WEALTH SHOCKS AND EXECUTIVE COMPENSATION:
EVIDENCE FROM CEO DIVORCE

by

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ABSTRACT

To empirically test the impact of CEOs' outside wealth on their compensation, I use spousal divorce as a proxy for an exogenous, negative shock to a CEO's outside wealth. I hypothesize that this shock decreases a CEO's risk tolerance. I also expect that the board of directors responds to this decrease by raising the CEO's cash compensation and by increasing the sensitivity of the CEO's compensation to changes in firm value. I find that cash bonuses, restricted stock grants, and option grants increase following a CEO's divorce, consistent with boards reacting to changes in CEOs' outside wealth and risk incentives. I also find that firms' total risk and idiosyncratic risk significantly drop during the year of a CEO's divorce, consistent with a drop in the CEO's risk tolerance. Overconfident CEOs, who are more risk tolerant, do not receive the same increases in compensation following divorce. I find little support for the relation between divorce and compensation being endogenously determined by performance or by poor corporate governance. Overall, the results support predictions that the board of directors takes the CEO's wealth into account when setting compensation and that outside wealth impacts the CEO's risk preferences.

1. INTRODUCTION

Baker and Hall (2004) predict that a CEO's overall wealth impacts the CEO's risk aversion and compensation. Lambert, Larcker, and Verrecchia (1991) propose two connections between CEOs' outside wealth and their compensation. First, a manager with decreasing absolute risk aversion in wealth, by definition, values risky, firm-related compensation (i.e., restricted stock grants and option grants) less as his outside wealth decreases. Second, if the CEO's outside wealth decreases, his total portfolio becomes less diversified with respect to his firm-value-sensitive holdings. The lack of diversification leaves the CEO with excess idiosyncratic risk, for which he receives no risk premium (see Carpenter, 1998; Kahl, Liu, and Longstaff, 2003). The CEO's lower risk tolerance and reduced diversification decrease the CEO's incentives to hold risk in his portfolio. That is, CEOs prefer reducing portfolio risk rather than maximizing returns on their firm's stock following a loss of wealth.

Few empirical papers have tested the relation between a CEO's wealth, risk preference, and compensation. Data on CEOs' outside wealth are not publicly available in general.¹ Empirical evidence on the impact of outside wealth on CEOs' risk aversion often relies on international data, such as Becker's (2006) study of Swedish CEOs. Other studies create proxies for CEOs' outside wealth from firm attributes, such as Dittman and Maug's (2007) proxy created from past compensation, or Baker and Hall's (2004) estimation based on firm size. Liu and Yermack (2007) examine a portion of

¹ While the SEC requires disclosure of a CEO's firm-related holdings (stock, restricted stock, and option holdings), there are no disclosure requirements for a CEO's outside wealth (cash, personal investments, and real property).

CEOs' outside wealth in their study of CEO home values. These proxies for a CEO's wealth are limited in their general applicability, and data that captures the full variation in CEOs' wealth are not available.

I propose using divorce as an exogenous, negative shock to a CEO's outside wealth. Divorce is exogenous because marital issues are more likely to be determined by familial circumstances than firm attributes. Divorce has a negative impact on wealth due to the substantial loss of assets in divorce settlements.² For example, Lorna Wendt received a judgment of \$20 million of Gary Wendt's (former CEO of GE Capital) estimated \$100 million of assets.³ Using data from 79 CEO divorces, I examine how negative shocks to a CEO's outside wealth impact his risk preference and compensation. I hypothesize that these negative shocks decrease the CEO's risk tolerance, because risk aversion increases as wealth declines. I expect that the board responds to the increase in the CEO's risk aversion by raising the CEO's cash compensation and by increasing the sensitivity of the CEO's stock portfolio to changes in firm value. Additionally, I test for

² Although domestic data is limited, international data supports the assumption of a large wealth loss from divorce. Sheehan, Chrzanowski, and Dewar (2008) report in survey results that wives in "high-income" divorces in Australia receive over 60 percent of basic (house, car, etc.) assets and over 20 percent of non-basic (stock options, luxuries) assets. In England, Norwich Union's "Cost of Divorce" survey estimates the average cost of divorce to be £28,000 (2006) or 126 percent of £22,202 (2005), the average annual income. (Source: <http://www.worldsalaries.org/uk.shtml> <http://www.aviva.co.uk/media-centre/story/2935/brits-spend-over-4-billion-on-divorce/> .) Some American practitioners estimate average legal costs of divorce at \$20-25 thousand. (Feigenbaum and Linton, 2004, The Complete Guide to Protecting Your Financial Security When Getting a Divorce.)

³ This included the value of options (although not the options themselves), which he was awarded during his tenure at GE. The \$20 million probably accounts for an even larger portion of his former wealth given that \$100 million was the estimation that Lorna and her counsel produced for the court, and that lawyers' fees were not included.

further evidence that the CEO's risk tolerance decreases by examining volatility, idiosyncratic risk, and CEO overconfidence surrounding CEO divorce.

I find increases in CEOs' salary, bonus, and restricted stock and option grants in the year after a divorce, relative to the year before divorce. In univariate analysis, cash bonuses show significant mean increases in the year after divorce of \$165,000 (19 percent), relative to the year before divorce. Similarly, the mean stock grant and option grant compensation increase by about \$297,000 (88 percent) and \$1,005,000 (35 percent) between the year before and the year after the divorce. The sample of CEOs who divorce shows significantly greater increases than peers in matched sample analysis (matched on asset size, industry, and year). In the year after divorce, compensation for divorced CEOs is higher than peers at the mean by \$284,000 for cash bonus and \$2,060,000 for option compensation.

I also find that CEO compensation packages become more sensitive to the stock price of the CEO's firm after divorce. I take the dollar change in the value of the CEOs' annual grants of options and restricted stock per one percent change in the value of the underlying stock as the measure for the sensitivity of the CEOs' compensation to firm value. Multivariate regression results reveal that this sensitivity is significantly higher in the years following divorce.

I document lower total risk and idiosyncratic risk in the year of a CEO's divorce. The temporarily lower risk is consistent with a greater incentive for a CEO to decrease the risk in his portfolio following a loss of wealth. CEOs generally face selling constraints with their stock and option holdings. This prevents the CEO from diversifying

and reduces the CEO's tolerance for idiosyncratic risk. I construct annual volatility from log monthly returns. I use the sum of squared errors from a four-factor model with monthly returns to create annual firm idiosyncratic risk. Both measures show a significantly negative relation to a CEO's divorce.

I examine the relation between CEO risk-aversion and CEO divorce by comparing the levels of CEOs' overconfidence. By definition, overconfident CEOs do not diversify their positions in the firm, because they are overconfident in their firm's prospects. As a result, overconfident CEOs underestimate the idiosyncratic risk in their portfolios. I expect, following a loss of wealth, an overconfident CEO does not have as large of an increase in compensation as a CEO who is not overconfident. I use two variables to define CEO overconfidence: the retention of shares by the CEO after exercising an option and whether a CEO is a net buyer of his firm's stock in a given year. I find overconfident CEOs do not get paid as highly after a divorce as other recently divorced CEOs. The greater increase in compensation for CEOs who are not overconfident is consistent with risk aversion driving compensation changes around divorce.

I verify that divorce serves as a proxy for a change in outside, not firm-related, wealth. I find that CEO holdings of stock, restricted stock, and options do not significantly decrease between the year before the divorce and the year after the divorce. In fact, the number of unexercisable and exercisable options held by the CEO increases significantly between these years. I then compare my sample firms to a matched sample of firms with CEOs who did not get divorced. I find that divorced CEOs do not hold

significantly less restricted stock or options following a divorce than the matched sample of non-divorced CEOs. Overall, these findings suggest that any decrease in a CEO's wealth following a divorce consists of a decrease to the CEO's outside wealth.

I confirm that the relation between divorce and compensation is not endogenously determined by using propensity score analysis. I create propensity scores for CEO divorce by regressing an indicator for CEO divorce on established determinants of divorce, such as age and generation, among others (see Stevenson and Wolfers, 2007a). I then use the propensity for divorce as a control variable in regressions of compensation on indicators for divorce. The positive relation between compensation and a CEO's divorce remains qualitatively unchanged.

I examine whether the increases in compensation following CEOs' divorces are due to poor governance. The marginal benefit of extracting rents to the CEO may increase following a loss of wealth, because he has less wealth to lose. If the CEO has the ability and opportunity to extract rents through poor governance, then increases in compensation may be due to managerial opportunism and rent extraction, not incentive alignment. However, I find that partitioning the divorced CEOs into groups based on above-median CEO ownership or compensation committee independence provides no reliable evidence that CEOs with more influence over compensation policies have greater increases in compensation following divorce.

I contribute to the executive compensation literature in three ways. Primarily, I add to the growing body of empirical work on the impact of CEO outside wealth on CEO incentives, like Becker (2006) and Liu and Yermack (2007), by using divorce as a proxy

for a decrease in CEOs' outside wealth. I show a positive association between a loss of CEOs' outside wealth and compensation, suggesting that CEOs' incentives change following a negative wealth shock. Second, increases in compensation following CEO divorce are consistent with outside wealth impacting governance policy. Specifically, the compensation results suggest that the board mitigates changes in the CEO's risk tolerance following divorce. Finally, I provide empirical support for predictions (i.e., Carpenter, 1998; Kahl, Liu, and Longstaff, 2003) that CEOs discount stock and option compensation when they cannot diversify their holdings. Consistent with these predictions, I show a drop in idiosyncratic risk following divorce.

The remainder of this paper is organized as follows: Section 2 reviews the previous literature and develops related hypotheses. Section 3 describes the data and the methodology. Section 4 presents univariate and multivariate results on compensation. Section 5 further explores the evidence on changes in CEO incentives as well as some alternative explanations of the results, and Section 6 concludes.

2. PREVIOUS LITERATURE AND HYPOTHESIS DEVELOPMENT

Prior literature on executive compensation focuses on incentive alignment between the top management (the CEO) and shareholders. Jensen and Murphy (1990) present evidence that CEO pay is sensitive to changes in firm value by \$3.25 for every \$1,000 change in shareholder wealth. This sensitivity to shareholder value incentivizes the CEO to make decisions that benefit shareholders, because it is in the CEO's personal interest to maximize his own wealth with the shareholders.

The sensitivity of a CEO's wealth to shareholder value is particularly important if the CEO's decisions have a relatively greater impact on shareholder value. Murphy (1999) presents evidence that firms in industries with more growth opportunities offer stronger pay-performance incentives. For example, in financial service industries CEOs receive a much larger portion of their salary in the form of options than CEOs in utility industries, where there are fewer growth opportunities. Smith and Watts (1992) provide robust evidence of the impact of growth opportunities on executive compensation.

Direct stock ownership in the firm also provides CEOs' incentives for increasing shareholders' wealth. Core and Guay (1999) find that boards of directors actively manage CEOs' ownership incentives with new equity grants. They find that boards use current grants of equity compensation to maintain CEOs' incentives.

I also expect that the board of directors takes into account the CEO's incentives from his total portfolio, not just the portion of the CEO's portfolio that is sensitive to firm value. Baker and Hall (2004) present evidence that CEOs at larger firms should be more highly compensated. Consequently, CEOs at larger firms are expected to be wealthier to help diversify their holdings in the firm. Because CEOs at larger firms have greater wealth, they can be awarded stronger compensation incentives due to the CEO's ability to diversify.

Boards can use compensation to align the interests of managers with the shareholders' risk preference. While increasing a CEO's pay-performance sensitivity generally creates incentives to increase shareholder wealth, a risk-averse manager may avoid risky, positive net present value projects if he is undiversified. Tufano (1996)

presents evidence that managers engage in greater hedging when their ownership levels are higher.

The board of directors can reduce risk-related agency conflicts by increasing the sensitivity of the CEO's wealth to firm risk. Hemmer, Kim, and Verrecchia (1999) present a model that introduces options into CEO compensation to incentivize greater risk-taking. Guay (1999) provides empirical support for the proposition that boards manage equity risk by awarding convex payoff compensation (option grants).

Lambert, Larcker, and Verrecchia (1991) predict that a CEO's risk-aversion decreases as the CEO's outside wealth increases. Figure 1 provides a graphical representation of the increase in risk aversion and risk premium associated with the loss of wealth following a CEO divorce. Core and Guay (1999) provide evidence that the board of directors responds to changes in a CEO's portfolio incentives with changes in compensation. I expect that the board mitigates the CEO's increase in risk aversion by increasing the CEO's outside wealth with cash compensation. This leads to the first hypothesis.

Hypothesis 1: The board of directors will increase salary and bonus compensation to increase a CEO's outside wealth following a divorce settlement.

The board can also increase a CEO's risk-tolerance by increasing the CEO's sensitivity of wealth to firm risk. Guay (1999) suggests that the board of directors can

increase the sensitivity of a CEO's wealth to equity risk by issuing stock options (at the money).⁴ This leads to the second hypothesis.

*Hypothesis 2: The board will grant higher levels of option grant compensation following the loss of wealth associated with a CEO's divorce.*⁵

Core and Guay (1999) present evidence that the board of directors manages the sensitivity of the CEO's wealth-to-firm value when the CEO's portfolio incentives change. After a CEO's divorce, I expect the board to react to the changes in the CEO's incentives by increasing the sensitivity of the CEO's compensation to changes in firm value. The board's desire for increased compensation sensitivity leads to the following hypothesis.

Hypothesis 3: The board of directors will increase the pay-performance sensitivity of a CEO's wealth following divorce by increasing restricted stock grants and option grants.

After a divorce, a CEO is less diversified, and idiosyncratic risk increases in the CEO's portfolio from holding own-firm restricted stock and options (see Figure 2). There is no return associated with idiosyncratic risk because it is generally diversifiable by the market. I expect the increase in idiosyncratic risk from new awards of stock and option grants reduces the value of the grants to the executive. The decrease in the CEO's subjective valuation of stock and option grants makes the CEO's total compensation

⁴ While Ross (2004) points out that options do not necessarily make payoffs more convex, options awarded near the strike price will generally increase the convexity of payoffs.

⁵ While these forms of compensation will also increase the undiversifiable risk to the executive, Lambert and Larcker (2004) generally show that the incentive effect of stock-based compensation outweighs the risk effect.

package more costly to the firm, as more grants must be awarded to produce the same incentives.

The increase in the cost of compensation to the firm can undermine the effectiveness of compensation in setting a CEO's incentives (see Dittman and Maug, 2007). However, I follow Demsetz and Lehn (1985) and assume that the benefits to the shareholders from awarding an additional restricted stock or option grant will still be positive, albeit at a decreasing rate.

3. DATA/METHODOLOGY

3.1 Data Sources

I combine data from commonly available datasets with hand-collected data on CEOs' divorces. I use CRSP and Compustat for stock price and accounting data, respectively. Compustat's Execucomp database provides data on CEO attributes and compensation. With the full Execucomp dataset (1992-2008), I exclude CEOs who were only present for one firm-year to guarantee more than one firm-year observation for each CEO in the panel. I further restrict the Execucomp data to firm-years in which compensation data is available. This exclusion leaves 4,385 individual CEOs.

Execucomp provides the names, ages, and principal office locations of these 4,385 CEOs. I search for information on CEOs' divorces using LexisNexis' and Westlaw's public records databases, LexisNexis Academic Universe's news/press release databases, and internet biographical sources. The appendix provides more complete descriptions of the data and the collection process of CEO divorce information.

The data collection process yields 79 CEO divorces between 1992 and 2007. For a comparison, Stevenson and Wolfers (2007a) report the annual number of divorces per 1,000 married people in the United States as 8.5 in 2003. With a sample of 4,385 CEOs in 37,327 CEO-years, this translates into an unconditional expectation of 317 divorces for the sample using national averages. The number of collected divorces seems low relative to unconditional expectations, likely due to limitations from a lack of available data, discussed further in the appendix. However, conditioning on CEO attributes, such as age, race, and duration of marriage, can lower the estimate to less than half of the national average.⁶

The main concern arising from the fact that not all divorces are likely to have been picked up in the data collection process is that potential bias is introduced, as changes related to divorce exist in the non-divorce/control sample. However, the lack of data availability comes in part from the inability of some states and counties to report divorce filings due to illegality (New York) or technological limitations (no electronic records). For New York, the publicity of CEOs' personal lives partially compensates for the lack of divorce filings. For counties that do not report, I have no reason to believe that the lack of electronic records (on the part of the county or LexisNexis) correlates in a

⁶ The percent of first marriages ending in divorce is a concave function of years since marrying, indicating a lower probability of divorce for longer marriages than the general population. In addition, percent of marriages ending in divorce is also increasing in year/decade of marriage, implying that older generations are less likely to get divorced (Stevenson and Wolfers (2007b)). CEOs in sample tend to be older (median age 53) with longer marriages (median marriage year 1976). While a full conditional model is not run to estimate divorce probability, conditional estimates of divorce probabilities given age and year/decade of marriage may be as low as one-third of the national average. Marriages during the 1950s and 1960s experience the lower portion of marriages ending in divorce, by year/decade of marriage. Factors such as education, gender, and age at the time of marriage also impact divorce probabilities.

meaningful way with CEO divorce or firm attributes to create bias. Any remaining bias resulting from missing data is likely to work *against* finding results.

3.2 Description of Methodology

For the sample of 79 CEOs with a divorce during their tenure, I study compensation, including salary, bonus, restricted stock, and option grants. In univariate analysis, I examine changes in compensation between the year before a CEO's divorce and the year after a CEO's divorce. Of the 79 CEOs who divorced in the sample period, seven divorced in the first year in office, and two divorced in their last year in office. Because several CEOs were not in office before or after their divorce, there is compensation data for only 72 CEOs in the year before divorce and 77 CEOs in the year after divorce. I also examine a "fixed" sample of 70 CEOs who remain in office in the years surrounding divorce to avoid any bias from changes in the sample size.

I also match a control group of firms to the firms at which CEOs get divorced for comparison. To match the divorce-affected firms with their control sample counterparts, I pair each divorce-affected firm to another Execucomp firm based on sharing the same year (divorce year), Fama-French 30 industry, and book asset size. This same matched sample is then paired to the divorce-affected firms in the year before and the year after divorce for consistency in comparison. For robustness, I report magnitudes and differences in book assets, market-to-book ratio, and return on assets between the groups.

For multivariate tests, I use the full panel of firm data in Execucomp and run regressions of salary, bonus, cash (salary plus bonus), restricted stock, and option

compensation on indicators for the years following a CEO's divorce. I also check the robustness of the results by using tobit models and by taking the natural log of the dependent variables to account for the fact that the compensation variables are censored at zero.

I construct indicators for divorce to pick up differences in compensation related to CEO divorce. When there is a firm-year in which the CEO was divorced, the indicator "Divorce Year" is set equal to one, zero otherwise. Likewise, the indicator "Year After Divorce" is equal to one if the previous firm-year had a CEO divorce, zero otherwise. The other divorce indicators are constructed in a similar fashion.

I include control variables shown to impact executive compensation. Specifically, I follow Core and Guay (1999) and include lags of the log of sales, market-to-book ratio, cash constraints, tax carry-forwards, and dividend constraints. I also include annual returns and the lag of annual returns to control for firm performance. I provide full variable descriptions in the Variable Appendix. Indicators for 2-digit SIC codes and years control for industry and time, and standard errors are clustered by firm. In unreported analysis, I also use two-way clustering of standard errors on year and gvkey (see, Cameron, Gelbach, and Miller, 2010). The following model describes the multivariate regression.

$$\begin{aligned}
 \text{Compensation Variable}_{i,t} &= \alpha_{i,t} + \beta * \text{Divorce Indicators}_{i,t} + \lambda * \text{Compensation Controls}_{i,t} \\
 &+ \gamma * \text{Industry Indicators}_{i,t} + \delta * \text{Year Indicators}_{i,t} + \varepsilon_{i,t}
 \end{aligned}$$

Where β , λ , γ , and δ represent coefficient vectors and ε represents an error term.

I investigate the impact of a CEO's divorce on the risk profile of his firm. First, I run multivariate OLS regressions of a proxy for idiosyncratic volatility on indicators for the years around divorce and on control variables. I construct idiosyncratic risk as the annual sum of squared errors from a four-factor Carhart (1997) model with returns taken at monthly intervals to avoid microstructure noise. For each firm, the regression includes the market variable, R_{mt} , the risk-free rate, R_{ft} , the Fama-French factors for size and growth opportunities, SMB and HML , and a momentum variable, UMD , from Kenneth French's data library.

$$R_{it} - R_{ft} = \beta_{mkt} * (R_{mt} - R_{ft}) + \beta_{smb} * SMB_t + \beta_{hml} * HML_t + \beta_{umd} UMD_t$$

A minimum of six months of return data is required for each firm-year to be included in the sample. I also examine total risk using monthly log returns to construct annual return volatility for each firm. I then regress the annual volatility measures on indicators for the years around CEO divorce and control variables.

$$Firm\ Risk_{i,t} = \alpha_{i,t} + \beta * Divorce\ Indicators_{i,t} + \lambda * Risk\ Controls_{i,t} + \gamma * Industry\ Indicators_{i,t} + \delta * Year\ Indicators_{i,t} + \varepsilon_{i,t}$$

I examine the impact of CEO overconfidence on compensation around a CEO's divorce. Following Malmendier and Tate (2005), Campbell, Gallmeyer, Johnson, and Rutherford (2010), and Sen and Tumarkin (2009), I construct proxies for CEO overconfidence based on the CEO's net purchases of firm stock and disposition of stock after option exercises. My overconfidence proxy using net share purchases is defined as purchases minus sales of the CEO's own firm stock in a year. Because measures of overconfidence may be impacted by a CEO's divorce, I modify the variable first by

creating an indicator, rather than a continuous variable, based on positive or negative net share sales in a given year. For each CEO, I average the indicator variable, excluding years after any CEO divorce. This measure provides a proxy for CEO overconfidence that is free from any impact from the divorce itself. Second, I follow Sen and Tumarkin (2009) and create a proxy for overconfidence based on whether or not 99 percent or fewer shares retained from an option exercise are sold within one week of exercise. I average the indicator by CEO-year, and then by CEO, excluding post-divorce years, to create a proxy for CEO overconfidence free from any event (divorce)-induced changes.

4. RESULTS ON COMPENSATION AND CEO DIVORCE

4.1 Univariate Tests – Compensation Changes

Table 1 presents the summary statistics of salary, bonus, restricted stock grants, option grants, other annual income, and other compensation. In general, the means and medians of the compensation variables reveal an increasing trend around divorce. Salary and cash bonus increase by \$107,000 and \$165,000, respectively. Restricted stock increases by \$297,000, and option grant compensation increases by \$1,000,000.

While increases in compensation around a CEO's divorce are substantial, the increases in compensation may be revealing a time trend or increases due to correlated, uncontrolled variables. I use a matched sample that is matched on year, industry, and asset size to control for firm characteristics. Panel B of Table 1 shows the mean and median differences in compensation between CEOs who get divorced and a matched sample of CEOs. In the year before divorce, the compensation packages for the divorced

and non-divorced CEOs seem relatively similar. Only the cash bonus variable shows any statistically significant difference. Conversely, in the year after divorce, means and medians of cash bonus, restricted stock grants, and option grants are significantly higher for divorce-affected firms, revealing an increasing trend for divorce-affected firms relative to control firms. As stated in Hypothesis 1, I expect that cash compensation increases overall. I expect the board partially reverses the loss of the CEO's wealth by awarding more cash, which increases the CEO's outside wealth.

Restricted stock and option grants increase for the divorced CEOs relative to the matched sample in the years around divorce. While restricted stock only shows increases for the divorced CEOs in median tests, there is evidence of option grant compensation increases for the divorced CEOs in both mean and median tests. This result is consistent with Hypotheses 2 and 3, predicting increases in the convexity of the CEO's compensation as well as increases in pay-performance sensitivity.

The increases in restricted stock and option grant compensation are consistent with the board increasing the sensitivity of the CEO's compensation to firm performance, but the CEO's subjective valuation of the compensation may not be increasing. Due to increased risk aversion from the wealth shock, the CEO subjectively values risky compensation, such as restricted stock and option grants, less. The increases in compensation may only create the same or lower performance incentives for the CEO, once the CEO's reduced valuation of the compensation is taken into account.

I also include statistics on differences in firm attributes between the firms at which CEOs get divorced and the matched sample. I report mean and median statistics

on differences in firm asset size, market-to-book ratio, and return on assets. I find little difference between the firms that could be driving the compensation results.

4.2 Multivariate Tests – Cash and Bonus

I test for differences in compensation using the full panel of Execucomp firms by running multivariate regressions of the compensation variables on indicators for firm-years (and subsequent firm-years) in which a CEO gets divorced. In Table 2, the first set of regressions further examines Hypothesis 1 by looking at cash-based compensation variables including salary, bonus, and the sum of salary and bonus. I take control variables from the executive compensation literature as compiled by Core and Guay (1999). Controls include size, proxied by log of sales, and growth opportunities, proxied by market-to-book. Past returns can impact compensation (see Baber, Janakiraman, and Kang, 1996), so I use annual returns and lagged annual returns to control for past performance. Finally, as options and stock may be awarded when cash is constrained or when tax advantages promote the use of non-cash compensation, I follow papers such as Yermack (1995) and Matsunaga (1995) in controlling for cash constraints, tax carry-forwards, and dividend constraints. Lags are taken of independent variables as firms may not be able to update incentive compensation continuously with changes in firm characteristics. Complete variable definitions appear in the appendix.

Table 2 presents the multivariate results. The first regression examines Hypothesis 1, which predicts higher levels of salary and cash bonus. In the salary regression, the coefficients on the indicator for the year after a CEO divorce and the

indicator for two years after a CEO divorce are positive and significant. These coefficients suggest that levels of annual salary are higher after divorce. In the regression of cash bonus, the indicators for the years following divorce also show a positive, significant relationship with bonus compensation. Similarly, cash—the sum of salary and bonus—relates positively and significantly to indicators of the years after divorce.

In the regression on cash bonus, the indicator for the year of divorce shows higher levels of bonus compensation, even though raises in compensation are not expected until after the news of divorce. However, the dates of divorce are based on divorce filings, not announcement dates (which are not obtainable). Because the filing date should be interpreted as the last possible announcement date, it is possible that news of the divorce and actions to change compensation precede the observed filing date.

4.3 Multivariate Tests – Stock and Option Grants

Next, I run multivariate regressions of a CEO's restricted stock grants, option grants, and their sum on indicators of CEO divorce, presented in Table 2. For option grants, the coefficients on all divorce indicators are positive and significant. Referring back to Hypothesis 2, there is an increase in convex pay-off compensation, consistent with the board raising the CEO's risk preference following a loss of wealth. The positive, significant coefficient on the indicator for divorce is also consistent with the board increasing the CEO's pay-performance sensitivity. It is not immediately clear if the higher option compensation is driven by Hypothesis 2, Hypothesis 3, or both, but the

higher option compensation provides evidence that the board changes a CEO's incentives following the CEO's divorce.

In regressions of restricted stock grants, the parameter estimates on the indicators for the year after divorce and the second year after divorce are also positive and significant, suggesting that the board increases a CEO's pay-performance sensitivity after a loss of wealth. This result is consistent with the prediction that the board must increase the sensitivity of compensation following a wealth shock due to a desire to align the interests of the shareholders and the CEO. Finally, the sum of restricted stock grants and option grants displays the strongest statistical evidence of a positive, significant relation with the divorce indicators, as the coefficient estimates on indicators for the years after divorce are positive and significant for the three years following divorce.

Overall, the results on firm-related compensation suggest that the board still views stock and options as valuable means of incentive alignment, even though the CEO's subjective valuation of stock and options has decreased after losing wealth.

4.4 Multivariate Tests – The Sensitivity of Compensation

Core and Guay (1999) present evidence that firms award incentive compensation (stock and option grants) to adjust the pay-performance sensitivity of the executive's portfolio. Table 3 presents multivariate evidence on the impact of divorce on the sensitivity of restricted stock and option grant compensation, defined as the change in value of the stock and option awards for a one percent change in firm value. Regressions on option grant sensitivity reveal significantly positive coefficient estimates on all

indicators for divorce. Coefficients on the divorce indicators are also positive and significant for regressions of restricted stock grant sensitivity, with the exception of the year of divorce. The sum of option grant sensitivity plus restricted stock grant sensitivity displays similar results. The results provide further evidence that the board responds to a negative wealth shock by increasing the sensitivity of the value of the executive's portfolio to the value of the firm.

4.5 Multivariate Tests – Alternative Specifications

Figure 3 plots the residuals from the primary set of compensation regressions in Table 2 on the fitted values estimated by the regressions. In a well-specified model, I expect the plotted values to appear in a circular shape. However, the data presented is censored, because compensation values do not drop below zero. For all compensation variables, the values cluster where the error equals the negative of the fitted value. I run alternative specifications of the compensation regressions to verify that data censoring does not introduce bias into the model.

Table 4 presents two different specifications of the compensation regressions. Panel A of Table 4 reports the results of a tobit model regression for each compensation variable. In general, the coefficients remain positive and statistically significant on the indicators for a CEO's divorce. I also report OLS regressions of the log of the CEO compensation variables regressed on indicators for a CEO's divorce. Again, the general positive, significant relation between CEO divorce and compensation holds. I do not find

evidence that the relations between compensation and CEO divorce are driven by issues related to data censoring or extreme observations.

5. EVIDENCE OF CHANGES IN INCENTIVES

5.1 Changes in Holdings

To check the validity of divorce as a proxy for an outside wealth shock, I examine the changes in CEO firm-related wealth by following the level of firm stock and option holdings in the CEO's portfolio in the years around divorce. I expect the CEOs' stock and option holdings remain relatively stable around divorce, as only outside wealth is predicted to change significantly with divorce. I use the same matched sample of firms, described previously, that share the same year, industry, and size. For the full sample of divorced and matched CEOs, Table 5 presents the mean and median statistics of the CEOs' holdings of firm stock, unvested stock, unexercisable options, and unexercised exercisable options for the year before divorce, year of divorce, and year after divorce. I include variables for the total amount (number of shares/options) and dollar value for each type of security.

Almost all mean and median statistics of ownership variables increase over time, giving no initial indication that a divorced CEO loses a significant portion of his firm-related wealth in the divorce. I use paired T-tests and paired Wilcoxon median tests to compare the holdings of each CEO before and after divorce, shown in Panel B of Table 5. The mean and median statistics are reported for each differenced variable, which is constructed as the value of the ownership variable in the year after divorce less the value

in the year before divorce. The CEOs' share ownership shows no significant decreases following divorce in mean and median tests. The amount of unvested stock, on the other hand, shows significant increases in number and value of shares in both mean and median tests, implying that the new grants are being held by the executive over the divorce period. The number of unexercisable options also shows significant increases in mean and median tests. This increase does not hold for the value of unexercisable options, but there is still no evidence of significant decline over time. Finally, the number and the value of unexercisable, exercisable options show statistical evidence of increases around divorce. In summary, it is not apparent that the spouse takes half of everything when it comes to CEO wealth that is tied to the firm, and the changes over time support the prediction that divorce impacts outside, not firm-related, wealth.

I compare the divorced CEOs to the matched sample by subtracting the values of the matched-firm CEOs' holdings from the value of the divorced CEOs' holdings. Panel C of Table 5 presents the results of the matched sample comparisons. There is no statistical evidence that the divorced CEOs have lower means or medians of own-firm holdings when compared to the matched sample of CEOs in the years around divorce. The only statistically significant results come from the median test statistics for the number of unexercised, exercisable options, which is higher for divorce-affected firms.

5.2 Discussion on the Magnitude of Wealth Lost

Data on the amount of wealth lost in a CEO divorce is only available in rare cases when a party files suit or the media obtains estimates of the settlement. However,

anecdotes, trends in divorce judgments, and survey evidence suggest that the magnitude of the divorce settlements ranges from 25 to 50 percent. While not every court takes a community property view that each spouse gets 50 percent, courts generally rule that the non-working spouse's standard of living should be maintained. Additionally, legal fees can frequently exceed \$1,000,000 in high wealth divorces.

Anecdotal and survey evidence suggests that CEOs are not able to limit losses in divorce through prenuptial agreements. Even before marriage, CEOs are unlikely to protect their wealth through prenuptial agreements, as only 3% of wealthy individuals have prenuptial agreements.⁷ Also, prenuptial agreements are frequently held invalid due to improper contracting (Steven Spielberg's contract was written on a bar napkin. Ivana Trump received more than her prenuptial agreement specified), subjected to costly provisions (Michael Douglas must pay Catherine Zeta-Jones several million per year of marriage and \$40 million for cheating), or voided after a certain number of years (Jack Welch's agreement expired after 10 years, a "Sunset" provision). Overall, I do not expect that prenuptial agreements reduce divorce settlements to insignificant portions of a CEO's wealth.

5.3 The Impact on Firm Risk

I test for changes in executive risk incentives by regressing annual firm risk on indicators for the firm-years around a CEO divorce. First, I construct an idiosyncratic

⁷ A Business Week survey polled people who make more than \$100,000, <http://www.businessweek.com/1998/31/b3589005.htm>

risk measure from a four-factor Carhart model using monthly returns. Following the literature revealing a time trend in idiosyncratic risk, I include a time-trend variable as a control variable (see Brown and Kapadia, 2007). Additionally, I control for firm size and dividends, as those have been shown to be two of the major cross-sectional determinants of firm risk (see Harvey and Siddique, 2004). I do not include various other controls from the literature on idiosyncratic volatility, as they may be alternative proxies of idiosyncratic risk, the dependent variable. For example, cash flow volatility can be a determinant of idiosyncratic volatility. However, the volatility associated with cash flow volatility is the variation in investment and firm attributes that I want to capture in the measure of idiosyncratic volatility.

Table 6 presents results of the multivariate OLS regressions of firm idiosyncratic risk and firm total risk on indicators for CEO divorce. The first regression shows a negative, significant relation between the indicator for a CEO's divorce and idiosyncratic risk, which is consistent with the CEO's risk preference declining around a loss of wealth. This drop is consistent with a divorced CEO being motivated to decrease the firm's idiosyncratic risk because a drop of firm idiosyncratic risk would decrease the idiosyncratic risk in his portfolio. I test for additional changes in firm risk by regressing total volatility, defined as the annual standard deviation of monthly log returns, on the same variables as the idiosyncratic risk regressions. The firm's total risk also shows a negative, significant relation to a CEO divorce. The negative relation between a CEO's divorce and total firm risk extends to the year following divorce. Overall, results suggest that the CEO is generally more risk averse following a loss of wealth.

5.4 Executive Overconfidence

Malmendier and Tate (2005, 2008) find that CEO overconfidence can impact investment decisions, financing policy, and acquisition activity. More recently, Sen and Tumarkin (2009) propose using retention of shares on option exercise to proxy for CEO overconfidence. Using overconfidence as a proxy for a CEO's attitude and outlook about the firm, I examine the impact of overconfidence on compensation around CEO divorce. I proxy for CEO overconfidence with the retention of shares following an option exercise by the CEO. Because my proxy for overconfidence—an annual indicator for retention of shares after option exercise—can be impacted by executive divorce (i.e., the CEO may sell shares to pay a divorce settlement), I average the indicators for each CEO, excluding firm years following divorce.

I expect that overconfident CEOs experience a smaller drop in risk tolerance after a divorce, because they don't believe their holdings in the firm are undiversified. To test the overconfidence hypothesis, I regress CEO compensation on divorce indicators and interactions of CEO overconfidence proxies with the divorce indicators. I also include firm, industry, and year-fixed effects.

In Panel A of Table 7, I use the retention of shares as a proxy for a CEO's overconfidence. The coefficients on the divorce indicators generally show a positive correlation with compensation, consistent with the multivariate regressions previously reported. In addition, there is evidence that the interactions between the proxy of CEO overconfidence and the divorce indicators are negatively associated with CEO

compensation. The negative coefficient on the interaction for CEO divorce and CEO overconfidence suggests that overconfident CEOs do not experience the same increases in compensation as non-overconfident CEOs. Similar results hold when overconfidence is proxied by a CEO's net purchases of own-firm stock. Panel B of Table 7 reports negative, significant coefficients on the interaction of CEO overconfidence and CEO divorce in several regressions with the "net buyer" proxy for overconfidence.

I interpret the negative coefficients as evidence that overconfident CEOs do not suffer as large of a change in incentives following a negative wealth shock. Because overconfident CEOs are not concerned about diversification, I expect that they have less need for further incentive alignment from compensation changes following divorce. These results are consistent with incentives changing following a negative wealth shock, especially for non-overconfident CEOs. Because the changes in compensation seem stronger for CEOs that are less risk tolerant (not overconfident), the results are consistent with compensation changes relating to changes in CEO risk tolerance, rather than firm attributes.

I create proxies for CEO overconfidence to test the interaction of a proxy for a CEO's overconfidence and a loss of the CEO's wealth. I also create alternative proxies for CEO overconfidence based on different CEO behaviors. First, I code a CEO as overconfident if he holds an option until one year before expiration, a "long-holder". Second, if a CEO holds options more than 67% in the money, I classify him as overconfident. Third, I classify a CEO as overconfident based on the capital expenditures of his firm. Capital expenditures are scaled by beginning-of-year property,

plant, and equipment. This capital expenditure ratio is then demeaned by an industry average. These proxies for overconfidence do not provide evidence either way for an interaction between CEO divorce and overconfidence relating to CEO compensation.

5.5 Rent Extraction

The findings presented are consistent with the board reacting to a change in CEO risk tolerance following a wealth shock, but CEO rent extraction could also explain the observed increases in compensation following divorce. A CEO may use his influence over the board to increase compensation, thereby mitigating the impact of divorce on his total wealth. I investigate the impact of governance on increases in CEO compensation following a CEO's divorce.

To measure a CEO's potential influence over his compensation, I gather information on compensation committee independence, following Yermack (1996). In Table 8, I separate the 79 CEOs who get divorced based on the independence of the compensation committee. I find little support for the idea that CEOs with insiders on the compensation committee receive greater compensation increases than CEOs with independent compensation committees.

Additionally, I partition the sample of divorced CEOs into above- and below-median ownership in an unreported analysis. I expect that CEOs with lower ownership will have higher agency conflicts due to their relatively low interest in the firm. Contrary to an entrenchment hypothesis, compensation increases following divorce hold for CEOs with higher ownership (in value or percent ownership), while univariate evidence shows

little evidence of significant increases in compensation for below-median ownership CEOs with divorces. Evidence that is based on governance characteristics suggests that the motivation for CEO pay increases following divorce is not related to governance problems or rent-extraction.

5.6 Omitted Variables

I take divorce as an exogenous change to a CEO's wealth. However, if divorce is not considered exogenous, then the compensation increases could be associated with a variable that impacts the probability of divorce. For example, if some CEOs work marginally harder, all else being equal, then the time and energy they devote to work may increase performance and compensation while negatively impacting the CEOs' marital relationships. The omission of this variable can then confound the interpretation of the results on the relationship between compensation and divorce.

To control for a possible endogenous relationship between divorce and higher levels of compensation, I control for a CEO's effort investment in the firm. Because a CEO's performance is related to his effort, I use abnormal ROA and industry-adjusted ROA to proxy for CEO effort. With this proxy, I control for the possibility that CEOs who work more are more likely to get divorced as a consequence of under-investing in their personal relationships. The results in Table 9 do not reveal a qualitative impact on the original compensation results. This suggests that CEOs' effort investment in the firm is not likely driving the observed relationship between divorce and compensation increases.

Unobserved variables that are correlated with the probability of CEO divorce may also drive the observed relation between CEO divorce and compensation. To control for omitted variables, I create two variables estimating the probability of divorce for CEOs. I create a propensity score by regressing the indicator for divorce on determinants of divorce in a probit model. Independent variables include CEO age, gender, presence of children, previous divorces, and a post-2000 time-trend indicator (see Stevenson and Wolfers, 2007a). To control for legal and generational differences, I include state of residence (proxied by state of firm headquarters) and generation (proxied by decade of birth) fixed effects.

The first propensity score, based on a CEO's personal characteristics, are presented in Panel A of Table 10. If the original results on CEO divorce and compensation are driven by variables related to the probability of divorce, then the probability that a CEO gets divorced should explain the impact of divorce on compensation. However, I re-estimate the multivariate compensation regressions using the estimated probability of divorce to control for any endogenous relationships. I find that the results on compensation are qualitatively the same, even after controlling for the propensity for CEOs to get divorced.

I also create a propensity score of CEO divorce using firm attributes. Again, if divorce is related to the amount of effort or time a CEO invests in work, then a substitution effect should occur between firm performance and likelihood of CEO divorce. To estimate the divorce probability based on firm attributes, I use industry-adjusted return on assets, abnormal return on assets (based on previous return on assets),

and two-digit SIC code indicators. Additionally, I include variables for CEO tenure and CEO retirement age (an indicator for CEO firm-year with age greater than or equal to 63) to capture any effect driven by a CEO's current and expected time/labor commitment to work. Again, results on the positive relation between divorce and compensation hold.

Overall, there is some evidence that divorce is not completely exogenous to the CEO's personal attributes. In particular, CEO age significantly and negatively relates to divorce probabilities, consistent with the literature on divorce. However, the divorce probabilities based on a propensity score do not take away the explanatory power of an actual divorce in the compensation regressions. The increases in compensation are more likely driven by an actual divorce, rather than an increased likelihood of divorce. I attribute this relation to the loss of wealth associated with an actual divorce that is not present with just an increased probability of divorce.

6. CONCLUSION

Lambert, Larcker, and Verrecchia (1991) predict that a CEO's outside wealth impacts his risk incentives and his optimal compensation contract. Some empirical papers have examined these issues by incorporating proxies of outside wealth to estimate parameters of their compensation models (i.e., Baker and Hall, 2004; Dittmann and Maug, 2007). However, these estimates have been backed out of data, such as firm size and past compensation, which may not effectively proxy for outside wealth. More recent empirical work has attempted to provide better proxies of outside wealth by using

international samples of CEOs' outside wealth (Becker, 2007) or CEOs' home values (Liu and Yermack, 2007).

Instead of creating a proxy for CEOs' total wealth, I examine CEO divorce and use divorce as a proxy for a shock to CEO wealth that is exogenous to firm characteristics. Specifically, I show that bonus, restricted stock grants, and option grants increase following a CEO's divorce when controlling for time, industry, and firm attributes. These increases are consistent with predictions that compensation increases as the board reacts to a decrease in the CEO's risk tolerance. Overall, these findings suggest that contracting between the board of directors and executives involves consideration of the entirety of a CEO's wealth, not just the wealth that is sensitive to changes in firm value.

I look for evidence of reduced CEO risk preference following a wealth shock by examining firm risk around divorce. I measure annual firm idiosyncratic risk using monthly stock returns data. Regressions show significantly lower total risk and idiosyncratic risk in the year of divorce. This decrease suggests that a CEO's risk preference declines, consistent with a high level of portfolio idiosyncratic risk impacting the executive's incentives. The evidence supports the prediction that a CEO's risk aversion increases following a shock to outside wealth, and this increases the CEO's compensation as the board responds to changes in the CEO's incentives.

Finally, I check the robustness of the compensation results to see whether correlated omitted variables or agency conflicts drive the relation between compensation and CEO divorce. I take propensity scores for divorce and find little evidence that a

correlation between divorce and firm performance drives the compensation results. I use compensation committee independence and CEO ownership to proxy for agency conflicts, and I find little support for rent extraction explaining the increases in compensation around a CEO's divorce.

Overall, results on compensation suggest that CEOs receive higher levels of compensation related to a divorce, which decreases a CEO's wealth. Because the board sets compensation, the results also suggest that the board takes into account a CEO's outside wealth when setting compensation to align incentives. The results do not appear to be driven by governance mechanisms or firm attributes.

APPENDIX A - VARIABLE DESCRIPTIONS

Variable	Definition
Abnormal ROA	Firm return on assets that has been demeaned by the previous three years' mean return on assets.
Annual Return	The annual stock return of a firm.
Assets (Millions)	The annual book value of firm assets.
Cash (Thou.)	The sum of salary and bonus.
Cash Constraints	The three year average of [(common and preferred dividends plus cash flow in investing minus cash flow from operations)/assets].
CEO Overconfidence (Retainer)	An average of a variable created annually to measure overconfidence. The annual variable is an annual average of indicators where each indicator equals one if a CEO fails to sell 99 percent of stock gained from an option exercise within a week, zero otherwise.
CEO Overconfidence (NetBuyer)	The average number of years that a CEO is a net buyer of firm stock.
Dividend Constraints	An indicator equal to one if [(retained earnings plus cash dividends and repurchases)/prior year's cash dividends and repurchases] is less than two in any of the previous three years, or if the denominator is zero for all three years.
Dividend Payer	An annual indicator equal to one if the firm pays dividends.
Divorce Propensity (Firm)	A propensity score created from a probit regression of an indicator for divorce on firm attributes including CEO tenure, an indicator for retirement age (over 63), industry-adjusted ROA, abnormal ROA and two-digit SIC code indicators.

Variable	Definition
Divorce Propensity (Personal)	A propensity score created from a probit regression of an indicator for divorce on firm attributes including CEO age, number of children, gender, number of previous marriages, generation (decade of birth), a post-2000 time indicator, and location (state of principal office).
Divorce Year	An indicator equal to one in the year of CEO divorce.
Industry Adjusted ROA	Firm return on assets that is demeaned by the annual average of return on assets for firms sharing the same two-digit SIC code.
Market-to-Book	The ratio of the market value of the firm (shares outstanding times price) divided by the book value of assets.
Options Grants (Thou.)	The Black-Scholes value of annual option grants.
Option Grant Sensitivity	The value of the change in total value of the option grant for a one percent change in stock price.
Other Annual (Thou.)	The sum of values of items such as annual perquisites, above-market earnings on restricted stock, deferred long-term incentive compensation, tax reimbursements, and any difference between price paid (below market) for stock and the market price.
Other Compensation (Thou.)	The sum of values of one-time payments for termination, change-in-control, perquisites, life insurance benefits, etc.
Perquisites (Thou.)	The sum of Other Annual and Other Compensation.
Retirement Age	An indicator equal to one if a CEO is age 63 or over.
Return on Assets (ROA)	Annual firm income (EBIT in millions) divided by beginning-of-year assets (millions).
Restricted Stock Grants (Thou.)	The value of annual grants of restricted stock.

Variable	Definition
Rest. Stock Sens. (Val.)	The change in the value of the restricted stock grant for a one-percent change in the value of stock price (directly proportional to number of grants).
Sales (Millions)	Annual firm sales.
Salary/Bonus (Thou.)	The annual salary/bonus the CEO receives.
Shares Owned	The number/value of shares owned by the CEO, excluding options.
Stock Unvested	The amount/value of restricted stock held by the CEO that is not vested.
Unexercisable Options	The number/value of unexercisable options held by the CEO.
Tax Carry-Forwards	Tax Carry-Forwards is an indicator equal to one if there were carry-forwards in any of the three previous years.
Time Trend Var.	A variable that increases by one for every year past 1990.
Unexer. Exer. Opt.	The amount/value of unexercised exercisable options held by the CEO.
Year 2 After Divorce	An indicator equal to one in the second year following a CEO divorce.
Year After Divorce	An indicator equal to one in the year following a CEO divorce.

APPENDIX B - DATA DESCRIPTION

I begin the search for CEO divorce information with divorce filing databases. Divorce filings are considered public information in approximately half of the states in the United States, and legal filings are reliable sources of data. The most useful sources were Lexis-Nexis and WestLaw's divorce-filing databases ("commercial sources"), accessible through law student accounts. These commercial sources contain divorce filing information that includes the names of the parties involved, the date of the filing, the location of the filing, the age of the parties, the date of the marriage (filing date), and, typically, the number of children from the marriage. Local governments retain the actual divorce filings (making direct searches in county or municipal courthouses prohibitively costly). Because local governments must be contacted independently, the commercial sources have data available only for a non-exhaustive number of counties from the states in which data are publicly available.

In addition, the local nature of the divorce filings means not all filings contain all of the above-mentioned variables. While the data covers a great portion of the states in which S&P 1500 firms are located, including California and Texas, there are some notable gaps in coverage in the data. Most notable is New York, where divorce filings are not considered public information. This state has a large number of S&P 1500 companies and no access to governmental divorce information. However, I supplement the limited data by using media and other publicly available data sources to obtain data, as described below.

Governmental sources of legal data were also used. Texas produces a comprehensive list of divorces for the entire state that is accumulated at the state level from the local governmental bodies. This list is downloadable from the State of Texas' official website. Similar to the commercial sources, the Texas data contain the names of parties involved, the location of the filing, the date of the filing, the ages of the parties, the date of the marriage, the number of children, and Texas-specific identifier numbers. In addition to the Texas data, direct contact with courts was conducted through websites and telephone contact where specific courts could be identified. However, use of information through direct contact to courts was limited due to the difficulty of identifying the specific court where a divorce was filed and due to the costs required by courts to obtain information.

Another important data source was the Thompson Insider Trading database. Until August 1996, stock transactions by insiders related to qualified domestic relations orders (QDROs) had to be reported to the SEC, transaction code Q. QDROs were typically the result of divorces. Although encompassing only a short window of the study, QDROs were an effective way of verifying a divorce through observable means. This provided the executive names, the company names, and the date of the divorce-related transaction. With this data, divorce dates were cross-checked with other data to ensure the date of the transaction corresponded with the date of the divorce.

In addition, publications, press releases, and news articles were used to gather information on CEO divorces. Primarily, Lexis-Nexis Academic Universe searches on each CEO provided information from U.S. news sources and major publications relating

to the CEO for the past 20 years (since 1988). When available, these articles provided information pertaining to the date of a CEO's divorce and anecdotes about the details of the divorce. The *New York Times* Weddings/Celebrations section provided articles in which a CEO was mentioned. Independent searches of this section were conducted outside the Lexis-Nexis Academic universe because of the large amount of familial information provided by this section. In general, New York VIPs and socialites report marriages in this section. While CEO divorces are not specifically covered, marriages of their children are widely reported. This coverage provides information on the mother and father of the son or daughter to be married, which gives insights into the marital history of the parent/CEO. Due to the non-public nature of New York divorces, this search was instrumental in providing marital history and remarriage events for New York CEOs.

The final source of CEO marital history data was internet-based biographical sites and general searches. Web pages such as Nndb.com and Answers.com provide biographical information on CEOs, which often includes divorces. In addition, general Google.com searches often provide links to biographical websites that are specific to a CEO. Most commonly, the biographical information came through websites for a CEO's personal foundation or for the corporate web page of the company at which the CEO was affiliated. Once biographical data from Internet, media, and legal sources had been collected, the data were cross-checked to ensure accuracy.

LexisNexis and Westlaw Divorce and Marriage Filing Coverage

LexisNexis

Alaska Divorce Records, 1983-current
Arizona Divorce Records (Maricopa County only), 2005-current
California Divorce Records, varies by county
California Marriage Records, varies by county
Colorado Marriage Records, 1975-2002 (Not updating)
Colorado Divorce Records, 2001-2002 (Not updating)
Connecticut Marriage Records, 1959-2006 (Not updating)
Connecticut Divorce Records, 1960-2004 (Not updating)
Florida Marriage Records, 1970-current
Florida Divorce Records, 1970-current
Georgia Marriage Records, 1964-1999 (Not updating)
Georgia Divorce Records, 1964-1999 (Not updating)
Kentucky Marriage Records, 1973-2006 (Not updating)
Kentucky Divorce Records, 1973-2006 (Not updating)
Maine Marriage Records, 1900-1996 (Not updating)
Grand Traverse, Michigan Marriage Records, 1900-2004 (Not updating)
Ingham City, Michigan Marriage Records, 2005-2009
Nevada Marriage Records, 1968-2007 (Not updating)
Nevada Divorce Records, 1968-current
North Carolina Marriage Records, 1998-current
North Carolina Divorce Records, 1998-current
Ohio Marriage Records, 1986-current
Ohio Divorce Records, 1986-current
Oklahoma Divorce Records, 1974-current
Oklahoma Marriage Records, 1997-current
Pennsylvania Divorce Records (Bucks county only), 1980-current
Rhode Island Divorce Records, 1970-2005
Texas Marriage Records (statewide), 1960-12/2006 (Dallas, Harris and El Paso updating and current)
Texas Divorce Records (statewide), 1980-12/2006 (Dallas, Harris and El Paso updating and current)
Utah Divorce Records, 2004-current

Westlaw*

Arizona Divorce Records 1995-current
Georgia Divorce Records 2000-current
Louisiana Divorce Records 2000-current
Maryland Divorce Records 2000-current
Michigan Divorce Records 2000-current
Missouri Divorce Records 2000-current
Oregon Divorce Records 1988-current
Pennsylvania Divorce Records 2000-current
South Carolina Divorce Records 2000-current
Tennessee Divorce Records 2000-current
Virginia Divorce Records 2000-current

*Actual coverage varies by county and can be provided upon request.

APPENDIX C - THE SEARCH ALGORITHM

Due to the inability to match CEOs with divorce filings based on some unique identifier (e.g., Social Security Number), the matching of names to divorces was a highly qualitative process. Beyond commonality of names, dozens of CEOs use their middle names, making matching of legal documents difficult as well. To control for possible coincidence of names, an additional matching of age, location, and any other personal information was used to appropriately link CEOs to their correct marital history. However, the commonality of a name could possibly trump even complete matches in other fields, especially when there were no unique identifiers, such as the identification of divorce for the CEO in the media or the name of the spouse. For example, any matches to John F. Smith of General Motors would not have been coded as an observable divorce in the sample, due to the near impossibility of confirmation of divorce without media sources indicating that it was, in fact, this particular John Smith getting a divorce on a particular date. On the other hand, marital information on Ignatius J. Panzica of Global Motorsport Group would be entered into the data with fewer necessary identifiers needed for confirmation of the marital information, due to the rarity of the name. In general, age, name of spouse, confirmable date of marriage/divorce, and geographical location were used in conjunction with name matching to ensure the collected data accurately represent the marital history of the appropriate person.

Geography was a sensitive identifier for several reasons. First, a CEO need not live in the same geographical area as the principal location of his company, which was the geographical identifier used from Execucomp. Second, even if a CEO resides near

his company's headquarters, divorce jurisdiction is based upon "domicile," not "residence." This fact provides that any place that the CEO or his spouse own property at which they spend a substantial amount of time may be considered appropriate jurisdiction for divorce, depending on the specifics of the law in the jurisdiction.

It is not uncommon that a husband and wife both file for divorce in separate states to attain law more favorable to one party. However, geography still retains value as a matching variable for a two reasons. First, as reported by Liu and Yermack (2007), CEOs typically "live about as far from headquarters as other workers" at a median of 13.6 miles. Second, while the importance of jurisdictional issues cannot be marginalized, courts have tended to converge in their policies of equity on the distribution of property in a divorce proceeding. This implies that the economic drivers for venue choice are not as significant as they were historically, leaving less incentive to "forum shop" by the parties to the divorce. Altogether, geographic proximity seems to still play a significant role in determining where the CEO will have a divorce filing. In addition, confirmation with the media sources supports the notion that divorce filings tend to be created in the state where the CEO and his company headquarters exist.

APPENDIX D - TABLES

Table 1**Univariate Statistics on Compensation for Divorced CEOs and a Matched Sample**

The table reports the mean and median statistics of compensation variables for firms at which a CEO was divorced during his tenure and a matched sample of firms. For 79 CEOs who were identified as divorced, 72 were in office in the year before their divorce, and 77 remained in office the year after their divorce. Seventy CEOs were in office continuously for all three years. The matched sample was created by taking each firm of a CEO who divorced and by finding a CEO at a comparable firm based on year (of divorce), on sharing the same Fama-French 30 industry, and on firm asset size. The same matched sample was used for all three years of analysis (year before divorce, year of divorce, and year after divorce). Salary and bonus are the base salary and annual bonus to the CEO. Cash is the sum of salary and bonus. Restricted Stock is the value of restricted stock granted in the respective year. Option Grants is the Black-Scholes value of options granted. All compensation variables are reported in thousands and Winsorized at the one-percent level for the combined divorced and matched sample. *, **, and *** indicate significance difference from zero at the .10, .05, and .01 levels. + indicates that the test statistic from the Wilcoxon test is positive.

Panel A – Mean and Median Statistics of Divorce and Matched Firms by Pairing

Compensation statistics for CEOs who get divorced is reported along with compensation statistics from a matched sample, for comparison.

		Year Before Divorce				Year of Divorce				Year After Divorce			
Variable	Firm Type	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Sample Type		CEOs in sample at least 1 year		CEOs in sample all 3 years		CEOs in sample at least 1 year		CEOs in sample all 3 years		CEOs in sample at least 1 year		CEOs in sample all 3 years	
		N = 72	N = 72	N = 70	N = 70	N = 79	N = 79	N = 70	N = 70	N = 77	N = 77	N = 70	N = 70
Salary	Divorce Firm	646	573	649	573	686	622	715	639	753	692	779	698
	Matched Firm	668	570	673	570	661	596	688	605	675	600	699	618
Bonus	Divorce Firm	868	428	850	409	1,134	519	1,181	525	1,033	575	1,083	597
	Matched Firm	768	276	777	212	640	368	693	384	749	280	801	312
Restricted Stock	Divorce Firm	337	0	347	0	334	0	358	0	634	0	695	0
	Matched Firm	265	0	267	0	336	0	374	0	403	0	440	0
Option Grants	Divorce Firm	2,836	787	2,885	766	2,907	1,020	2,988	1,030	3,841	788	4,141	924
	Matched Firm	3,401	430	3,484	430	2,513	288	2,805	457	1,781	366	1,925	405
Other Comp.	Divorce Firm	208	40	214	43	264	48	294	68	190	59	204	69
	Matched Firm	137	30	140	25	159	30	173	29	197	35	214	38
Other Annual	Divorce Firm	53	0	54	0	71	0	80	0	70	0	76	0
	Matched Firm	38	0	39	0	35	0	38	0	33	0	35	0
Assets	Divorce Firm	11,167	1,671	11,087	1,671	12,327	1,927	12,921	1,934	14,384	1,994	15,282	2,006
	Matched Firm	12,221	1,759	12,112	1,759	12,103	1,958	12,701	1,970	13,262	2,035	14,064	2,158
Market-to-Book	Divorce Firm	1.90	1.21	1.87	1.21	1.66	0.99	1.67	1.11	1.50	1.02	1.50	1.05
	Matched Firm	1.52	1.35	1.53	1.35	1.51	1.06	1.59	1.17	1.38	1.03	1.46	1.22
Ret. on Assets	Divorce Firm	0.07	0.10	0.07	0.10	0.05	0.09	0.06	0.09	0.05	0.08	0.05	0.08
	Matched Firm	0.08	0.10	0.08	0.10	0.08	0.10	0.09	0.11	0.07	0.09	0.07	0.09

Panel B – Univariate Analysis of Differences in Compensation Variables

This panel reports the mean and median differences between compensation variables of CEOs who were divorced less compensation from a matched sample of firms. Mean (Median) differences are reported along with results of T-tests (Wilcoxon tests) of differences.

Variable	Year Before Divorce				Year of Divorce				Year After Divorce			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>Sample Type</i>	<i>CEOs in sample at least 1 year</i>		<i>CEOs in sample all 3 years</i>		<i>CEOs in sample at least 1 year</i>		<i>CEOs in sample all 3 years</i>		<i>CEOs in sample at least 1 year</i>		<i>CEOs in sample all 3 years</i>	
	N = 72	N = 72	N = 70	N = 70	N = 79	N = 79	N = 70	N = 70	N = 77	N = 77	N = 70	N = 70
Salary	-22	-11	-24	-16	25	14	27	31	78	59	79	62
Bonus	100	119*	73	110	494***	120***	488**	128***	284*	79***	282	116***
Cash	85	128	55	114	557**	119**	558**	126**	378*	140**	380*	160**
Restricted Stock	72	0	80	0	-2	0	-16	0	231	0**	255	0**
Option Grants	-565	58	-600	24	394	0	184	0	2060**	227***	2216*	228***
Other Comp.	71	5	74	7	105	5	121	15*	-7	13*	-9	16*
Other Annual	14	0	15	0	36	0	42	0	37	0	41	0
Perquisites	115	5	118	6	191	5	218	10*	48	6	52	10
Assets	-1,054.02	-59.36	-1,024.31	-50.27	223.59	4.57	219.97	5.21	1,123.64*	193.65	1,217.53	10.56
Market-to-Book	0.37	0.08	0.33	0.06	0.15	0.09	0.08	0.09	0.11	0.05	0.04	0.04
Ret. On Assets	-0.01	-0.01	-0.01	0.01	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.02	-0.02

Table 2
Multivariate Analysis of Cash Compensation Variables

This table reports the coefficients of a multivariate regression analysis of CEO compensation variables on indicator variables for the years surrounding CEO divorce and control variables for the entire panel of Execucomp CEO-firm-years. The dependent variables salary, bonus, cash (salary plus bonus), option value (Black-Scholes value), restricted stock value, and total incentive compensation (option value plus restricted stock value) are taken as reported from Execucomp. The independent variable of interest is Year of Divorce, an indicator variable, which represents the firm-year of CEO divorce. Similarly, Year After Divorce and Year 2 After Divorce, indicator variables, represent the firm-year after and two years after CEO divorce. Controls include lag of log sales, lag of market-to-book, lag of cash constraints, lag of tax carry-forwards, lag of dividend constraints, annual stock return, and lag of annual stock return. Lags are one year lags. Cash constraints are defined as the three-year average of [(common and preferred dividends plus cash flow in investing minus cash flow from operations)/assets]. Tax carry-forwards is an indicator equal to one if there were carry-forwards in any of the three previous years. Dividend constraints is an indicator equal to one if [(retained earnings plus cash dividends and repurchases)/prior year's cash dividends and repurchases] is less than two in any of the previous three years or if the denominator is zero for all three years. Two-digit SIC industry controls and year controls were included but not reported. All non-binary variables are Winsorized at the .01 level. Standard errors are clustered by firm, and p-values are provided below the coefficient estimates.

Variable	Salary	Bonus	Cash (Salary+Bonus)	Option Comp. (Blk. Sch.)	Rest. Stock Val.	Incentive Comp. (Opt. + Stk.)
Divorce Year	15.03	318.97	322.38	830.92	4.26	888.52
	(0.68)	(0.03)	(0.06)	(0.12)	(0.96)	(0.14)
Year After Divorce	79.48	278.92	367.74	1577.41	360.49	2029.74
	(0.00)	(0.02)	(0.00)	(0.03)	(0.01)	(0.01)
Year 2 After Divorce	67.00	231.69	283.78	768.55	171.23	986.65
	(0.01)	(0.09)	(0.04)	(0.15)	(0.18)	(0.10)
Log Sales	110.90	195.87	309.47	516.90	131.34	681.24
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Market-to-Book	-1.65	12.11	10.36	478.99	0.25	510.73
	(0.37)	(0.02)	(0.09)	(0.00)	(0.97)	(0.00)
Cash Constraints	-24.02	-334.41	-371.09	-2635.28	-300.47	-3095.58
	(0.46)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
Carry-forwards	11.99	-9.77	-1.70	205.77	44.81	250.33
	(0.08)	(0.67)	(0.95)	(0.02)	(0.12)	(0.02)
Dividend Constraints	-18.77	-83.81	-101.56	54.70	-70.27	-27.00
	(0.01)	(0.00)	(0.00)	(0.47)	(0.00)	(0.76)
Annual Return	-2.36	152.89	149.90	250.13	30.55	298.33
	(0.42)	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)
Lag Annual Return	-0.89	60.19	57.85	24.20	-19.51	-19.38
	(0.79)	(0.00)	(0.00)	(0.79)	(0.18)	(0.85)
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	23,085	23,085	23,085	23,085	23,085	23,085
R-squared	0.90	0.49	0.69	0.31	0.17	0.33

Table 3**Multivariate Analysis of Sensitivity of New Awards**

This table reports the coefficients of a multivariate regression analysis of the sensitivity of new incentive awards (log of total change in wealth per one percent change in stock price plus one) on indicator variables for the years surrounding CEO divorce and control variables for the entire panel of Execucomp CEO-firm-years. The dependent variable of option sensitivity is the partial derivative of the Black-Scholes value per one percent change in stock price. Restricted stock sensitivity is equal to the number of restricted shares held, and total incentive compensation is the log of the sum of option and restricted stock awards. The independent variable of interest is Divorce Year, and indicator, which is equal to one in the year of CEO divorce for a CEO at his firm in the particular year of divorce and zero otherwise. Similarly, Year After Divorce and Year 2 After Divorce are indicator variables for the year after and two years after CEO divorce for the divorced CEO at the same firm. Controls include lag of log sales, lag of market-to-book, lag of cash constraints, lag of tax carry-forwards, lag of dividend constraints, annual stock return, and lag of annual stock return. Lags are one-year lags. Cash constraints are defined as the three-year average of [(common and preferred dividends plus cash flow in investing minus cash flow from operations)/assets]. Tax carry-forwards is an indicator equal to one if there were carry-forwards in any of the three previous years. Dividend constraints is an indicator equal to one if [(retained earnings plus cash dividends and repurchases)/prior year's cash dividends and repurchases] is less than two in any of the previous three years or if the denominator is zero for all three years. Two-digit SIC industry controls and year controls are included but not reported. Standard errors are clustered by firm. All non-binary variables are Winsorized at the .01 level. P-values are provided next to the coefficient estimates.

Variable	Log Opt. Grant Sens.	Log Res. Stk. Grant Sens.	Log Stk. + Opt. Grant Sens.
Divorce Year	1.19	0.11	1.18
	(0.02)	(0.51)	(0.02)
Year After Divorce	0.91	0.57	0.93
	(0.12)	(0.01)	(0.11)
Year 2 After Divorce	1.27	0.46	1.27
	(0.01)	(0.02)	(0.01)
Log Sales	0.66	0.19	0.67
	(0.00)	(0.00)	(0.00)
Market-to-Book	0.25	-0.02	0.24
	(0.00)	(0.02)	(0.00)
Cash Constraints	-2.84	-0.16	-2.82
	(0.00)	(0.26)	(0.00)
Carry-forwards	0.11	0.04	0.10
	(0.32)	(0.29)	(0.39)
Dividend	0.15	0.02	0.16
Constraints	(0.19)	(0.61)	(0.16)
Annual Return	0.32	0.04	0.33
	(0.00)	(0.01)	(0.00)
Lag Annual	0.10	-0.02	0.08
Return	(0.16)	(0.34)	(0.21)
Industry Controls	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes
N	22,490	22,490	22,490
R-squared	0.68	0.23	0.69

Table 4**Alternative Specifications of Compensation Regressions**

This table reports alternative specifications for regressions of compensation on indicators for CEO divorce. The dependent variables, salary, bonus, cash (salary plus bonus), option value (Black-Scholes value), restricted stock value, and total incentive compensation (option value plus restricted stock value), are taken as reported by Execucomp. The independent variable of interest is Year of Divorce, an indicator variable which represents the firm-year of CEO divorce. Similarly, Year After Divorce and Year 2 After Divorce, indicator variables, represent the firm-year after and two years after CEO divorce. Controls include lag of log sales, lag of market-to-book, lag of cash constraints, lag of tax carry-forwards, lag of dividend constraints, annual stock return, and lag of annual stock return. Lags are one year lags. Cash constraints are defined as the three-year average of [(common and preferred dividends plus cash flow in investing minus cash flow from operations)/assets]. Tax carry-forwards is an indicator equal to one if there were carry-forwards in any of the three previous years. Dividend constraints is an indicator equal to one if [(retained earnings plus cash dividends and repurchases)/prior year's cash dividends and repurchases] is less than two in any of the previous three years or if the denominator is zero for all three years. Two-digit SIC industry controls and year controls were included but not reported. All non-binary variables are Winsorized at the .01 level. Standard errors are clustered by firm, and p-values are provided below the coefficient estimates.

Panel A – Tobit Regressions

This table reports the coefficients of a tobit regression of CEO compensation variables on indicator variables for the years surrounding CEO divorce and control variables for the entire panel of Execucomp CEO-firm-years.

Variable	Salary	Bonus	Option Comp.	Rest. Stock Val.
Divorce Year	22.58	310.18	1174.62	311.87
	(0.54)	(0.03)	(0.03)	(0.39)
Year After	67.74	321.60	1334.79	1619.06
Divorce	(0.05)	(0.01)	(0.02)	(0.00)
Year 2 After	55.37	244.25	689.56	972.94
Divorce	(0.05)	(0.11)	(0.19)	(0.01)
Log	139.51	306.08	1081.49	562.55
Sales	(0.00)	(0.00)	(0.00)	(0.00)
Market-	-1.14	30.31	676.40	-182.76
to-Book	(0.68)	(0.00)	(0.00)	(0.00)
Cash	-25.31	-305.71	-4329.14	1073.52
Constraints	(0.41)	(0.02)	(0.00)	(0.02)
Carry-	8.52	-41.38	240.99	-4.99
forwards	(0.19)	(0.10)	(0.02)	(0.96)
Dividend	-0.93	-49.00	335.34	-111.15
Constraints	(0.89)	(0.05)	(0.00)	(0.17)
Annual	4.45	362.51	492.23	153.25
Return	(0.13)	(0.00)	(0.00)	(0.00)
Lag Annual	16.13	223.03	150.03	100.02
Return	(0.00)	(0.00)	(0.04)	(0.06)
Industry Controls	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes
N	27,300	27,300	27,300	27,300
Pseudo R-squared	0.06	0.04	0.05	0.05

Panel B - Alternative Specifications of Compensation Regressions

This table reports the coefficients of an OLS regression of the logs of CEO compensation variables on indicator variables for the years surrounding CEO divorce and control variables for the entire panel of Execucomp CEO-firm-years.

Variable	Log of Salary	Log of Bonus	Log of Option Compensation	Log of Restricted Stock Compensation
Divorce Year	-0.02 (0.83)	0.35 (0.24)	0.72** (0.04)	0.32 (0.29)
Year After Divorce	0.14** (0.02)	0.66** (0.01)	0.57 (0.13)	1.39*** (0.00)
Year 2 After Divorce	0.06 (0.45)	0.06 (0.84)	0.47 (0.16)	0.87** (0.01)
Log Sales	0.21*** (0.00)	0.41*** (0.00)	0.49*** (0.00)	0.29*** (0.00)
Market-to-Book	-0.04*** (0.00)	0.02 (0.28)	0.22*** (0.00)	-0.10*** (0.00)
Cash Constraints	0.12 (0.25)	1.12*** (0.00)	-1.92*** (0.00)	0.58** (0.02)
Carry-forwards	0.03 (0.19)	-0.07 (0.21)	0.10* (0.09)	0.01 (0.97)
Dividend Constraints	-0.01 (0.53)	-0.13** (0.02)	0.20*** (0.00)	-0.03 (0.54)
Annual Return	-0.01 (0.81)	1.00*** (0.00)	0.21*** (0.00)	0.09*** (0.00)
Lag Annual Return	0.06*** (0.00)	0.63*** (0.00)	0.04 (0.37)	0.07** (0.03)
Industry Controls	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes
N	27,300	27,300	27,300	27,300
R-squared	0.99	0.76	0.72	0.31

Table 5
CEO Holdings around Divorce

This table reports the summary statistics of stock and option holdings for CEOs who were divorced during their tenure and a matched sample of firms. For 79 CEOs who were identified as divorced, 72 were in office in the year before their divorce, and 75 remained in office the year after their divorce. Sixty-eight CEOs were in office all three years. The matched sample was created by finding a CEO at a comparable firm based on year (of divorce), on sharing the same Fama-French 30 industry, and on firm asset size. The same matched sample was used for all three years of analysis (year before divorce, year of divorce, and year after divorce). Shares owned is the number of shares owned, excluding options. Stock unvested is the amount (value) of restricted stock held by the executive. Similarly, Unexer. Opt. and Unexer. Exer. Options are the number (value) of unexercisable options and of unexercised options that are exercisable in the current year held by the executive, respectively. Option values are based on the difference between the strike price and the market price of the stock. All variables are in thousands, as reported by Execucomp.

Panel A - Summary Statistics of CEO holdings for Divorce and Matched Firms

Firm holdings statistics for CEOs who get divorced is reported along with firm holdings statistics from a matched sample, for comparison.

		Year Before Divorce				Year of Divorce				Year After Divorce			
Variables	Firm Type	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Sample Type		CEOs in sample at least 1 year		CEOs in sample all 3 years		CEOs in sample at least 1 year		CEOs in sample all 3 years		CEOs in sample at least 1 year		CEOs in sample all 3 years	
		N = 72	N = 72	N = 68	N = 68	N = 79	N = 79	N = 68	N = 68	N = 75	N = 75	N = 68	N = 68
Shares Owned (Num.)	Divorce Firm	2,824	244	2,946	208	3,269	195	3,737	215	3,658	216	3,987	228
	Matched Firm	1,764	250	1,780	247	1,541	214	1,661	246	1,349	216	1,480	245
Shares Owned (Val.)	Divorce Firm	135,974	5,779	140,587	5,400	151,472	4,980	172,817	5,016	146,624	6,131	161,217	6,253
	Matched Firm	62,594	8,419	62,592	6,419	56,424	6,676	62,052	7,399	52,297	6,962	57,546	7,901
Stock Unvested (Num.)	Divorce Firm	36	0	35	0	39	0	43	0	65	0	71	0
	Matched Firm	65	0	52	0	46	0	48	0	38	0	42	0
Stock Unvested (Val.)	Divorce Firm	1,068	0	899	0	1,497	0	1,397	0	1,908	0	2,080	0
	Matched Firm	1,873	0	1,254	0	1,852	0	1,784	0	1,421	0	1,537	0
Unexer. Opt. (Num.)	Divorce Firm	433	128	409	124	522	176	529	186	590	196	629	206
	Matched Firm	365	116	340	113	397	129	410	135	595	114	646	126
Unexer. Opt. (Val.)	Divorce Firm	5,089	85	4,258	82	6,918	474	6,035	507	4,819	383	5,223	529
	Matched Firm	8,227	585	8,308	570	2,891	366	3,122	432	5,374	427	5,898	461
Unexer. Exer. Opt. (Num.)	Divorce Firm	568	208	522	227	728	230	762	280	858	308	923	371
	Matched Firm	498	169	480	159	670	180	722	191	666	153	726	192
Unexer. Exer. Opt. (Val.)	Divorce Firm	10,135	1,215	8,005	1,202	12,879	1,000	12,022	1,220	11,617	1,707	12,598	1,783
	Matched Firm	31,646	953	32,180	752	10,307	1,230	11,040	1,269	9,358	1,198	10,231	1,253

Panel B - Change in CEO Own-Firm Holdings Around Divorce

This table reports statistics on the changes in divorced CEOs' firm-related portfolio holdings around divorce across time and relative to a matched sample. For each CEO holdings in the year before divorce are subtracted from holdings in the year after divorce, producing an absolute change in holdings variable for the years surrounding divorce. Mean and median statistics are reported for the difference variables. T-tests and Wilcoxon sign rank tests are run to test the difference from zero of the mean and median statistics. *, **, and *** indicate significance at the .10, .05, and .01 levels. + indicates that the statistic from the Wilcoxon test is positive.

Variables	N	Mean	Median
Δ Shares Owned (Num.)	62	1,119	1
Δ Shares Owned (Val.)	61	23,269	-4
Δ Stock Unvested (Num.)	67	37***	0***+
Δ Stock Unvested (Val.)	67	1201*	0**+
Δ Unexer. Opt. (Num.)	67	228***	19***
Δ Unexer. Opt. (Val.)	67	1,008	0
Δ Unexer. Exer. Opt. (Num.)	67	412***	83***
Δ Unexer. Exer. Opt. (Val.)	67	4,750	328*

Panel C – CEOs' Holdings Relative to Matched Firms

This panel reports the mean and median differences between firm holdings of CEOs who were divorced less compensation from a matched sample of firms. Mean (Median) differences are reported along with results of T-tests (Wilcoxon tests) of differences. This panel reports statistics on the differences in holdings between the divorced CEO group and a matched sample. The matched sample is created for each divorce-affected firm by matching a control firm based on year, asset size, and Fama-French 30 industry. The values of compensation variables for the matched sample are subtracted from values for the divorced CEO sample. Mean and median statistics on differences between the divorce-affected firms and the matched sample are reported. . *, **, and *** indicate significance at the .10, .05, and .01 levels.

Variables	Year Before Divorce				Year of Divorce				Year After Divorce			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>Sample Type</i>	<i>CEOs in Sample at Least 1 Year</i>		<i>CEOs in Sample All 3 years</i>		<i>CEOs in Sample at Least 1 Year</i>		<i>CEOs in Sample All 3 years</i>		<i>CEOs in Sample at Least 1 Year</i>		<i>CEOs in Sample All 3 years</i>	
	N = 72	N = 72	N = 68	N = 68	N = 79	N = 79	N = 68	N = 68	N = 75	N = 75	N = 68	N = 68
Shares Owned (Num.)	976	-32	1,078	-31	1,586	-40	1,931	-48	2,322	-5	2,524	-10
Shares Owned (Val.)	70,120	-507	74,596	0	98,619	-794	115,971	-50	94,824	-1,080	104,272	-1,300
Stock Unvested (Num.)	-30	0	-17	0	-7	0	-5	0	26	0	29	0
Stock Unvested (Val.)	-830	0	-372	0	-354	0	-386	0	487	0	543	0
Unexer. Opt. (Num.)	68	0	70	-13	126	10	119	18	-5	13	-17	12
Unexer. Opt. (Val.)	-3,247	0	-4,165	0	4,027	0	2,913	0	-555	0	-675	0
Unexer. Exer. Opt. (Num.)	67	31	39	36	57	14	40	15	192	110**	197	127*
Unexer. Exer. Opt. (Val.)	-21,954	0	-24,652	0	2,572	0	982	-2	2,260	0	2,368	-4

Table 6
Multivariate Analysis of Idiosyncratic Risk

This table reports the coefficients of a multivariate regression analysis of firm idiosyncratic risk and stock (log) return risk on indicator variables for the years surrounding CEO divorce and control variables for the firms listed in Compustat. The panel consists of the entire history of firms listed at any point on Compustat (1950-2010). The first dependent variable, idiosyncratic risk, is calculated as the sum of squared errors from a four-factor (Carhart, 1997) model of monthly data in annual regressions for each firm. The second dependent variable is the annual standard deviation of log monthly returns for each firm-year. The independent variable of interest is Year of Divorce, which represents the year of CEO divorce for a CEO at his firm in the particular year with an indicator equal to one in the divorce year. Similarly, the other divorce variables equal one in the year (two years) after (before) CEO divorce for the CEO of interest and zero otherwise. Controls include an annual time trend (increase by one each year) to account for increases in idiosyncratic risk over time, log of book assets, and a dividend payer indicator for firms that pay dividends in a given year. Errors are clustered at the firm level. P-values are provided under to the coefficient estimates.

	Idiosyncratic Volatility	Volatility (Log Returns)
Year 2 Before Divorce	-115.78 (0.23)	-0.01 (0.14)
Year Before Divorce	22.52 (0.82)	0.01 (0.89)
Divorce Year	-1496.25 (0.00)	-0.04 (0.00)
Year After Divorce	-134.73 (0.14)	-0.01 (0.05)
Year 2 After Divorce	-134.77 (0.14)	0.01 (1.00)
Time Trend Variable	40.69 (0.00)	0.01 (0.00)
Log of Assets	-384.30 (0.00)	-0.01 (0.00)
Dividend Indicator	-1034.66 (0.00)	-0.06 (0.00)
R squared	0.035	0.276
N	205,859	220,129

Table 7**CEO Compensation and CEO Overconfidence/Divorce Interactions**

This table presents results from OLS regressions of compensation variables on indicators for divorce and interactions with proxies for CEO overconfidence. The panel of firm-year data comes from merging CRSP, Compustat, Execucomp, and the TFN insider trading database. The dependent variables salary, bonus, cash (salary plus bonus), option value (Black-Scholes value), restricted stock value, and total incentive (option value plus restricted stock value) are taken as reported from Execucomp (in thousands). Divorce Year, an indicator, represents the year of CEO divorce for a CEO at his firm. Similarly, Year After Divorce and Year 2 After Divorce are indicators that represent the year after and two years after CEO divorce. Firm controls include Lag Log Sales, Lag Market-to-Book, Lag Cash Constraints, Lag Carry-forwards, Lag Dividend Constraints, Annual Return, and Lag Annual Return. Full definitions of variables are included in the variable appendix. Two-digit SIC industry controls and year controls were included but not reported. All non-binary variables are Winsorized at the .01 level. Standard errors are clustered by firm. P-values are provided under the coefficient estimates.

Panel A – Overconfidence Proxied by Retention of Shares after CEO Option Exercise

Panel A defines CEO overconfidence as the average (by CEO) of the annual average of an indicator that equals one for a transaction in which a CEO fails to sell 100 percent of stock received from the exercise of an option grant within one week, zero otherwise.

Variable	Salary	Bonus	Cash	Options	Rest. Stock	Equity Incent.
Divorce Year	-169.32 (0.12)	1071.62 (0.03)	884.83 (0.13)	7854.72 (0.04)	-455.75 (0.40)	8057.85 (0.08)
Year After Divorce	209.61 (0.00)	551.46 (0.05)	766.71 (0.00)	6374.96 (0.00)	1061.96 (0.14)	7847.81 (0.00)
Year 2 After Divorce	-15.92 (0.88)	-73.96 (0.87)	-99.23 (0.84)	-383.41 (0.77)	1296.19 (0.13)	1276.31 (0.58)
CEO Overconfidence	394.35	-919.41	-534.64	-11394.24	746.88	-11726.57
(Retainer)* Divorce Year	(0.03)	(0.32)	(0.61)	(0.04)	(0.49)	(0.08)
CEO Overconfidence	-239.73	-395.04	-652.00	-8411.10	-986.83	-10096.28
(Retainer)*Year After Divorce	(0.04)	(0.37)	(0.10)	(0.00)	(0.19)	(0.00)
CEO Overconfidence	187.26	100.83	286.05	-195.57	-506.59	-960.67
(Retainer)*Year 2 After Divorce	(0.21)	(0.87)	(0.66)	(0.90)	(0.60)	(0.71)
CEO Overconfidence	-9.02	148.82	142.04	-155.82	52.96	-87.59
(Retainer)	(0.56)	(0.02)	(0.05)	(0.54)	(0.50)	(0.76)
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	4,599	4,599	4,599	4,599	4,599	4,599

Panel B – Overconfidence Proxied by CEO Being a Net Buyer of Firm Stock

Panel B proxies for overconfidence with the mean number of years in which a CEO is a net buyer of own-firm stock.

Variable	Salary	Bonus	Cash	Options	Rest. Stock	Equity Incent.
Divorce Year	89.86	669.95	737.23	2252.63	74.28	2358.92
	(0.10)	(0.03)	(0.03)	(0.08)	(0.76)	(0.10)
Year After Divorce	80.23	210.72	368.36	1053.05	528.63	1491.93
	(0.11)	(0.24)	(0.05)	(0.34)	(0.14)	(0.19)
Year 2 After Divorce	163.55	3.25	173.16	169.81	1077.47	1445.25
	(0.00)	(0.99)	(0.57)	(0.79)	(0.02)	(0.21)
CEO Overconfidence	-213.43	-1093.61	-1291.52	-1067.39	209.59	-226.90
(NetBuyer)* Divorce Year	(0.28)	(0.08)	(0.10)	(0.79)	(0.66)	(0.96)
CEO Overconfidence	44.63	382.37	194.10	5944.36	295.39	6204.22
(NetBuyer)*Year After Divorce	(0.71)	(0.65)	(0.81)	(0.37)	(0.69)	(0.33)
CEO Overconfidence	64.81	777.68	686.67	1525.50	-1667.22	-517.27
(NetBuyer)*Year 2 After Divorce	(0.70)	(0.44)	(0.50)	(0.60)	(0.00)	(0.86)
CEO Overconfidence	-21.56	-108.34	-127.28	-329.55	-59.31	-395.75
(NetBuyer)	(0.03)	(0.00)	(0.00)	(0.00)	(0.08)	(0.00)
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	16,057	16,057	16,057	16,057	16,057	16,057

Panel C – Overconfidence Proxied by CEO “Longholders” of Firm Stock

Panel C indicates overconfidence with an indicator for CEOs who have ever held in-the-money options until the year before option expiration (Longholder).

Variable	Salary	Bonus	Cash	Options	Rest. Stock	Equity Incent.
Divorce Year	31.41 (0.73)	524.82 (0.11)	558.06 (0.15)	2641.75 (0.35)	-69.30 (0.80)	2903.63 (0.35)
Year After Divorce	121.43 (0.02)	74.99 (0.71)	194.95 (0.33)	1619.43 (0.33)	808.44 (0.16)	2557.68 (0.18)
Year 2 After Divorce	106.03 (0.08)	42.13 (0.92)	144.42 (0.74)	-1255.71 (0.08)	646.09 (0.26)	-305.33 (0.84)
CEO Overconfidence	50.49	160.37	169.24	-271.56	195.44	-35.96
(Longholder)* Divorce Year	(0.67)	(0.78)	(0.79)	(0.94)	(0.65)	(0.99)
CEO Overconfidence	-43.36	449.36	400.71	822.47	-216.92	1343.13
(Longholder)*Year After	(0.54)	(0.15)	(0.21)	(0.76)	(0.79)	(0.62)
Divorce CEO Overconfidence	39.09	-134.25	-89.65	1240.53	5.95	901.57
(Longholder)*Year 2 After Divorce	(0.63)	(0.76)	(0.84)	(0.23)	(0.99)	(0.60)
CEO Overconfidence	-5.75	43.52	35.66	-276.64	-51.08	-323.25
(Longholder)	(0.53)	(0.15)	(0.31)	(0.09)	(0.25)	(0.08)
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	6,393	6,393	6,393	6,393	6,393	6,393

Panel D – Overconfidence Proxied by CEO Holding of over 67% in the Money Options

Panel D defines overconfidence as the average number of years that a CEO holds options more than 67% in-the-money.

Variable	Salary	Bonus	Cash	Options	Rest. Stock	Equity Incent.
Divorce Year	31.41	524.82	558.0	2641.75	-69.30	2903.63
	(0.73)	(0.11)	(0.15)	(0.35)	(0.80)	(0.35)
Year After Divorce	121.43	74.99	194.9	1619.43	808.44	2557.68
	(0.02)	(0.71)	(0.33)	(0.33)	(0.16)	(0.18)
Year 2 After Divorce	106.03	42.13	144.4	-	646.09	-305.33
	(0.08)	(0.92)	(0.74)	(0.08)	(0.26)	(0.84)
CEO Overconfidence	50.49	160.37	169.2	-271.56	195.44	-35.96
	(0.67)	(0.78)	(0.79)	(0.94)	(0.65)	(0.99)
(Longholder)* Divorce Year	-43.36	449.36	400.7	822.47	-216.92	1343.13
CEO Overconfidence						
	(0.54)	(0.15)	(0.21)	(0.76)	(0.79)	(0.62)
(Longholder)*Year After	39.09	-	-89.65	1240.53	5.95	901.57
Divorce CEO Overconfidence						
	(0.63)	(0.76)	(0.84)	(0.23)	(0.99)	(0.60)
(Longholder)*Year 2 After						
Divorce						
CEO Overconfidence	-5.75	43.52	35.66	-276.64	-51.08	-323.25
(Longholder)	(0.53)	(0.15)	(0.31)	(0.09)	(0.25)	(0.08)
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	6,393	6,393	6,393	6,393	6,393	6,393

Panel E - Overconfidence Proxied by Overinvestment

Panel E defines overconfidence as the CEO's firm's investment rate (CAPEX/beginning of year PP&E) demeaned by industry average.

Variable	Salary	Bonus	Cash	Options	Rest. Stock	Equity Incent.
Divorce Year	-20.52 (0.73)	256.35 (0.31)	222.50 (0.45)	113.59 (0.85)	23.84 (0.87)	38.26 (0.95)
Year After Divorce	28.04 (0.51)	314.96 (0.20)	341.35 (0.17)	2678.77 (0.11)	395.26 (0.13)	3348.89 (0.04)
Year 2 After Divorce	89.95 (0.08)	488.82 (0.14)	544.47 (0.11)	1445.22 (0.25)	242.03 (0.42)	1942.86 (0.18)
CEO Overconfidence	135.20	392.46	527.97	2615.64	6.67	3072.99
(CAPX)* Divorce Year	(0.19)	(0.38)	(0.28)	(0.14)	(0.97)	(0.13)
CEO Overconfidence	154.37	-1.48	195.01	-1219.46	180.64	-1362.04
(CAPX)*Year After Divorce	(0.11)	(1.00)	(0.61)	(0.58)	(0.69)	(0.54)
CEO Overconfidence	21.48	-688.98	-632.15	-652.46	-9.07	-1051.83
(CAPX)*Year 2 After Divorce	(0.77)	(0.10)	(0.14)	(0.76)	(0.98)	(0.66)
CEO Overconfidence	-92.89	-303.26	-403.86	-290.48	-193.22	-473.28
(CAPX)	(0.00)	(0.00)	(0.00)	(0.06)	(0.00)	(0.01)
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	21,476	21,476	21,476	21,476	21,476	21,476

Table 8
Comparisons by Governance Characteristics

This table reports the mean and median statistics of differences in compensation variables for firms at which a CEO was divorced during his tenure and a matched sample of firms. The matched sample was created by taking each firm of a CEO who divorced and by finding a CEO at a comparable firm based on year (of divorce), on sharing the same Fama-French 30 industry, and on firm asset size. The same matched sample was used for all three years of analysis (year before divorce, year of divorce, and year after divorce). Salary and bonus are the base salary and annual bonus to the CEO. Cash is the sum of salary and bonus. Restricted Stock is the value of restricted stock granted in the respective year. Option Grants is the Black-Scholes value of options granted. All compensation variables are reported in thousands and Winsorized at the one-percent level for the combined divorced and matched sample. *, **, and *** indicate significance difference from zero at the .10, .05, and .01 levels. + indicates that the test statistic from the Wilcoxon test is positive.

Panel A – Univariate Analysis of Differences in Compensation Variables, Insider Compensation Committee

This panel reports the mean and median differences between compensation variables of CEOs who were divorced less compensation from a matched sample of firms. The divorced-CEO sample is restricted to firms in which the CEO gets divorce and the compensation committee contains insiders. Mean (Median) differences are reported along with results of T-tests (Wilcoxon tests) of differences.

Variables	Year Before Divorce				Year of Divorce				Year After Divorce			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>Sample Type</i>	<i>CEOs in sample at least 1 year</i>		<i>CEOs in sample all 3 years</i>		<i>CEOs in sample at least 1 year</i>		<i>CEOs in sample all 3 years</i>		<i>CEOs in sample at least 1 year</i>		<i>CEOs in sample all 3 years</i>	
Salary	N = 34 -118	N = 34 110	N = 33 -122	N = 33 -83	N = 36 -76	N = 36 -50	N = 33 -85	N = 33 -51	N = 35 20	N = 35 22	N = 33 12	N = 33 0
Bonus	-87	123	77	161	293**	140**	318**	246**	289	129*	321	129
Cash	-180	112	-25	118	215	74	232	105	346	120	355	119
Restricted Stock	-137	0	-142	0	-367	0	-401	0	-197	0	-209	0
Option Grants	-133	46	56	91	-557	0	-783	0	3559*	341**	3662*	292*
Other Comp.	78	11	104	12	178*	15	200*	16*	107**	27***	114**	29***
Other Annual	4	0	13	0	28*	0	31*	0	40	0* ⁺	43	0* ⁺
Perquisites	82	11	117	12	207**	14*	231**	16*	147*	51***	156*	55***

Panel B – Univariate Analysis of Differences in Compensation Variables, Independent Compensation Committee

This panel reports the mean and median differences between compensation variables of CEOs who were divorced less compensation from a matched sample of firms. The divorced-CEO sample is restricted to firms in which the compensation committee contains insiders. Mean (Median) differences are reported along with results of T-tests (Wilcoxon tests) of differences.

Variable	Year Before Divorce				Year of Divorce				Year After Divorce			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>Sample Type</i>	<i>CEOs in sample at least 1 year</i>		<i>CEOs in sample all 3 years</i>		<i>CEOs in sample at least 1 year</i>		<i>CEOs in sample all 3 years</i>		<i>CEOs in sample at least 1 year</i>		<i>CEOs in sample all 3 years</i>	
Salary	N = 33 97	N = 33 75	N = 30 85	N = 30 53	N = 33 126	N = 33 71*	N = 30 116	N = 30 65	N = 30 148*	N = 30 87**	N = 30 148*	N = 30 87**
Bonus	341	230*	284	117	800**	213**	765*	103*	496*	161***	496*	161***
Cash	457	251**	390	192	1024**	390**	989*	331*	643**	300**	643**	300***
Restricted Stock	227	0	262	0	349*	0** ⁺	397*	0** ⁺	771***	0*** ⁺	771***	0*** ⁺
Option Grants	-1249	25	-1417	24	1539	132	1283	131	183	317*	183	317*
Other Comp.	48	0	38	1	51	0	50	2	-154	-2	-154	-2
Other Annual	7	0	7	0	47	0	51	0	37	0	37	0
Perquisites	137	2	135	4	226	5	241	2	-53	-2	-53	-2

Table 9
CEO Compensation and Divorce with Time/Labor Invested in Work

This table presents results from OLS regressions of compensation variables on indicators for divorce and proxies for the investment of CEO labor in work relative to family obligations. The panel of firm-year data comes from merging CRSP, Compustat, and Execucomp. The dependent variables salary, bonus, cash (salary plus bonus), option value (Black-Scholes value), restricted stock value, and total incentive (option value plus restricted stock value) are taken as reported from Execucomp. Divorce Year, an indicator, represents the year of CEO divorce for a CEO at his firm. Similarly, Year After Divorce and Year 2 After Divorce are indicators that represent the year after and two years after CEO divorce. ROA-based performance measures proxy for the investment of CEO time/labor in his job. Indus. Adj. ROA is the firm ROA less the annual two-digit SIC industry mean ROA. Abnormal ROA is the firm's ROA with the past three years' mean ROA subtracted. Full definitions of controls are included in the variable appendix. Two-digit SIC industry controls and year controls were included but not reported. All non-binary variables are Winsorized at the .01 level. Standard errors are clustered by firm. P-values are provided under the coefficient estimates.

Variable	Salary	Salary	Bonus	Bonus	Cash	Cash	Options	Options	Rest. Stock	Rest. Stock	Equity Incent.	Equity Incent.
Divorce Year	16.54	16.94	362.27	367.34	366.77	372.26	1099.62	1102.77	3.82	-21.36	1171.25	1149.99
	(0.63)	(0.63)	(0.02)	(0.02)	(0.04)	(0.04)	(0.06)	(0.07)	(0.97)	(0.81)	(0.08)	(0.09)
Year After	69.42	69.08	290.39	288.43	370.46	368.10	1801.47	1810.46	246.23	246.40	2018.89	2027.82
Divorce	(0.01)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.05)	(0.05)	(0.01)	(0.01)
Year 2 After	63.53	67.36	239.68	245.55	288.07	297.61	893.55	940.07	146.28	153.94	1094.57	1152.00
Divorce	(0.01)	(0.01)	(0.09)	(0.09)	(0.05)	(0.04)	(0.11)	(0.10)	(0.26)	(0.24)	(0.09)	(0.07)
Abnormal	0.08		4.13		4.14		1.95		2.90		5.16	
ROA	(0.81)		(0.01)		(0.03)		(0.67)		(0.21)		(0.44)	
Indus. Adj.		7.12		33.90		40.35		-8.20		4.40		-2.46
ROA		(0.00)		(0.23)		(0.17)		(0.84)		(0.74)		(0.95)
Log Sales	113.94	114.62	173.34	174.95	289.47	291.77	518.20	522.66	114.74	116.01	664.03	670.22
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Market-	-2.39	-2.86	12.76	12.32	10.61	9.68	472.70	496.38	7.17	7.14	513.10	537.97
To-Book	(0.21)	(0.15)	(0.01)	(0.01)	(0.07)	(0.12)	(0.00)	(0.00)	(0.25)	(0.27)	(0.00)	(0.00)
Cash	-1.97	7.23	-50.81	-32.57	-57.85	-29.74	-2150.69	-2109.50	-40.24	-39.98	-2265.63	-2231.45
Constraints	(0.95)	(0.82)	(0.57)	(0.73)	(0.59)	(0.79)	(0.00)	(0.00)	(0.70)	(0.71)	(0.00)	(0.00)
Carry-	12.72	13.28	-11.91	-9.26	-1.76	1.45	239.32	267.41	47.25	48.74	281.74	312.81
forwards	(0.06)	(0.05)	(0.56)	(0.65)	(0.94)	(0.95)	(0.01)	(0.00)	(0.08)	(0.07)	(0.01)	(0.00)
Dividend	-11.73	-11.03	-46.96	-45.06	-58.00	-55.32	114.34	121.26	-49.38	-47.44	64.36	72.45
Constraints	(0.07)	(0.09)	(0.02)	(0.03)	(0.01)	(0.02)	(0.13)	(0.11)	(0.02)	(0.02)	(0.46)	(0.40)
Annual	-1.30	-1.90	155.02	153.71	153.38	151.37	269.07	264.14	31.38	30.29	319.09	312.05
Return	(0.64)	(0.50)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.02)	(0.03)	(0.00)	(0.00)
Lag Annual	0.68	1.07	64.57	65.67	63.86	65.39	24.24	17.05	-32.84	-30.26	-31.54	-37.40
Return	(0.84)	(0.75)	(0.00)	(0.00)	(0.00)	(0.00)	(0.80)	(0.86)	(0.02)	(0.04)	(0.76)	(0.73)

Table 10**CEO Divorce, Compensation, and the Propensity for Divorce**

Panel A shows the first stage regression of estimating divorce propensity. The propensity of divorce (firm) is taken as the predicted values of divorce estimated by a probit regression of a CEO-divorce-year indicator on CEO tenure, an indicator for the CEO being at or above retirement age (63), the lag of industry (two-digit SIC) adjusted ROA, the lag of firm mean (past three years) adjusted ROA, and two-digit SIC indicators. The propensity of divorce (personal) is taken as the predicted values of divorce estimated by a probit regression of a CEO-divorce-year indicator on CEO age, number of children, a gender indicator, number of previous marriages, generation (proxied by decade of birth), a post-2000 time trend indicator, and state of residence (proxied by state of the CEO's headquarters). Logs of independent variables and industry fixed effects are included in the second column for robustness. Panel B presents results from an OLS regression of compensation variables on indicators for divorce and a proxy for the propensity of CEO divorce from firm-related attributes. Panel C presents a similar set of regressions but the propensity for divorce is constructed from CEO personal attributes. The panel of firm-year data comes from merging CRSP, Compustat, and Execucomp. The dependent variables salary, bonus, cash (salary plus bonus), option value (Black-Scholes value), restricted stock value, and total incentive (option value plus restricted stock value) are taken as reported from Execucomp. Divorce Year, an indicator, represents the year of CEO divorce for a CEO at his firm. Similarly, Year After Divorce and Year 2 After Divorce are indicators that represent the year after and two years after CEO divorce. Full definitions of controls are included in the variable appendix. Two-digit SIC industry controls and year controls were included but not reported. All non-binary variables are Winsorized at the .01 level. Standard errors are clustered by firm. P-values are provided under the marginal effect estimates.

Panel A – First Stage Regressions of Divorce on Expected Determinants of Divorce

Panel A shows the first stage repression of estimating divorce propensity from a probit regression.

	Divorce Indicator	Divorce Indicator
CEO Age	-0.01 (0.00)	
Male CEO Indicator	-0.01 (0.81)	0.01 (0.60)
Number of Children	0.01 (0.13)	
Number of Marriages	0.01 (0.01)	
Pre-year 2000 Indicator	0.01 (0.29)	
CEO Tenure		-0.01 (0.23)
Retirement Age Indicator		0.01 (0.78)
Industry Adj. ROA		-0.01 (0.07)
Firm Adj. ROA		0.01 (0.29)
Industry Fixed Effects	no	yes
Generation Fixed Effects	yes	no
State Fixed Effects	yes	no
Pseudo-R squared	0.074	0.0833
N	20,526	19,532

Panel B – CEO Compensation and the Propensity for Divorce from Firm Attributes

Panel B presents results from an OLS regression of compensation variables on indicators for divorce and a proxy for the propensity of CEO divorce from firm-related attributes.

Variable	Salary	Bonus	Cash	Options	Rest. Stock	Equity Incent.
Divorce Year	34.27 (0.38)	384.44 (0.04)	406.04 (0.05)	1136.31 (0.09)	-58.26 (0.58)	1159.76 (0.13)
Year After Divorce	56.58 (0.02)	330.02 (0.01)	387.46 (0.00)	2175.29 (0.01)	290.06 (0.04)	2442.14 (0.00)
Year 2 After Divorce	72.86 (0.01)	288.76 (0.06)	345.60 (0.03)	1066.62 (0.09)	165.14 (0.26)	1296.99 (0.06)
Divorce Propensity (Firm)	-1108.72 (0.47)	-5494.46 (0.14)	-7241.05 (0.13)	-17008.50 (0.18)	4405.20 (0.20)	-10541.85 (0.47)
Log Sales	142.87 (0.00)	268.39 (0.00)	414.50 (0.00)	946.47 (0.00)	183.23 (0.00)	1181.37 (0.00)
Market-to-Book	0.09 (0.97)	25.92 (0.00)	26.46 (0.00)	664.20 (0.00)	16.97 (0.07)	728.95 (0.00)
Cash Constraints	-52.26 (0.17)	-281.79 (0.02)	-351.30 (0.01)	-3229.64 (0.00)	-100.94 (0.45)	-3447.47 (0.00)
Carry-forwards	9.90 (0.18)	-21.58 (0.36)	-14.08 (0.61)	292.29 (0.01)	34.89 (0.26)	311.10 (0.01)
Dividend Constraints	10.73 (0.14)	15.88 (0.48)	28.39 (0.29)	405.78 (0.00)	-7.06 (0.77)	415.27 (0.00)
Annual Return	4.36 (0.23)	193.71 (0.00)	198.48 (0.00)	380.52 (0.00)	35.23 (0.04)	444.43 (0.00)
Lag Annual Return	3.57 (0.36)	85.40 (0.00)	87.74 (0.00)	-77.68 (0.44)	-32.34 (0.08)	-154.03 (0.16)
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	16,196	16,196	16,196	16,196	16,196	16,196

Panel C – CEO Compensation and the Propensity for Divorce from Personal Attributes

Panel B presents results from an OLS regression of compensation variables on indicators for divorce and a proxy for the propensity of CEO divorce from a model including CEO's personal attributes.

Variable	Salary	Bonus	Cash	Options	Rest. Stock	Equity Incent.
Divorce Year	28.08	328.47	342.81	487.67	-0.79	505.10
	(0.48)	(0.05)	(0.07)	(0.35)	(0.99)	(0.40)
Year After Divorce	62.97	273.29	347.80	1518.38	403.96	2035.12
	(0.03)	(0.02)	(0.01)	(0.06)	(0.01)	(0.01)
Year 2 After Divorce	64.59	191.91	240.21	596.01	172.94	819.24
	(0.01)	(0.18)	(0.10)	(0.30)	(0.22)	(0.20)
Divorce Propensity (Personal)	1707.46	10135.75	11906.81	34577.95	4514.98	40201.92
	(0.07)	(0.00)	(0.00)	(0.00)	(0.31)	(0.00)
Log Sales	133.39	300.65	438.24	920.58	208.54	1182.40
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Market-to-Book	0.99	26.78	27.93	623.85	10.16	676.71
	(0.65)	(0.00)	(0.00)	(0.00)	(0.21)	(0.00)
Cash Constraints	-55.56	-544.80	-625.34	-3562.36	-438.80	-4245.01
	(0.14)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Carry-forwards	7.67	-12.17	-8.46	218.72	50.12	273.60
	(0.30)	(0.63)	(0.77)	(0.03)	(0.13)	(0.02)
Dividend Constraints	-1.44	-18.63	-18.02	345.47	-35.45	305.40
	(0.86)	(0.45)	(0.54)	(0.00)	(0.15)	(0.00)
Annual Return	0.61	187.92	188.63	372.98	41.20	438.93
	(0.87)	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)
Lag Annual Return	0.74	79.07	78.37	31.45	-13.29	-12.16
	(0.84)	(0.00)	(0.00)	(0.76)	(0.47)	(0.91)
Industry Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	19,028	19,028	19,028	19,028	19,028	19,028

APPENDIX E - FIGURES

Figure 1

Figure 1 is a graphical representation of the increase in risk premium following a loss of wealth. R1, the utility lost from gamble XY, increases to R2 as wealth declines.

Figure 2

Figure 2 is a graphical representation of the decrease in diversification after a reduction in outside wealth.

Figure 3
(a) Salary

The residuals of a regression (from Table 2) of CEO salary plotted against the fitted values of the regression.

(b) Bonus

The residuals of a regression (from Table 2) of CEO bonus plotted against the fitted values of the regression.

(c) Options

The residuals of a regression (from Table 2) of CEO option compensation plotted against the fitted values of the regression.

(d) Restricted Stock

The residuals of a regression (from Table 2) of CEO restricted stock grant compensation plotted against the fitted values.

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