 LT\_INITIAL\_RC_t + \lambda_5 LT\_SUB\_NONPROX\_RC_t + \lambda_6 LT\_SUB\_PROX\_RC_t + \lambda_7 ST\_INITIAL\_RC_t + \lambda_8 ST\_SUB\_NOPROX\_RC_t + \lambda_9 ST\_SUB\_PROX\_RC_t$ [a]

	n [b]	Median [c]	Weighted Mean Coefficient	Z-Statistic [d]
POS_INC, λ_1	90	1.04**	1.24	30.82**
NEG_INC, λ_2	48	−0.00	−0.26	−0.51
TREND, λ_3	90	265.33**	275.99	69.41**
LT_INITIAL_RC, λ_4	49	0.05	0.08	0.40
LT_SUB_NONPROX_RC, λ_5	25	0.25	0.23	0.89
LT_SUB_PROX_RC, λ_6	56	0.34**	0.39	2.63**
ST_INITIAL_RC, λ_7	48	0.54**	0.35	2.97**
ST_SUB_NONPROX_RC, λ_8	36	0.67*	0.60	3.04**
ST_SUB_PROX_RC, λ_9	53	0.89**	1.18	6.00**
Adjusted R^2	90	0.55		

*, ** Significant at 0.05 and 0.01, respectively.

[a] COMP = CEO cash compensation (salary and bonus) in inflation-adjusted dollars;
R_CHARGE = the restructuring charge in year t, in inflation-adjusted dollars;
LT_(ST_) = prefix indicates the restructuring charge variable is recorded in a year when the CEO's tenure is at or above (below) the median tenure of the CEO in the restructuring charge year for test sample of restructuring charges.
INITIAL_RC = R_CHARGE_t if the restructuring charge is the first reported by the firm during the test period (1982–1997), otherwise 0;
SUB_NONPROX_RC = R_CHARGE_t if the restructuring charge is subsequent to the initial charge (INITIAL_RC) reported by the firm during the test period (1982–1997) and the firm did not report a previous restructuring charge in the two years prior to year t, otherwise 0;
SUB_PROX_RC = R_CHARGE_t if the restructuring charge is subsequent to the initial charge (INITIAL_RC) reported by the firm during the test period (1982–1997) and the firm reported a previous restructuring charge in the two years prior to year t, otherwise 0;
ADJ_INC = INCOME − R_CHARGE, where INCOME equals earnings before tax, extraordinary items, and the results of discontinued operations in year t, in inflation-adjusted dollars;
POS_INC = ADJ_INC if ADJ_INC > 0;
NEG_INC = ADJ_INC if ADJ_INC < 0; and
TREND = inflation-adjusted CEO cash compensation growth index.

[b] n is the number of firm-specific parameters that are used to compute the test statistics.

[c] The significance levels indicated in the Median column are based on the Wilcoxon signed rank test.

[d] Appendix A describes the weighted mean and Z-statistic calculations.

TABLE 7
Tests of Differences in Equation (5) Restructuring Charge Coefficients[a]

Panel A: Income Coefficient Differences

Coefficient Difference	*n*[b]	*Median*[c]	*Weighted Mean Difference*	*Z-Statistic*[d]
POS_INC − LT_INITIAL_RC, $\lambda_1 - \lambda_4$	49	0.94**	0.85	3.31**
POS_INC – LT_SUB_NONPROX_RC, $\lambda_1 - \lambda_5$	25	0.87*	0.92	1.95*
POS_INC − LT_SUB_PROX_RC, $\lambda_1 - \lambda_6$	56	0.31*	0.28	1.70
POS_INC − ST_INITIAL_RC, $\lambda_1 - \lambda_7$	48	0.30*	0.44	2.59**
POS_INC − ST_SUB_NONPROX_RC, $\lambda_1 - \lambda_8$	36	0.23	0.30	1.34
POS_INC − ST_SUB_PROX_RC, $\lambda_1 - \lambda_9$	53	0.10	0.07	0.49

Panel B: Differences by CEO Tenure

Coefficient Difference	*n*[b]	*Median*[c]	*Weighted Mean Difference*	*Z-Statistic*[d]
LT_INITIAL_RC − ST_INITIAL_RC, $\lambda_4 - \lambda_7$[e]	NA	NA	−0.10	−0.82
LT_SUB_NONPROX_RC−ST_SUB_NONPROX_RC, $\lambda_5 - \lambda_8$[e]	NA	NA	−0.37	−2.43**
LT_SUB_PROX_RC − ST_SUB_PROX_RC, $\lambda_6 - \lambda_9$[e]	NA	NA	−0.79	−5.50**

Panel C: Differences by Prior Restructuring Charge Proximity

Coefficient Difference	*n*[b]	*Median*[c]	*Weighted Mean Coefficient*	*Z-Statistic*[d]
LT_INITIAL_RC − LT_SUB_NONPROX_RC, $\lambda_4 - \lambda_5$[e]	NA	NA	−0.15	−0.74
LT_INITIAL_RC − LT_SUB_PROX_RC, $\lambda_4 - \lambda_6$[e]	NA	NA	−0.31	−1.86
LT_SUB_NONPROX_RC − LT_SUB_PROX_RC, $\lambda_5 - \lambda_6$[e]	NA	NA	−0.16	−0.53
ST_INITIAL_RC − ST_SUB_NONPROX_RC, $\lambda_7 - \lambda_8$[e]	NA	NA	−0.25	−1.29
ST_INITIAL_RC − ST_SUB_PROX_RC, $\lambda_7 - \lambda_9$[e]	NA	NA	−0.83	−4.08**
ST_SUB_NONPROX_RC − ST_SUB_PROX_RC, $\lambda_8 - \lambda_9$[e]	NA	NA	−0.58	−3.17**

*, ** Significant at 0.05 and 0.01, respectively.

[a] See Table 6 for a complete specification of Equation (5).

[b] n is the number of firm-specific parameters used to compute differences.

[c] The significance levels indicated in the Median column are based on the Wilcoxon signed rank test.

[d] Appendix A describes the weighted mean and Z-statistic calculations.

[e] We evaluate differences by CEO tenure and temporal proximity of the charge using the two-sample form of the z-statistic described in Appendix A. Sample sizes for each two-sample comparisons correspond to numbers of coefficient observations reported in Table 5. Medians are not reported for this analysis.

prior charges has a greater effect on CEO cash compensation when the CEO is short-tenured than when he is long-tenured.

Sensitivity Analyses

Prior research has found that CEO compensation is associated with the firm's stock returns as well as with the firm's earnings. We reestimate all models including three different annual stock return measures (raw, abnormal from market model using value-weighted indices, and abnormal from market model using equally weighted indices) as additional control variables. The results of these tests (not reported) indicate that CEO compensation increases with the firm's stock return, but our primary findings are robust to controlling for returns.

In addition to the firm-specific regressions reported in the tables, we also estimate all regressions using a pooled cross-sectional time-series design. To control for firm-specific and year-specific differences, we include dummy variables for each firm and year. The only difference between the pooled cross-sectional design results and the firm-specific design results is that the coefficient magnitudes in the pooled design are substantially smaller than those in the firm-specific design. However, the relations among the variables remains consistent with the firm-specific results reported in the tables (i.e., compensation committees, on average, partially shield CEO cash compensation from the effect of restructuring charges; the degree of shielding depends on whether the restructuring is an initial, temporally non-proximate subsequent, or temporally proximate subsequent restructuring charge; and the longer the executive's tenure, the more compensation committees shield CEO compensation from the effect of restructuring charges).

Prior research suggests that CEO cash compensation increases with earnings persistence (Baber et al. 1998, 1999). Because restructuring charges are generally nonrecurring, a control for earnings persistence may be particularly critical in restructuring years. To control for the potential effect of earnings persistence on the relation between CEO cash compensation and restructuring charges, we estimate a first-difference specification of Equation (2) including a firm-specific control for earnings persistence.[20] We estimate this specification using both a firm-specific and a pooled cross-sectional time-series design. Consistent with our basic analysis reported in Table 3, the results of these tests suggest that compensation committees partially shield CEO compensation from the earnings effect of restructuring charges, on average.

V. CONCLUSION

We reexamine the degree to which compensation committees appear to intervene to protect CEO compensation from the adverse effect of restructuring charges. Our results confirm Dechow et al.'s (1994) (DHS's) conclusions that compensation committees intervene to modify the income number used to determine CEO compensation, and that the extent of this intervention depends on the frequency of reported restructurings and the length of the CEO's tenure. However, in contrast to prior evidence that compensation committees fully shield executive cash compensation from the earnings effect of nonrecurring

[20] Following Ali and Zarowin (1992) and Cheng et al. (1996), we rank firms each year by their E_{it}/P_{it} ratio, where E_{it} is reported earnings per share for year t and P_{it} is the end-of-year stock price. We assign all firm-years with negative values of E_{it}/P_{it} a ranking of 1, and group the remaining firm-years into nine approximately equal portfolios and assign them rankings of 2 through 10. The earnings persistence variable equals 1 if the firm-year's E/P ratio falls in portfolios 3 to 8, 0 otherwise. This ranking procedure assumes the extreme portfolios (top two and bottom two) have more transitory items in earnings (i.e., earnings are less persistent) than the middle portfolios.

losses, including restructuring charges (DHS; Gaver and Gaver 1998), we find that after controlling for the temporal trend in inflation-adjusted CEO compensation, compensation committees, on average, only partially shield CEO compensation from the adverse effect of restructuring charges.[21] Thus, our results suggest that prior evidence that compensation committees completely shield CEO compensation from the effects of restructuring charges is likely a spurious result of a correlated omitted variable—the temporal increase in inflation-adjusted CEO cash compensation. This highlights the importance of controlling for the temporal trend in inflation-adjusted CEO compensation in firm-specific time-series compensation models.

We also investigate how the context of the restructuring affects the extent of shielding. Our results support DHS's conclusion that, in general, compensation committees provide less shielding in firms reporting multiple restructuring charges, and more shielding in firms with long-tenured vs. short-tenured CEOs. Further, we find differential shielding for three specific types of restructuring charges—initial, nonproximate subsequent, and proximate subsequent charges—and that these various kinds of restructuring charges interact with CEO tenure. Specifically, our results suggest that compensation committees: (1) completely shield initial restructuring charges and subsequent restructuring charges not preceded by a prior restructuring within two years if the CEO has long tenure, (2) provide no shielding of subsequent restructuring charges that follow a prior charge within two years if the CEO has short tenure, and (3) partially shield the other categories of restructuring charges. To our knowledge, this is the first evidence that, depending on the context, compensation committees let some restructuring charges flow through, thereby reducing the earnings number used to compute CEO compensation.[22] In sum, this study demonstrates that contextual factors appear to play a substantive role in compensation committee decisions whether to shield (and if so how much to shield) executive compensation from the adverse effects of restructuring charges.

Our study has several limitations. First, we examine only CEO cash compensation. Recent research suggests that other forms of executive compensation, such as stock options, represent an increasing portion of total executive compensation in recent years (Murphy 1999). Furthermore, since firms typically restructure to improve *future* performance, total compensation may provide a more appropriate measure of whether compensation committees award CEOs additional incentive compensation for undertaking restructurings. We leave this question for future research. Second, the evidence that intervention is contextual is a necessary but not sufficient condition for demonstrating that compensation committees penalize CEOs for opportunistic restructuring charges. The study's evidence is indirect in at least two respects. First, we do not study compensation committees' deliberations; instead the analysis uses observable outputs of that process to draw inferences about the committees' decision rules. Second, we do not identify ''opportunistic'' restructurings. Perhaps future research could investigate more directly whether compensation committees are less apt to shield restructurings (or other actions) that are not value-enhancing, or that appear to be undertaken primarily to manage earnings. Finally, our sample includes only *Fortune* 500 firms. The degree of shielding we document may not generalize to smaller firms not in the *Fortune* 500. Despite these limitations, our results dispel prior evidence that compensation committees unconditionally and fully shield executive compensation from the adverse effect of restructuring charges on earnings.

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[21] In fact, the DHS results imply that CEOs are awarded bonus pay for undertaking restructurings.

[22] One possible exception is Gaver and Gaver's (1998, 250) evidence that compensation committees partially shield executive compensation from the earnings effect of ''income-decreasing special items.'' However, special item losses reported by Compustat include a variety of transactions, not just restructuring charges.

Appendix A
Derivation and Distribution of the Weighted Mean Statistic

We provide coefficient estimates consistent with the framework underlying the Z-statistics employed both here and in DHS. For a given independent variable, this estimate is a weighted mean of the underlying firm-specific coefficient estimates. The weighting follows directly from the assumptions underlying the Z-statistic. Specifically, the regression coefficient estimate, b_j, of each firm j is distributed as:

$$t(b, s_{bj}^2)$$

where:

t(.) = the student's t distribution;
b = the population mean for the regression parameter; and
s_{bj}^2 = the variance of the firm-specific coefficient estimate.

Multiplying b_j by w_{bj}, where w_{bj} equals $s_{bj}\sqrt{(k_j/(k_j/(k/zj - 2)))}$ and k_j is the number of yearly observations in firm j's compensation regression, yields a value (asymptotically) distributed as:

$$\text{Normal } (w_{bj}\, b, 1).$$

The sum of these multiples across the sample is then distributed:

$$\text{Normal } \left(\sum_{j=1}^{N} w_{bj} b, N\right)$$

Dividing the sum of the $w_{bj}b_j$ multiples by $\sqrt{N}$ yields the conventional Z-statistic employed in DHS. Dividing this sum by $\Sigma_{j=1}^{N} w_{bj}$ yields the corresponding population weighted mean estimator, distributed as:

$$\text{Normal } \left(b, N \Big/ \left(\sum_{j=1}^{N} w_{bj}\right)^2\right).$$

We use this form of the matched-pair Z-statistic for the statistical analyses presented in Tables 3 through 6 and in Table 7 Panel A.

Moreover, the difference, D, between two such weighted means, assuming independence, is distributed as:

$$\text{Normal } \left(D, N_1 \Big/ \left(\sum_{j=1}^{N_1} w_{bj}\right)^2 + N_2 \Big/ \left(\sum_{i=1}^{N_2} w_{bi}\right)^2\right)$$

where D is the difference in the two population means (i.e., $b_1 - b_2$), N_1 is the number of firms in sample j, and N_2 is the number of firms in sample i. An associated two-sample Z-test divides the estimated difference between the two weighted mean estimates by the square root of:

TABLE A1
Replication of Dechow et al. (1994)
Results from 90 Firm-Specific Regressions of CEO Cash Compensation on Income and Restructuring Charges, 1982–1989[a]

Panel A: $COMP_t = \beta_0 + \beta_1 ADJ\_INC_t + \beta_2 R\_CHARGE_t$

	Predicted Sign	*Median[b]*	*Weighted Mean Coefficient[c]*
β_0		522.33	
β_1	+	0.54**	0.81**
β_2	?	−0.27*	−1.13**
$\beta_1 - \beta_2$	+	0.72**	1.94**
Adjusted R^2		0.30	
Number of Observations		20	

Panel B: $COMP_t = \beta_0 + \beta_1 ADJ\_INC_t + \beta_2 R\_CHARGE_{tt} + \beta_3 TREND_t$

	Predicted Sign	*Median[b]*	*Weighted Mean Coefficient[c]*
β_0		133.03	
β_1	+	0.58**	0.84**
β_2	?	0.29**	0.36**
β_3	+	252.11**	262.83**
$\beta_1 - \beta_2$	+	0.23*	0.48**
Adjusted R^2		0.51	
Number of Observations		20	

*, ** Significant at 0.05 and 0.01, respectively.
[a] We adjust all dollar amounts to 1989 equivalent dollars based on the CPI.
[b] The significance levels indicated in the Median column are based on the Wilcoxon signed rank test.
[c] Appendix A describes the weighted mean coefficient and Z-statistic calculations.
COMP = CEO cash compensation (salary and bonus) in inflation-adjusted dollars;
R_CHARGE = the restructuring charge in year t, in inflation-adjusted dollars;
ADJ_INC = INCOME − R_CHARGE, where INCOME equals earnings before tax, extraordinary items, and the results of discontinued operations in year t, in inflation-adjusted dollars; and
TREND = inflation-adjusted CEO cash compensation growth index.

$$N_1 \Big/ \left(\sum_{j=1}^{N_1} w_{bj}\right)^2 + N_2 \Big/ \left(\sum_{i=1}^{N_2} w_{bi}\right)^2.$$

We use this form of the Z-statistic for the empirical analyses reported in Table 7, Panels B and C.

Appendix B
Replication of Dechow et al. (1994)

We replicate the Dechow et al. (1994) (DHS) sample as completely as possible based on a listing of the firms comprising their sample that Professor Huson graciously provided us. We were able to locate cash compensation and restructuring charge data for all but one of the 91 firms in the DHS sample. Consistent with DHS, we estimate the compensation-earnings relation on a firm-by-firm basis using all compensation and earnings data available for the period from 1970 through 1989. Hence, there are a maximum of 20 time-series observations for each firm. Consistent with DHS, we require that the firm have a minimum of ten years of compensation data to remain in the test sample.

We report the replication analysis in Table A1. Panel A reports our results for the primary DHS time-series regression coefficient means and medians. Consistent with DHS, the average R_CHARGE coefficient is significantly negative and the average coefficient on ADJ_INC is significantly greater than the coefficient on R_CHARGE. Panel B reflects the effect of adding the compensation-trend variable to the basic DHS model. In this analysis, the average R_CHARGE coefficient is positive and significant (0.01 level). Consistent with our Table 3 analysis, we also find that the coefficient on ADJ_INC is significantly greater than the coefficient on R_CHARGE (0.01 level). Hence, we find that after controlling for the over-time increase in inflation-adjusted CEO cash compensation, on average, compensation committees partially shield executive compensation from the effect of restructuring charges.

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