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WHAT MATTERS MOST IN CEO COMPENSATION?

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Abstract

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Components of compensation have been analysed in previous studies of corporate financial variables of interest but never together to get a sense of the complete picture of what truly matters. This paper includes variable interactions using the difference-in-differences methodology for panel regressions. Data is collected from Capital IQ, Compustat, CRSP, and ExecuComp for S&P 1500 firms from 2006 to 2013. Inside debt is negatively related to a firm's total risk, idiosyncratic risk, and CEO turnover. Inside debt is positively related to diversification, liquidity, firm value, and return. Overconfidence is negatively related to total risk, liquidity, investment, and firm value. The CEO pay slice is positively related to total risk but negatively related to diversification, liquidity, and firm value. Interactions among these variables lead to an increase in total risk but a decrease in investment, diversification, liquidity, and firm value. Inside debt mitigates CEO risky decision making, whereas CEOs who are overconfident by their option exercise behaviour or their relative compensation to other directors creates a situation where they are encouraged to take on more risk, which, on average, is shown to harm the firm.

Keywords: Inside Debt, Overconfidence, CEO Pay Slice, Risk, Executive Compensation, Incentives

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1. INTRODUCTION

Recent literature in the compensation space has focused on variables that correspond to CEO incentives, including inside debt, overconfidence, and the CEO pay slice. This paper looks at the most recent time when all of this data is available, beginning from 2006 to 2013. An in-depth analysis of theories the literature has already been provided, but this study considers all three together and includes interactions in order to remove potential omitted variable bias in previous studies. The argument of the paper is omitted variable bias in previous studies has occurred since overconfidence is not considered in inside debt and CEO pay slice studies, inside debt is not considered in overconfidence and CEO pay slice studies, and the CEO pay slice is not considered in overconfidence and inside debt studies.

To ensure this study can be performed, the correlation between the variables of interest must be relatively low. They are all correlated under the absolute value of 7%. My regressions take into account all three compensation incentives and include interactions among them in the models. With respect to previous literature, the results are similar to prior findings, but this study attempts to shed light on the interactions among these compensation incentives to see what truly matters. Interactions among these variables lead to an additional positive effect for total risk and additional negative effects for investment, diversification, liquidity, and firm value. My specifications provide insight into a period where publicly available compensation data is provided at a greater accuracy than before. My period from 2006 to 2013 also provides robustness to economic factors resulting from the Great Recession since the sample period starts just before

the crisis and concludes several years after the economy exited the most recent recession.

The remainder of the paper is organized as follows. Section 2 provides a review of the literature to develop testable hypotheses. Section 3 details the methodology and data construction. Section 4 reviews the results of the tests. Section 5 concludes with limitations of the study and future suggestions for research.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The most recent development in the executive compensation space has been with the CEO Pay Slice (CPS). Since they have more responsibility, CEOs receive more pay-performance incentives and aggregate team incentives than oversight executives and divisional executives (Aggarwal & Samwick, 2003). Bebchuk et al. (2010) find that lucky grants, or option grants timed when the CEO could profit the most, are associated with higher levels of pay elsewhere. Bebchuk et al. (2011) also analyse this higher pay with the CPS measure, defined as the percentage of pay the CEO receives relative to the total compensation of the top five executives. They find that CPS has negative associations with firm value, profitability, and stock returns after mergers, which increases the agency cost of equity.

The most developed literature in recent years is from overconfidence. Malmendier and Tate (2005) find that overconfident CEOs make investments that respond more to cash flows. CEOs invest more when funds are available and less when external financing is required. In the case of mergers, these overpaid investments destroy the value of the firm (Malmendier & Tate, 2008), especially since overconfident CEOs have high-risk tolerance (Jiao et al., 2018). It has also shown that portfolio company takeover destroys the value of corporate venture capital shareholders (Benson & Ziedonis, 2010). Yim (2013) finds that overconfidence is only trumped when CEOs engage in successful mergers earlier in their career that ultimately leads to higher compensation for the remaining work life of the CEO. Billett and Quian (2008) find that the first participation in a merger leads to no effect on value but future mergers negatively affect value, which leads to self-attribution bias and overconfidence. These overconfident CEOs also issue less equity than their peers (Malmendier & Tate, 2011) do. These results are further exacerbated if the CEO is male since men are more overconfident than women (Huang & Kisgen, 2012) are. Together, these results show that extreme levels of overconfidence negatively affect the firm. While overconfidence pertains to extreme option-exercising behaviour, Lewellen (2006) finds the agency cost of debt is higher for CEOs with more stock and options. Generally, overconfidence is viewed negatively in the finance and management literature, but why do firms continue to find and hire overconfident CEOs? Hirshleifer et al. (2012) empirically show overconfident CEOs are extremely beneficial to innovative industries where growth opportunities can be exploited. More recent research has shown overconfident CEOs are better leaders in the sense they attract more long-lasting supplier relationships as well as employees who buy more stock in the

company (Phua et al., 2018). According to their abstract, “by being intentionally overexposed to the idiosyncratic risk of their firms, overconfident CEOs exhibit a strong belief in their firms’ prospects”. We will examine this further in the Results section.

Another compensation variable linked to reducing agency problems is CEO inside debt, which analyses the relative debt-to-equity ratio of the CEO’s compensation with the firm’s debt-to-equity ratio. The CEO receives debt in the form of deferred compensation and pension plans and equity in the form of stock and stock options (Rangarajan & Yermack, 2007). CEO inside debt is negatively associated with equity prices and positively associated with bond prices (Wei & Yermack, 2011). Loan yield spreads are lower if a non-commercial bank holds both debt and equity claims as a “dual holder” according to Jiang et al. (2010). Cassell et al. (2012) analyses the CEO inside debt ratio and finds higher inside debt leads to less risky decisions by the CEO in terms of lower volatility, leverage, higher diversification, and liquidity, which reduces the agency cost of debt. However, a recent study by Doukas and Mendal (2018) find compensation is not linked to a risk-reducing activity: hedging. They incorporate inside debt and also test this with CEO Vega and CEO Delta, which I use the ratio of these as a control in my tests alongside the other compensation variables.

Although Bebchuk et al. (2011) uses the CEO Pay Slice to represent a proxy for CEO power, there has been a recent debate about if this is really the case. Bugeja et al. (2017) provide some indirect evidence of an efficient contracting theory whereby firms correct any overpay overtime if the firm does not perform well, and they show new CEOs do not have increasing or higher CPS over time when compared with the outgoing CEO. CPS also does not consider the pay distribution among the other top executives, and it often misestimates CEO power. Zagonov and Salganik-Shoshan (2018) suggest alternatives to supplement CPS, such as pay slice gap and non-CEO highest paid executive pay slice. Although this paper does not directly test these measures, I focus on the aspect that CPS is not enough by itself by including and interacting CPS with variables concerning inside debt and overconfidence. A recent study in the UK found CPS and firm value are negatively related (supporting social comparison theory) when the CEO is not about to retire (Tarkovska, 2017).

With respect to agency costs, Edmans and Liu (2011) theorize inside debt efficiently reduces the agency cost of debt. White (2018) finds agency costs of debt are higher when the CPS is lower with respect to inside debt measured by pensions. Li et al. (2016) show the over-investment hypothesis of agency theory is true with respect to higher CPS yielding more investment in corporate social responsibility (CSR). Similarly, the over-investment hypothesis is true concerning overconfident CEOs and the agency cost of debt is higher when they seek external financing and a turnover occurs (Iyer et al., 2017). Similar results hold in Chinese firms when overconfident CEOs overinvest, leading to higher investment-cash flow sensitivity, higher investment distortion, and higher agency costs (Huang et al., 2011). However, none of these studies considers effects when all three are considered: CPS, inside

debt, and overconfidence demonstrated through stock and option compensation.

Mitigating results should come from mixing compensation packages in the variety of ways discussed above. Generally, inside debt is viewed as reducing firm risk since this incentivizes the CEO with long-term incentives she will not earn if the firm no longer exists. Overconfidence and CPS have been demonstrated to show more CEO power and willingness to take on risk. Thus, this would lead us to believe a compounding effect will occur in situations where the CEO is both overconfident and paid more than other executives. Mitigation of this should occur if inside debt is higher, but Section 4 will describe what actually occurs and which effect dominates or recedes from the others as each piece is considered in turn. These lead to three hypotheses concerning how variety in the compensation package affect agency issues with the firm. See Appendix B for hypothesized variable coefficients.

Hypothesis 1: Higher CPS and higher overconfidence together further increase agency problems.

Hypothesis 2: Higher CPS and higher inside debt mitigate agency problems.

Hypothesis 3: Higher inside debt and higher overconfidence mitigate agency problems.

3. DATA AND METHODOLOGY

CEO compensation data are derived from ExecuComp. Firm financials come from Compustat. Governance measures are calculated using Risk Metrics. Stock prices come from CRSP. Variable descriptions are in Appendix A.

Variables of interest are directly derived from the existing literature. A CEO is considered overconfident if his stock and option behaviour is any of three indicators from Malmendier and Tate (2005). Longholder is CEO holds an option until the last year of its duration. Netbuyer is CEOs were net buyers of company equity during their first five years in the sample. Holder67 is CEOs who at least twice had options that were valued above 67% in the money during the fifth year to rule out information advantage. The CEO Pay Slice (CPS) is defined as the percentage of compensation that the CEO has compared to the top five executives listed in ExecuComp, as defined by Bebchuk et al. (2011).

Finally, the four CEO inside debt variables are all derived from Cassell et al. (2012). CEO relative debt-to-equity (RDE) is the CEO's inside debt holdings to equity holdings ratio divided by the firm's debt-to-equity ratio. The inside debt holdings are calculated as the sum of the present value of the accumulated pension benefits and deferred compensation. Equity holdings are comprised of stock and stock options. Firm debt is equivalent to total current liabilities and long-term debt. Firm equity equals the market value of equity at the end of the fiscal year. Using Wei and Yermack (2011), the CEO relative incentive ratio (RIR) modifies CEO RDE by changing the equity holding values of the CEO and firm by using delta. The CEO's holdings are calculated by multiplying her options by delta; the firm's holdings are multiplied by the average exercise price of options times the number of employee options outstanding with an assumed

remaining life of four years. Options are valued according to the Black-Scholes (1973) option-pricing model. The third debt variable is cash-adjusted (CEO RIRCA). First, the CEO's expected decision horizon is calculated by adding the difference between the industry CEO age and her age and the difference between the industry CEO tenure and her tenure. If negative, use the current cash compensation. If positive, multiply the result by the current cash compensation. This number is added to the inside debt holdings and then follow the same procedure as stated above when constructing CEO RDE. As necessary, the delta is calculated for the various types of options (exercisable, not exercised, and unexercisable). Besides the extreme inside debt indicator variable (CEO RDE > 1), all inside debt ratios are transformed by the natural log.

The summary statistics for the data described are in Table 1. 43.3% of the CEOs in the sample are considered overconfident. The average CEO receives more equity compensation than debt as demonstrated by average negative inside debt ratios transformed by the natural log. Only 15.1% of the CEOs in the sample period receive compensation such that they are heavily incentivized toward debtholder interests. 39% of the top five executive total compensation is paid to the average CEO. Panel B provides the correlation matrix with significant p-values listed below each correlation. The inside debt variables are significantly correlated with each other. Overconfidence is negatively correlated with three of the four inside debt variables; however, the correlations are all under -0.06 so there is little concern for multicollinearity in the regression analysis in Section 4. CPS is not correlated with either inside debt nor overconfidence.

4. EMPIRICAL RESULTS

I follow the literature and analyse the regressions used in Malmendier and Tate (2005), Bebchuk et al. (2011), and Cassell et al. (2012). There are two main differences between the regressions used in these papers and mine. First, I do not include the military and financial education indicators in the Malmendier and Tate (2005) models due to lack of data. Second, all of my models include the three compensation variables of interest and interactions among them in order to fully capture agency issues with the firm variables addressed in each paper. This will fully capture the effects of agency problems caused by or mitigated by the structure of the CEO's compensation package and also provide better models that more robust to the issue of omitted variables. Note all models and regressions described in Section 4 use year and industry controls. All inferences made are based on errors robust to heteroscedasticity and clustered by firm. The paper incorporates original models from the literature to demonstrate the variables are necessary including controlling for other CEO risk-taking and incentives with the CEO vega/delta ratio (Coles et al., 2006). Since this particular period includes the financial crisis, regressions include a dummy variable for the Crisis (2008 and 2009) and report it when it is not dropped out of models since year controls are included throughout all models.

Table 1. Summary statistics*Panel A:* Summary statistics

<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>Std. Dev.</i>
Age	12733	55.021	8.919
Annual Return	12733	0.004	0.186
Abnormal Total Compensation	12733	-74.725	13238.380
Book Value Per Share	12733	15273.940	345687.200
Book Leverage	12733	0.352	1.156
Capital Expenditures / Assets	12733	0.042	0.054
Cash Flow	12446	1670.152	12596.760
CEO Age > 60	12733	0.228	0.420
CEO Outsider	12733	0.003	0.057
CEO Ownership > 20%	12733	0.023	0.151
CEO RDE > 1	12733	0.151	0.359
CEO Vega/Delta	12733	0.004	0.100
Chairman	12733	0.010	0.099
Corporate Governance	12733	0.327	0.684
CEO Pay Slice	12733	0.394	0.121
Debt/Equity	12733	81.557	6182.727
Depression Baby	12733	0.003	0.051
Director Ownership	12733	0.002	0.026
Diversified	12733	0.017	0.129
E-index	12733	1.570	1.550
Entropy	12733	1.600	1.662
Firm Return	12733	0.017	0.118
Founder	12733	0.070	0.254
Idiosyncratic Risk	12733	1.938	2.002
Industry-Adjusted CPS	12733	0.393	0.034
Industry-Adjusted Tobin's Q	12733	1.302	0.405
Investment	12451	560.151	4392.657
Leverage	12733	0.268	1.524
Liquidity Constraint	12733	0.045	0.208
Log (Sales)	12733	7.200	1.898
CEO RIRCA	12733	-1.112	2.805
CEO RIR	12733	-1.522	3.065
CEO RDE	12733	-0.646	2.411
Log (Firm Age)	12733	1.060	1.264
Longholder	12733	0.010	0.102
Market Return	12733	0.017	0.022
M/B	12732	1.480	21.316
Net Buyer	12733	0.429	0.495
Net Debt Issuance	12733	0.009	0.088
Net Financing Deficit	12733	0.053	0.774
# VPs	12733	2.546	1.320
OC CEO	12733	0.433	0.495
Holder67	12733	0.014	0.118
President	12733	0.382	0.486
Profitability	12733	0.103	0.443
R&D	12733	0.086	1.807
R&D/Sales	12733	0.037	0.961
R&D Missing	12733	0.456	0.498
Relative Equity Compensation	12733	0.338	1.548
Return	12733	1.168	84.015
ROA	12733	0.102	0.434
Sales Growth	12669	196.580	10157.620
Size	12733	7.669	2.014
Stock Ownership	12733	0.019	0.057
Tangibility	12733	0.223	0.232
Tenure = 1	12733	0.055	0.228
Tenure = 2	12733	0.108	0.452
Tenure = 3	12733	0.153	0.660
Tenure = 4	12733	0.187	0.845
Tenure = 5	12733	0.217	1.018
Tenure = 6	12733	0.220	1.127
Tenure > 6	12733	1.416	2.548
Tenure Missing	12733	0.431	0.495
Tobin's Q	12733	1.639	1.203
Total Book Leverage	12733	0.391	0.472
Total Risk	12733	1.678	1.810
Vested Options	12733	1208.222	43461.100
Working Capital	12733	0.085	0.392

Panel B: Correlation matrix of variables of interest

	CEO RDE	OC CEO	CPS	CEO RIRCA	CEO RIR	CEO RDE > 1
CEO RDE	1					
OC CEO	-0.057 0***	1				
CPS	0.0083 1	0.0126 1	1			
CEO RIRCA	0.9496 0***	-0.0516 0***	0.0012 1	1		
CEO RIR	0.4717 0***	-0.0604 0***	0.0107 1	0.3802 0***	1	
CEO RDE > 1	-0.0552 0***	-0.0459 0***	0.0224 0.1725	-0.0605 0***	0.3587 0***	1

Table 2. Compensation and total risk

Panel A: Instrumental variable models

	(1) CEO RDE	(2) CEO RDE > 1	(3) CEO RIR	(4) CEO RIRCA
Log (Total Assets)	-0.077*** (0.018)	0.020*** (0.002)	-0.401*** (0.024)	-0.363*** (0.022)
M/B Ratio	0.001 (0.001)	0.000** (0.000)	0.001 (0.001)	0.001 (0.001)
Log (Median D/E)	0.737*** (0.080)	0.114*** (0.009)	-0.069 (0.082)	-0.152** (0.077)
CEO Age	-0.002 (0.002)	0.004*** (0.000)	-0.011*** (0.003)	-0.007*** (0.003)
New CEO	-0.139 (0.126)	-0.040** (0.018)	-0.261* (0.152)	0.620*** (0.136)
Tax Status	-0.034 (0.110)	-0.023 (0.015)	0.943*** (0.130)	1.059*** (0.122)
State Tax Rate	0.064*** (0.018)	-0.000 (0.002)	0.099*** (0.019)	0.085*** (0.018)
Constant	0.113*** (0.018)	-0.005** (0.002)	0.303*** (0.026)	0.318*** (0.026)
Observations	12,476	12,476	12,476	12,476
Adjusted R ²	0.013	0.037	0.069	0.049

Panel B: Total risk 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	-0.341*** (0.076)				-1.970*** (0.614)			
CEO RDE > 1		-2.051*** (0.354)				-2.742*** (0.496)		
CEO RIR			0.064 (0.079)				-0.617*** (0.206)	
CEO RIRCA				0.274*** (0.073)				-0.146 (0.132)
Overconfident CEO					-0.134 (0.166)	-0.202** (0.083)	-0.079 (0.099)	-0.172** (0.076)
CEO Pay Slice					1.608*** (0.621)	0.445*** (0.172)	1.019*** (0.379)	0.122 (0.192)
OC*CPS					1.264** (0.532)	0.263 (0.161)	0.700*** (0.263)	0.347** (0.171)
OC*Inside Debt					0.672*** (0.219)	0.047 (0.030)	0.195*** (0.071)	0.036 (0.047)
CPS*Inside Debt					3.650*** (1.201)	0.379*** (0.086)	1.142*** (0.372)	0.311 (0.240)
Observations	12,384	12,384	12,384	12,384	12,384	12,384	12,384	12,384
Adjusted R ²	0.015	0.039	0.091	0.041	0.000	0.021	0.005	0.083

Panel C: Total risk 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	-0.312*** (0.067)				-1.791*** (0.552)			
CEO RDE > 1		-1.899*** (0.313)				-2.540*** (0.442)		
CEO RIR			0.078 (0.070)				-0.458*** (0.173)	
CEO RIRCA				0.240*** (0.063)				-0.104 (0.117)
Overconfident CEO					-0.105 (0.151)	-0.167** (0.075)	-0.075 (0.084)	-0.143** (0.067)
CEO Pay Slice					1.429** (0.556)	0.382*** (0.146)	0.748** (0.316)	0.068 (0.168)
OC*Inside Debt					0.607*** (0.197)	0.039 (0.027)	0.140** (0.060)	0.021 (0.041)
CPS*Inside Debt					3.330*** (1.080)	0.363*** (0.078)	0.885*** (0.312)	0.265 (0.211)
OC*CPS					1.042** (0.478)	0.132 (0.139)	0.461** (0.209)	0.197 (0.141)
Observations	12,384	12,384	12,384	12,384	12,384	12,384	12,384	12,384
Adjusted R ²	0.092	0.138	0.216	0.151	0.000	0.104	0.112	0.212

Panel D: Idiosyncratic risk 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	-0.438*** (0.094)				-2.589*** (0.793)			
CEO RDE > 1		-2.724*** (0.435)				-3.662*** (0.615)		
CEO RIR			0.139 (0.097)				-0.678*** (0.249)	
CEO RIRCA				0.352*** (0.086)				-0.168 (0.167)
Overconfident CEO					-0.149 (0.214)	-0.239** (0.097)	-0.094 (0.112)	-0.192** (0.085)
CEO Pay Slice					1.871** (0.796)	0.355* (0.196)	0.936** (0.449)	-0.062 (0.230)
OC*Inside Debt					0.884*** (0.283)	0.063 (0.039)	0.216** (0.086)	0.050 (0.059)
CPS*Inside Debt					4.807*** (1.553)	0.516*** (0.109)	1.325*** (0.448)	0.427 (0.301)
OC*CPS					1.509** (0.683)	0.193 (0.181)	0.687** (0.296)	0.308 (0.187)
Observations	12,384	12,384	12,384	12,384	12,384	12,384	12,384	12,384
Adjusted R ²	0.019	0.057	0.143	0.075	0.000	0.027	0.024	0.136

Panel E: Idiosyncratic risk 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	-0.295*** (0.060)				-1.562*** (0.490)			
CEO RDE > 1		-1.774*** (0.278)				-2.347*** (0.394)		
CEO RIR			0.089 (0.063)				-0.342** (0.165)	
CEO RIRCA				0.200*** (0.057)				-0.076 (0.107)
Overconfident CEO					-0.142 (0.136)	-0.198*** (0.075)	-0.125 (0.081)	-0.177*** (0.069)
CEO Pay Slice					1.291*** (0.496)	0.402*** (0.142)	0.587** (0.296)	0.078 (0.159)
OC*Inside Debt					0.533*** (0.175)	0.040 (0.025)	0.106* (0.058)	0.015 (0.039)
CPS*Inside Debt					2.898*** (0.956)	0.328*** (0.068)	0.657** (0.291)	0.189 (0.192)
OC*CPS					1.042** (0.426)	0.250* (0.147)	0.491** (0.199)	0.293** (0.148)
Observations	12,384	12,384	12,384	12,384	12,384	12,384	12,384	12,384
Adjusted R ²	0.120	0.158	0.223	0.184	0.000	0.131	0.165	0.226

Table 2 provides regressions concerning compensation and total risk, defined as the volatility of daily firm returns from the current year. Panel A provides original baseline instrumental variable regressions. Cassell et al. (2012) describe and use this model as a test for endogeneity since CEO inside debt is jointly determined and dependent on CEO and firm characteristics as well as taxes (potential positive impact on the individual tax bill if they defer compensation in certain states and retirement situations) and industry practices. In the remaining regressions, the inside debt variables used are the instrumented ones.

Panel B defines total risk as the volatility of daily firm returns from the current year. Columns 1-4 provide baseline regressions given different definitions of inside debt. Columns 5-7 use instrumental variable regressions where inside debt is regressed on median inside debt levels, CEO age, tax status, and whether the firm made a profit or loss. Errors in brackets are robust to heteroscedasticity and clustered by firm. Significance is depicted by stars at the 10% (*), 5% (**), and 1% (***) levels. Inside debt remains negative and significant in three of the four models. Overconfidence is negative and significant in two models, which is contrary to the findings of Phua et al. (2018). Once again, this may be due to the inclusion of financials and utilities and due to the sample period occurring immediately following the

Great Recession. The CEO Pay Slice is positive and significant in three of the four models. Each model has at least one interaction that is positive and significant. When computing all of the values together with Model 8, an overconfident CEO increases risk by 0.367%. This is mainly due to CPS offsetting the negative significance of overconfidence alone; thus, a higher CPS dominates the other compensation variables in this particular consideration of risk.

Panel C defines total risk as the volatility of daily firm returns from the prior year. Panel D provides regressions of idiosyncratic risk, which is the volatility of daily firm residuals from the market model from the current year. Panel E provides regressions of idiosyncratic risk from the prior year. Panels C, D, and E provide similar results. The interactions with inside debt and the other variables of interest (overconfidence and CPS) are positive, which is consistent with Hypothesis 1. Thus, overconfident CEOs and a higher CPS increase firm risk. One interesting note is Crisis is negative and significant, which seems counterintuitive. However, the most recent Great Recession was of historic proportions and led to many behaviours and movements never seen before. Therefore, it is quite plausible this indicator is signalling this type of concern in the market could lead firms to behave less irrational and seek safety; in other words, they would become less risky during the period of risk

and be riskier during periods of less concern. This is an area for future research to see how managers react to situations post-Great Recession to see if these results still hold or if a paradigm shift has occurred.

Table 3. Compensation effects on investment*Panel A: R&D/Sales 1*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	0.027*** (0.006)				0.086** (0.041)			
CEO RDE > 1		0.001 (0.055)				-0.090 (0.092)		
CEO RIR			0.070*** (0.023)				0.037*** (0.012)	
CEO RIRCA				0.048*** (0.019)				0.023*** (0.009)
Overconfident CEO					0.012 (0.016)	0.012 (0.014)	0.007 (0.017)	0.011 (0.015)
CEO Pay Slice					-0.109*** (0.038)	-0.018 (0.015)	-0.096*** (0.026)	-0.059*** (0.020)
OC*Inside Debt					-0.027* (0.014)	0.004* (0.002)	-0.011** (0.005)	-0.006** (0.003)
CPS*Inside Debt					-0.157** (0.077)	0.015 (0.013)	-0.063*** (0.022)	-0.038** (0.016)
OC*CPS					-0.063** (0.031)	-0.017 (0.028)	-0.046* (0.026)	-0.033 (0.028)
Observations	12,384	12,384	12,384	12,384	12,384	12,384	12,384	12,384
Adjusted R ²	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Panel B: R&D/Sales 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	-0.010 (0.052)				-0.109 (0.292)			
CEO RDE > 1		-0.560 (0.358)				-1.023* (0.542)		
CEO RIR			0.202** (0.090)				0.216 (0.154)	
CEO RIRCA				0.197** (0.096)				0.213 (0.134)
Overconfident CEO					0.104 (0.065)	0.089 (0.062)	0.042 (0.048)	0.054 (0.043)
CEO Pay Slice					0.684 (0.482)	0.786* (0.475)	0.270 (0.379)	0.406 (0.376)
OC*Inside Debt					0.040 (0.097)	0.019 (0.014)	-0.082 (0.056)	-0.090 (0.059)
CPS*Inside Debt					0.199 (0.547)	0.141* (0.082)	-0.343 (0.265)	-0.316 (0.208)
OC*CPS					-0.518 (0.372)	-0.564* (0.338)	-0.715* (0.403)	-0.687* (0.383)
Observations	12,363	12,363	12,363	12,363	12,363	12,363	12,363	12,363
Adjusted R ²	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Panel C: Investment

	(1)	(2)	(3)	(4)	(5)
Overconfident CEO	-121.927* (73.592)	-21.114 (95.211)	-71.849 (99.644)	-61.963 (102.053)	-56.825 (98.172)
OC*CF	0.081** (0.041)	0.081** (0.041)	0.082** (0.041)	0.081** (0.041)	0.081** (0.041)
CEO RDE		-3.799 (10.993)			
CEO RDE > 1			-194.664** (97.186)		
CEO RIR				6.582 (9.351)	
CEO RIRCA					4.449 (7.951)
CEO Pay Slice		71.847 (200.541)	70.256 (215.468)	90.952 (213.753)	84.454 (207.887)
OC*Inside Debt		22.082 (14.235)	217.814* (114.347)	-13.691 (10.592)	-14.230 (10.155)
CPS*Inside Debt		-3.869 (16.417)	101.575 (140.441)	17.782 (19.551)	19.931 (18.616)
OC*CPS		-256.365 (172.601)	-258.735 (173.178)	-245.415 (168.043)	-246.112 (168.564)
Crisis		-44.911 (92.755)	-49.944 (91.771)	-40.414 (91.301)	-39.905 (91.679)
Constant	-184.719** (82.808)	-239.313*** (92.568)	-236.479** (98.660)	-263.256** (103.116)	-255.304** (99.509)
Observations	12,164	12,164	12,164	12,164	12,164
Adjusted R ²	0.495	0.495	0.495	0.495	0.495

Table 3 provides models of compensation and investment. This table provides an analysis of compensation variables with respect to investment. Panel A uses current research and development expense scaled by net sales as its dependent variable. In three of the four new models, inside debt is positive and significant. This is the exact opposite finding of Cassell et al. (2012), and this may be a by-product of this paper having more data and including financials and utilities to include a larger sample. In addition, their sample occurred right before and during the financial crisis. Overconfidence is negative and significant only in interactions. CPS is negative and significant in three models. Using Model 8, an overconfident CEO affects investment only by 0.3%. Thus, only inside debt and

CPS play a role. Higher inside debt increases investment, whereas higher CPS reduces investment.

Panel B defines investment as prior year research and development expense over sales. Results are not significant in Panel B with lagged R&D. Panel C defines investment as current year capital expenditure divided by common stock. Using the investment model from Malmendier and Tate (2005), we see no significant effects except for Model 3 in extreme cases of inside debt. Thus, in general, the results are not conclusive regarding incentive structures around investment in times of crisis, although there is some evidence according to the current models suggesting from the interactions the amount falls in the presence of overconfidence and higher compensation relative to other executives.

Table 4. Compensation and diversification

Panel A: Entropy 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	0.088* (0.051)				0.561* (0.298)			
CEO RDE > 1		0.616** (0.306)				0.806** (0.393)		
CEO RIR			-0.015 (0.034)				0.605*** (0.138)	
CEO RIRCA				0.023 (0.030)				0.460*** (0.100)
Overconfident CEO					0.001 (0.065)	0.021 (0.056)	-0.078 (0.080)	-0.019 (0.067)
CEO Pay Slice					-0.445* (0.238)	-0.119 (0.080)	-1.014*** (0.261)	-0.487*** (0.158)
OC*Inside Debt					-0.181* (0.101)	-0.003 (0.008)	-0.187*** (0.049)	-0.136*** (0.037)
CPS*Inside Debt					-1.033* (0.565)	-0.106* (0.057)	-1.093*** (0.247)	-0.840*** (0.181)
OC*CPS					-0.340 (0.217)	-0.056 (0.068)	-0.498*** (0.191)	-0.349** (0.139)
Observations	12,384	12,384	12,384	12,384	12,384	12,384	12,384	12,384
Adjusted R ²	0.040	0.042	0.045	0.045	0.005	0.039	0.000	0.011

Panel B: Entropy 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	0.081 (0.050)				0.500* (0.291)			
CEO RDE > 1		0.560* (0.303)				0.757* (0.396)		
CEO RIR			-0.034 (0.032)				0.532*** (0.125)	
CEO RIRCA				-0.028 (0.030)				0.385*** (0.088)
Overconfident CEO					-0.082 (0.130)	-0.064 (0.133)	-0.155 (0.144)	-0.094 (0.136)
CEO Pay Slice					-0.662*** (0.207)	-0.378*** (0.108)	-1.152*** (0.250)	-0.676*** (0.177)
OC*Inside Debt					-0.171* (0.096)	-0.013* (0.007)	-0.170*** (0.044)	-0.118*** (0.032)
CPS*Inside Debt					-0.907 (0.556)	-0.084 (0.065)	-0.952*** (0.228)	-0.702*** (0.160)
OC*CPS					-0.022 (0.410)	0.232 (0.281)	-0.158 (0.334)	-0.019 (0.302)
Observations	12,384	12,384	12,384	12,384	12,384	12,384	12,384	12,384
Adjusted R ²	0.062	0.064	0.065	0.066	0.024	0.061	0.010	0.036

Compensation and diversification are next. Panel A defines diversification as the current year proportion of industry sales transformed by the natural log. Panel B defines diversification as the previous year proportion of industry sales transformed by the natural log. Inside debt is positive and significant in the last four models. Overconfidence only plays a role in the interactions.

CPS is negative and significant by itself and in the interactions. According to Model 6, an overconfident CEO contributes 0.619% to diversified sales, with the majority coming from the model's constant term. Thus, CEOs with more inside debt diversify sales more, but overconfident CEOs paid more than the rest of upper management diversify sales less. The story holds with higher CPS too. Thus, H2 and H3 do

not hold in this case for diversification. The use of inside debt fails to mitigate in the case of diversification. Panel B defines diversification as the previous year proportion of industry sales transformed by the natural log. Similar results are shown in Panel B.

Table 5. Compensation and liquidity

Panel A: Working capital 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	0.056*** (0.014)				0.159** (0.075)			
CEO RDE > 1		0.051 (0.063)				-0.107 (0.082)		
CEO RIR			0.143*** (0.026)				0.213*** (0.045)	
CEO RIRCA				0.083*** (0.014)				0.150*** (0.034)
Overconfident CEO					-0.011 (0.015)	-0.010 (0.011)	-0.042** (0.021)	-0.020 (0.016)
CEO Pay Slice					-0.128** (0.063)	0.029 (0.031)	-0.330*** (0.085)	-0.143** (0.058)
OC*Inside Debt					-0.053** (0.026)	0.003 (0.003)	-0.068*** (0.016)	-0.047*** (0.012)
CPS*Inside Debt					-0.280** (0.142)	0.031*** (0.012)	-0.353*** (0.081)	-0.242*** (0.062)
OC*CPS					-0.115* (0.066)	-0.031 (0.029)	-0.184*** (0.066)	-0.124*** (0.044)
Observations	12,384	12,384	12,384	12,384	12,384	12,384	12,384	12,384
Adjusted R ²	0.372	0.463	0.002	0.290	0.252	0.464	0.081	0.282

Panel B: Working capital 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	0.192 (0.236)				0.591 (1.128)			
CEO RDE > 1		0.488 (0.951)				0.313 (1.090)		
CEO RIR			0.291* (0.174)				0.227 (0.375)	
CEO RIRCA				0.151* (0.086)				0.048 (0.238)
Overconfident CEO					-0.114 (0.146)	-0.100 (0.115)	-0.151 (0.195)	-0.091 (0.144)
CEO Pay Slice					-0.709 (0.919)	-0.262 (0.215)	-0.569 (0.591)	-0.271 (0.244)
OC*Inside Debt					-0.227 (0.388)	-0.031 (0.028)	-0.091 (0.134)	-0.020 (0.086)
CPS*Inside Debt					-1.042 (2.113)	0.011 (0.174)	-0.365 (0.687)	-0.076 (0.436)
OC*CPS					-0.278 (0.626)	0.028 (0.298)	-0.138 (0.400)	-0.018 (0.347)
Observations	12,377	12,377	12,377	12,377	12,377	12,377	12,377	12,377
Adjusted R ²	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Panel C: Leverage

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	-0.046*** (0.014)				-0.271** (0.107)			
CEO RDE > 1		-0.331*** (0.070)				-0.445*** (0.098)		
CEO RIR			0.042** (0.017)				-0.157*** (0.038)	
CEO RIRCA				0.059*** (0.016)				-0.081*** (0.027)
Overconfident CEO					-0.016 (0.024)	-0.027* (0.016)	0.003 (0.019)	-0.018 (0.016)
CEO Pay Slice					0.181* (0.097)	0.034 (0.042)	0.208*** (0.076)	0.037 (0.062)
OC*Inside Debt					0.095** (0.038)	0.010*** (0.004)	0.052*** (0.014)	0.026*** (0.009)
CPS*Inside Debt					0.487** (0.207)	0.045*** (0.015)	0.266*** (0.069)	0.135*** (0.049)
OC*CPS					0.173* (0.098)	0.036 (0.044)	0.148** (0.064)	0.086** (0.042)
Observations	12,384	12,384	12,384	12,384	12,384	12,384	12,384	12,384
Adjusted R ²	0.488	0.476	0.454	0.407	0.116	0.439	0.318	0.486

Panel D: Leverage 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO RDE	-0.181 (0.236)				-0.530 (1.128)			
CEO RDE > 1		-0.466 (0.953)				-0.292 (1.097)		
CEO RIR			-0.244 (0.176)				-0.175 (0.379)	
CEO RIRCA				-0.120 (0.089)				0.024 (0.243)
Overconfident CEO					0.069 (0.146)	0.057 (0.116)	0.095 (0.195)	0.039 (0.145)
CEO Pay Slice					0.601 (0.923)	0.203 (0.236)	0.449 (0.593)	0.153 (0.248)
OC*Inside Debt					0.202 (0.388)	0.027 (0.028)	0.071 (0.135)	-0.007 (0.088)
CPS*Inside Debt					0.930 (2.113)	-0.011 (0.175)	0.295 (0.695)	-0.030 (0.447)
OC*CPS					0.316 (0.628)	0.042 (0.305)	0.178 (0.410)	0.049 (0.356)
Observations	12,377	12,377	12,377	12,377	12,377	12,377	12,377	12,377
Adjusted R ²	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Panel E: Book leverage

	(1)	(2)	(3)	(4)	(5)
CEO RDE		-0.014*** (0.005)			
CEO RDE > 1			-0.133*** (0.026)		
CEO RIR				-0.010** (0.005)	
CEO RIRCA					-0.012*** (0.004)
CEO Pay Slice		-0.036 (0.053)	-0.048 (0.058)	-0.050 (0.056)	-0.049 (0.056)
Overconfident CEO	0.009 (0.017)	-0.010 (0.021)	-0.016 (0.021)	-0.004 (0.023)	-0.002 (0.021)
OC*Inside Debt		0.004 (0.006)	0.016 (0.042)	0.006 (0.006)	0.009 (0.006)
CPS*Inside Debt		0.003 (0.010)	0.171** (0.073)	-0.009 (0.008)	-0.013* (0.008)
OC*CPS		0.061 (0.053)	0.063 (0.053)	0.061 (0.052)	0.058 (0.052)
Observations	12,449	12,449	12,449	12,449	12,449
Adjusted R ²	0.000	0.000	0.000	0.000	0.000

Compensation and liquidity are considered next. This table provides an analysis of compensation variables with respect to liquidity. Panel A defines liquidity as the current year current assets less current liabilities, i.e., the current working capital. In three of the four models, inside debt is positive and significant. Overconfidence remains negative but only significant in its term by itself once and consistently negative and significant in the interactions. CPS is negative and significant in the majority of the models. Panel B defines liquidity as the previous year current assets less current liabilities. Significance falls away in Panel B. Panel C defines leverage as the current long-term debt scaled by assets. Panel C yields the opposite results for inside debt and CPS. Panel D defines liquidity as the prior long-term debt scaled by assets. Once again, in Panel D, the significance goes away. Panel E defines liquidity as the prior year's sum of total long-term liabilities and total current liabilities scaled by the numerator plus stockholder's equity. Panel E only

has negative significance for inside debt. Thus, when considering liquidity through the lens of short-term capital, inside debt is positively related and CPS is negatively related. When considering liquidity through the lens of long-term capital, the result only remains significant for inside debt, but the result is flipped: inside debt tends to reduce leverage in the long-term.

Net financing deficit, defined as dividends plus the change in inventory plus the change in net working capital less net income scaled by total assets, is considered next in Table 6. The first model provides the baseline from Malmendier and Tate (2005) with the subsequent Models 2-5 adding in the various interaction terms. I find that two of the four models (Models 3 and 5) have positive significance with the overconfidence and inside debt indicator. In all models, overconfidence and the net financing deficit interaction term are positive and significantly correlated at the 1% level. Thus, overconfidence is the main driver of the net financing deficit.

Table 6. Compensation and net financing deficit

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Overconfident CEO	-0.043*** (0.010)	-0.009 (0.035)	-0.014 (0.036)	-0.006 (0.036)	-0.006 (0.035)
CEO RDE		0.001 (0.002)			
CEO RDE > 1			0.007 (0.034)		
CEO RIR				-0.004 (0.004)	
CEO RIRCA					-0.004 (0.003)
CPS		0.046 (0.052)	0.059 (0.053)	0.054 (0.054)	0.050 (0.052)
OC*Inside Debt		0.000 (0.002)	0.035*** (0.013)	0.003 (0.002)	0.004** (0.002)
CPS*Inside Debt		0.000 (0.005)	-0.082 (0.050)	0.008 (0.006)	0.007 (0.005)
OC*CPS		-0.102 (0.079)	-0.106 (0.081)	-0.100 (0.078)	-0.100 (0.079)
OC*NFD	0.985*** (0.011)	0.984*** (0.011)	0.985*** (0.011)	0.985*** (0.011)	0.985*** (0.011)
Observations	12,449	12,449	12,449	12,449	12,449
Adjusted R ²	0.116	0.116	0.116	0.116	0.116

Table 7. Compensation and firm value

	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
	<i>CEO Pay Slice</i>	<i>Ind-Adj Tobin's Q</i>	<i>Ind-Adj Tobin's Q</i>	<i>Ind-Adj Tobin's Q</i>	<i>Ind-Adj Tobin's Q</i>	<i>Ind-Adj Tobin's Q</i>
CEO Pay Slice		-0.112*** (0.024)	-0.137*** (0.030)	-0.136*** (0.031)	-0.147*** (0.031)	-0.141*** (0.030)
CEO RDE			0.005*** (0.001)			
CEO RDE > 1				-0.013* (0.007)		
CEO RIR					0.008*** (0.001)	
CEO RIRCA						0.008*** (0.001)
Overconfident CEO			-0.018** (0.007)	-0.019*** (0.007)	-0.015** (0.007)	-0.016** (0.007)
OC*Inside Debt			-0.000 (0.001)	0.000 (0.006)	0.000 (0.001)	0.000 (0.001)
CPS*Inside Debt			-0.012*** (0.002)	0.024 (0.021)	-0.017*** (0.003)	-0.017*** (0.003)
OC*CPS			0.061*** (0.021)	0.067*** (0.022)	0.057*** (0.021)	0.058*** (0.021)
Observations	12,449	12,449	12,449	12,449	12,449	12,449
Adjusted R ²	0.470	0.746	0.748	0.746	0.748	0.748

Firm value, defined as industry-adjusted Tobin's Q, is considered in Table 7. Model 1 demonstrates the CPS instrumented variable regression. Model 2 is the original baseline. Models 3-6 are the models with the additional interactions. CPS is negative and significant throughout. Overconfidence is negative and significant. Besides

CEO RDE > 1, inside debt is positive and significant. With respect to the interactions, CPS and inside debt are negative and significant, but CPS and overconfidence are positive and significant, suggesting the two mitigate each other in this instead of exacerbating each other.

Table 8. Compensation and ROA*Panel A: ROA 1*

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
CPS	-0.140 (0.122)	-0.193 (0.170)	-0.205 (0.177)	-0.201 (0.176)	-0.195 (0.171)
CEO RDE		0.005 (0.004)			
CEO RDE > 1			-0.025 (0.032)		
CEO RIR				0.011* (0.006)	
CEO RIRCA					0.012* (0.006)
Overconfident CEO		-0.046 (0.036)	-0.049 (0.038)	-0.042 (0.034)	-0.043 (0.035)
OC*Inside Debt		0.000 (0.002)	0.013 (0.013)	0.000 (0.002)	0.001 (0.002)
CPS*Inside Debt		-0.005 (0.006)	0.094 (0.080)	-0.013 (0.010)	-0.010 (0.008)
OC*CPS		0.133 (0.119)	0.136 (0.122)	0.127 (0.116)	0.131 (0.118)
Observations	12,449	12,449	12,449	12,449	12,449
Adjusted R ²	0.000	0.000	0.000	0.000	0.000

Panel B: ROA 2

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
CPS	-0.295 (0.236)	-0.411 (0.334)	-0.453 (0.367)	-0.417 (0.340)	-0.402 (0.329)
CEO RDE		0.007 (0.005)			
CEO RDE > 1			-0.054 (0.053)		
CEO RIR				0.014* (0.008)	
CEO RIRCA					0.014* (0.008)
Overconfident CEO		-0.088 (0.067)	-0.096 (0.073)	-0.081 (0.063)	-0.082 (0.064)
OC*Inside Debt		0.000 (0.002)	0.011 (0.013)	0.001 (0.002)	0.001 (0.002)
CPS*Inside Debt		-0.012 (0.011)	0.192 (0.154)	-0.023 (0.017)	-0.017 (0.014)
OC*CPS		0.266 (0.219)	0.286 (0.236)	0.252 (0.211)	0.254 (0.211)
Observations	12,449	12,449	12,449	12,449	12,449
Adjusted R ²	0.000	0.000	0.000	0.000	0.000

Following Bebchuk et al. (2011), I analyse compensation effects on return using return on assets (ROA), defined as net income scaled by total assets. Panel A provides models using current ROA. I only find a significant positive effect for inside debt after adjusting for the CEO's expected decision horizon. None of the interactions among the

compensation variables are significant. Panel B, which uses lagged ROA, provides similar results. Thus, the net effect of the compensation incentives shows that inside debt (when considering cash-adjusted compensation) positively affects firm return in the form of higher ROA.

Table 9. Compensation and CEO turnover

	(1)	(2)	(3)	(4)	(5)
CEO RDE		-0.111 (0.163)			
CEO RDE > 1			-4.056* (2.100)		
CEO RIR				-0.040 (0.188)	
CEO RIRCA					-0.050 (0.183)
CEO Pay Slice	0.336 (1.383)	0.559 (1.272)	-0.581 (1.551)	0.299 (1.380)	0.242 (1.278)
CPS*Inside Debt		0.256 (0.437)	9.043** (3.822)	-0.004 (0.504)	-0.039 (0.491)
Stock Return * CPS	-30.795 (46.982)	-15.945 (50.191)	-5.757 (50.763)	-18.897 (50.364)	-18.901 (50.738)
Firm Return * CPS	21.275 (57.782)	6.568 (60.694)	-3.081 (60.854)	8.654 (60.259)	8.648 (60.646)
Market Return * CPS	12.040 (54.128)	-6.323 (60.289)	-34.530 (61.631)	-4.819 (58.942)	-5.538 (58.375)
Observations	2,262	1,425	1,425	1,425	1,425
Pseudo R ²	0.286	0.271	0.285	0.271	0.271

Finally, CEO turnover, which indicates if there was a change in the CEO position of a firm within the past year, is considered using logistic regressions. Model 1 provides the original baseline regression for the instrumented CPS that is used in the remaining models. The overconfidence indicator and crisis indicator were included in the regressions but both were dropped due to multicollinearity with the CEO turnover indicator. The only significance occurred with Model 3 with negative significance with CEO RDE > 1 and the interaction between CPS and inside debt was positive and significant. Thus, extreme inside debt reduced the likelihood of turnover by almost 50% (when comparing magnitudes with the constant), but a higher CPS

doubled the likelihood of turnover and cancelled out this effect. Interestingly, the CPS in the baseline model was neither negative nor significant.

5. CONCLUSION

Considering other variables in corporate finance research is necessary to complete the picture of how the firm is affected by CEO compensation incentives. Inside debt is negatively related to a firm's total risk, idiosyncratic risk, and CEO turnover and positively related to diversification, liquidity, firm value, and return. Overconfidence is negatively related to total risk, liquidity, and firm value and positively related to investment. The CEO pay slice is positively related

to total risk and CEO turnover and negatively related to investment, diversification, liquidity, and firm value. Interactions among these variables are positively related to total risk and negatively related to investment, diversification, liquidity, and firm value. Overall, agency costs are more likely to increase as the CEO pay slice increases and if the CEO is overconfident. However, in a time of crisis, the total risk of the firm will decline if the proper compensation package is used and it turns out the CEO is overconfident. This may be another reason (besides innovation) why firms continue to want and hire overconfident executives. They are timely and good in not only times of wanted growth but also in times of dire need or crisis as demonstrated by some evidence in this paper. It is also more likely to increase as the percentage of CEO inside debt relative to the firm declines.

This research does have limitations that may provide interesting studies in the future. First, military information was not available for CEOs but was used in the Malmendier and Tate (2005) study. Another paper could relook at these effects and consider this type of experience with regards to overconfidence and the other compensation

variables. Specifically, attempt to answer the question if military experiences affect compensation packages and if they are different than the non-military CEO population. Second, this study focuses on U.S. data and does not consider the issues from an international context. A future paper could consider international environments similar to the U.S. to see if the results hold. Lastly, I exclusively focus on CPS instead of other alternatives, such as the pay slice gap or non-CEO highest paid executive pay slice. It would be interesting to see how overconfident CEOs' pay structures vary with these structures and if the gap is larger or smaller when controlling for inside debt.

In conclusion, inside debt mitigates the risky decision making of a CEO, whereas CEOs who are deemed overconfident by their option exercise behaviour or their relative compensation to other directors creates a situation where they are encouraged to take on more risk (in the presence of higher CPS), which is shown to harm the firm. Future research should further analyse the compensation package to determine what is optimal and look at these effects after the litigation changes resulting from the financial crisis.

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Appendix A. Variable definitions

Variable	Definition
Age	CEO age in given year
Annual Return	$\ln(\text{stock return} + 1)$
Abnormal Total Compensation	Regression residual of total executive compensation on the lag of book value + year & industry fixed effects
Book Value Per Share	Stockholder's equity / common shares outstanding
Capital Expenditures / Assets	Capital expenditures / total assets
Cash Flow	Operating income before depreciation / common stock
Cash Surplus	Net cash flow from operations less depreciation expense plus research and development expenses, scaled by total assets
CEO Age > 60	CEO's age > 60
CEO Outsider	CEO, not an employee 2 years before becoming CEO
CEO Ownership > 20%	CEO's stock ownership > 20%
CEO RDE > 1	CEO RDE > 1
CEO Vega/Delta	Option sensitivity to changes in the stock volatility/option sensitivity to changes in the stock price
Chairman	CEO = Chairman
Corporate Governance	# outside CEO-directors on the board
CEO Pay Slice	Total CEO compensation / the total executive compensation of the top 5 executives
Debt/Equity	$(\text{Long-term debt} + \text{current liabilities}) / \text{total stockholder's equity}$
Depression Baby	CEO born in the 1920s
Director Ownership	Total stock ownership of directors / total common equity
Diversified	The firm has multiple sale segments
E-index	Governance index from Bebchuk, Cohen, and Ferrell (2009)
Entropy	Natural log of the inverse of the sum of segment proportions
Firm Return	Firm daily return - value-weighted market return
Founder	CEO is a company founder
Idiosyncratic Risk	The standard deviation of firm annual stock returns
Industry-Adjusted CPS	Median CPS of a firm's industry, classified by two-digit SIC
Industry-adjusted Tobin's Q	Median Tobin's Q of a firm's industry, classified by two-digit SIC
Investment	Capital expenditures / common stock
Leverage	Long-term debt / total assets
Liquidity Constraint	Net income < 0
Log (Sales)	$\ln(\text{net sales})$
CEO RIRCA	$\ln[(\text{CEO RIR} * \text{CEO's expected decision horizon})]$, where the CEO's expected decision horizon = $(\text{CEO age} - \text{industry median CEO age}) - (\text{CEO tenure} - \text{industry median CEO tenure})$
CEO RIR	$\ln[(\text{pension value} + \text{deferred compensation}) / (\text{market value of stock owned} * \text{option value calculated with delta})] / [(\text{current liabilities} + \text{long-term debt}) / (\text{employee average option price} * \text{total employee options owned})]$
CEO RDE	$\ln[(\text{pension value} + \text{deferred compensation}) / (\text{option value} + \text{stock value})] / [(\text{current liabilities} + \text{long-term debt}) / (\text{common shares outstanding} * \text{fiscal-year end stock price})]$
Log (Firm Age)	$\ln(\text{Company age})$ from Compustat
Longholder	CEO holds an option 40% in the money in its final year before expiration
Market Return	Value-weighted market return
M/B	End-of-the-year fiscal stock price * common shares outstanding / stockholder's equity
Net Buyer	CEO buys more stock in a given year than sells
Net Debt Issuance	$(\text{Total debt issued} - \text{total debt reduction}) / \text{by total assets}$
Net Financing Deficit	$(\text{Dividends} + \text{change in inventory} + \text{change in net working capital} - \text{net income}) / \text{total assets}$
# VPs	Number of Vice Presidents in the firm
OC CEO	CEO is either a longholder, a holder67, or a net buyer
Holder67	CEO holds an option 67% in the money 5 years before expiration
President	CEO = President
Profitability	Operating income before depreciation / net income
R&D	Research and development expense
R&D/Sales	R&D / net sales
R&D Missing	R&D expense missing
Relative Equity Compensation	$(\text{Unvested stock value} + \text{option awards}) / \text{total compensation of the top 5 executives}$
Return	Daily stock return
ROA	Operating income before depreciation / net income
Sales Growth	% change in yearly net sales
Size	$\ln(\text{total assets})$
Stock Ownership	% shares owned excluding options
Tangibility	$(\text{PPE} - \text{depreciation}) / \text{total assets}$
Tenure = 1	CEO tenure = 1
Tenure = 2	CEO tenure = 2
Tenure = 3	CEO tenure = 3
Tenure = 4	CEO tenure = 4
Tenure = 5	CEO tenure = 5
Tenure = 6	CEO tenure = 6
Tenure > 6	CEO tenure > 6
Tenure Missing	CEO tenure missing
Tobin's Q	$(\text{Market value} + \text{assets} - \text{common equity} * \text{tax before depreciation}) / \text{assets}$
Total Book Leverage	$(\text{Current liabilities} + \text{long-term debt}) / (\text{common equity} + \text{current liabilities} + \text{long-term debt})$
Total Risk	The standard deviation of market annual stock returns
Vested Options	Vested shares / common shares outstanding * 10
Working Capital	Current assets - current liabilities

Appendix B. Predicted signs from prior literature and hypotheses development

	<i>Overconfidence (Malmendier & Tate, 2005)</i>	<i>CEO Pay Slice (Bebchuk et al., 2011)</i>	<i>Inside Debt (Cassell et al., 2011)</i>	<i>Overconfidence and CPS</i>	<i>Overconfidence and Inside Debt</i>	<i>CPS and Inside Debt</i>
Investment	+	+	-	+	Net 0*	Net 0*
Firm Value	-*	-	+	-*	Net 0*	Net 0*
Profitability	-*	-	+	-*	Net 0*	Net 0*
Stock Returns	-*	-	-*	-*	-*	-*
CEO Turnover PPS	-*	-	+	-*	Net 0*	Net 0*
Volatility	+	+	-	+	Net 0*	Net 0*
Leverage	+/-	+	-	Net 0 or +*	Net 0 or -*	Net 0*
Diversification	-*	-*	+	-*	Net 0*	Net 0*
Liquidity	-*	-*	+	-*	Net 0*	Net 0*

Note: * indicates hypothesized

Appendix C. Remaining portions of the tables**Table 2.** Panel B

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	-0.026** (0.012)	0.021** (0.011)	0.016 (0.023)	0.073*** (0.022)	-2.490 (1.971)	0.612*** (0.147)	-0.201 (0.351)	0.131 (0.119)
Log (Total Current Comp)	-0.001 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.097*** (0.020)	0.022 (0.020)	-0.088*** (0.015)	-0.067*** (0.012)
Log (Firm Age)	-1.259** (0.641)	0.085 (0.110)	0.321** (0.161)	0.500** (0.208)	0.019 (0.037)	-0.038 (0.024)	0.076** (0.033)	0.034 (0.025)
Log (Total Assets)	-0.098*** (0.014)	-0.011 (0.015)	-0.059*** (0.017)	-0.053*** (0.014)	-0.046** (0.020)	0.037*** (0.012)	-0.051** (0.021)	-0.012 (0.015)
M/B Ratio	-0.002 (0.025)	-0.034 (0.024)	0.007 (0.026)	-0.046 (0.028)	0.000 (0.002)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Sales Growth	-0.000** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Return	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
D/E Ratio	0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Cash Surplus	-0.037 (0.043)	-0.100 (0.067)	-0.135 (0.103)	-0.222 (0.157)	0.008 (0.054)	-0.118 (0.082)	-0.007 (0.048)	-0.090 (0.072)
Crisis					-1.955*** (0.100)	-2.109*** (0.061)	-2.069*** (0.073)	-2.174*** (0.060)
Constant	0.233*** (0.052)	0.215*** (0.051)	0.238*** (0.050)	0.237*** (0.051)	-0.692** (0.348)	-0.028 (0.102)	-0.350 (0.215)	0.156 (0.113)

Table 2. Panel C

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	-1.163** (0.574)	0.066 (0.101)	0.316** (0.154)	0.436** (0.192)	-2.262 (1.786)	0.566*** (0.150)	-0.108 (0.261)	0.132 (0.100)
Log (Total Current Comp)	-0.085*** (0.013)	-0.005 (0.014)	-0.046*** (0.015)	-0.045*** (0.012)	-0.083*** (0.017)	0.026 (0.018)	-0.070*** (0.012)	-0.056*** (0.011)
Log (Firm Age)	0.010 (0.023)	-0.021 (0.022)	0.014 (0.024)	-0.029 (0.026)	0.029 (0.034)	-0.024 (0.023)	0.071** (0.028)	0.038 (0.023)
Log (Total Assets)	-0.028** (0.011)	0.016 (0.010)	0.016 (0.021)	0.061*** (0.019)	-0.046** (0.018)	0.031*** (0.011)	-0.040** (0.018)	-0.010 (0.014)
M/B Ratio	-0.000 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.000 (0.002)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Sales Growth	-0.000* (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Return	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
D/E Ratio	0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Cash Surplus	0.006 (0.035)	-0.051 (0.054)	-0.093 (0.093)	-0.159 (0.133)	0.046 (0.046)	-0.068 (0.068)	0.013 (0.044)	-0.050 (0.063)
Crisis					-1.971*** (0.090)	-2.110*** (0.056)	-2.092*** (0.064)	-2.171*** (0.055)
Constant	-1.010*** (0.045)	-1.027*** (0.044)	-1.006*** (0.044)	-1.006*** (0.045)	-1.834*** (0.311)	-1.235*** (0.087)	-1.440*** (0.179)	-1.056*** (0.098)

Table 2. Panel D

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	-1.661** (0.798)	0.058 (0.133)	0.461** (0.223)	0.596** (0.276)	-3.313 (2.569)	0.773*** (0.208)	-0.193 (0.376)	0.150 (0.137)
Log (Total Current Comp)	-0.119*** (0.017)	-0.005 (0.019)	-0.060*** (0.020)	-0.062*** (0.017)	-0.116*** (0.024)	0.042 (0.025)	-0.097*** (0.017)	-0.076*** (0.014)
Log (Firm Age)	-0.043 (0.031)	-0.086*** (0.027)	-0.042 (0.030)	-0.100*** (0.031)	-0.015 (0.047)	-0.091*** (0.028)	0.045 (0.039)	-0.003 (0.030)
Log (Total Assets)	-0.035** (0.015)	0.026** (0.013)	0.034 (0.028)	0.092*** (0.026)	-0.063** (0.026)	0.048*** (0.015)	-0.053** (0.025)	-0.010 (0.019)
M/B Ratio	-0.000 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.001 (0.003)	-0.000 (0.001)	-0.001* (0.001)	-0.001 (0.001)
Sales Growth	-0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Return	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.002*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
D/E Ratio	0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Cash Surplus	0.016 (0.043)	-0.064 (0.047)	-0.137 (0.107)	-0.222 (0.157)	0.072 (0.062)	-0.094 (0.065)	0.022 (0.054)	-0.069 (0.061)
Crisis					-1.802*** (0.121)	-2.003*** (0.066)	-1.970*** (0.081)	-2.087*** (0.065)
Constant	-1.137*** (0.064)	-1.161*** (0.062)	-1.133*** (0.062)	-1.131*** (0.063)	-2.233*** (0.445)	-1.366*** (0.118)	-1.692*** (0.255)	-1.128*** (0.136)

Table 2. Panel E

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	-1.247** (0.492)	-0.085 (0.078)	0.174 (0.165)	0.234 (0.197)	-2.116 (1.506)	0.369** (0.148)	-0.198 (0.172)	-0.017 (0.082)
Log (Total Current Comp)	-0.065*** (0.011)	0.010 (0.012)	-0.027** (0.013)	-0.029*** (0.011)	-0.062*** (0.015)	0.038** (0.016)	-0.049*** (0.011)	-0.038*** (0.009)
Log (Firm Age)	0.030 (0.023)	0.002 (0.021)	0.031 (0.023)	-0.000 (0.024)	0.048 (0.031)	-0.001 (0.022)	0.080*** (0.026)	0.055** (0.022)
Log (Total Assets)	-0.040*** (0.010)	0.001 (0.009)	0.005 (0.019)	0.036** (0.017)	-0.054*** (0.016)	0.014 (0.010)	-0.045*** (0.016)	-0.023* (0.012)
M/B Ratio	-0.000 (0.001)	0.000 (0.001)	-0.000 (0.001)	-0.001 (0.001)	0.001 (0.002)	0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Sales Growth	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Return	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.000*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
D/E Ratio	0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Cash Surplus	0.009 (0.037)	-0.046 (0.055)	-0.092 (0.096)	-0.135 (0.121)	0.040 (0.047)	-0.061 (0.068)	0.003 (0.050)	-0.044 (0.063)
Crisis					0.397*** (0.069)	0.280*** (0.033)	0.279*** (0.043)	0.219*** (0.031)
Constant	-0.708*** (0.037)	-0.724*** (0.036)	-0.705*** (0.036)	-0.704*** (0.036)	-1.450*** (0.277)	-0.942*** (0.080)	-1.045*** (0.167)	-0.757*** (0.090)

Table 3. Panel A

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	0.111** (0.051)	-0.003 (0.005)	0.115* (0.063)	0.047 (0.035)	0.120 (0.098)	0.016 (0.015)	0.025 (0.022)	0.011 (0.012)
Log (Total Current Comp)	0.003 (0.003)	0.001 (0.002)	0.011*** (0.003)	0.004 (0.003)	0.003 (0.003)	0.004*** (0.001)	0.003 (0.003)	0.001 (0.003)
Log (Firm Age)	0.019*** (0.006)	0.018*** (0.005)	0.004 (0.004)	0.006** (0.003)	0.018*** (0.006)	0.016*** (0.004)	0.014** (0.006)	0.015*** (0.006)
Log (Total Assets)	0.001 (0.001)	-0.001 (0.002)	0.018*** (0.007)	0.012** (0.006)	0.001 (0.001)	0.000 (0.003)	0.002 (0.002)	0.001 (0.002)
M/B Ratio	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Sales Growth	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Return	-0.000* (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.000** (0.000)	-0.000* (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
D/E Ratio	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000* (0.000)	-0.000 (0.000)
Cash Surplus	-0.019 (0.028)	-0.014 (0.026)	-0.048 (0.046)	-0.034 (0.038)	-0.020 (0.028)	-0.015 (0.027)	-0.021 (0.029)	-0.018 (0.028)
Crisis					-0.003 (0.017)	0.011 (0.017)	0.000 (0.015)	0.005 (0.013)
Constant	-0.006 (0.009)	-0.007 (0.009)	-0.009 (0.010)	-0.007 (0.009)	0.053** (0.025)	0.001 (0.015)	0.046*** (0.016)	0.025*** (0.008)

Table 3. Panel B

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	-0.110 (0.223)	-0.103 (0.066)	0.274 (0.189)	0.139 (0.141)	-0.228 (0.408)	0.075 (0.094)	0.087 (0.139)	0.054 (0.117)
Log (Total Current Comp)	-0.017 (0.030)	-0.000 (0.025)	0.014 (0.030)	-0.005 (0.029)	-0.018 (0.031)	0.017 (0.024)	-0.007 (0.031)	-0.014 (0.029)
Log (Firm Age)	0.048 (0.034)	0.034 (0.030)	0.010 (0.025)	0.001 (0.020)	0.049 (0.034)	0.026 (0.028)	0.029 (0.030)	0.027 (0.028)
Log (Total Assets)	0.012 (0.019)	0.019 (0.021)	0.067** (0.032)	0.066** (0.032)	0.010 (0.017)	0.027 (0.024)	0.032* (0.017)	0.032* (0.018)
M/B Ratio	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Sales Growth	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Return	0.000 (0.000)	-0.000 (0.000)	-0.000** (0.000)	-0.000* (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
D/E Ratio	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Cash Surplus	-0.009 (0.023)	-0.010 (0.021)	-0.109 (0.100)	-0.096 (0.092)	0.009 (0.022)	-0.002 (0.021)	-0.036 (0.049)	-0.028 (0.042)
Crisis					0.039 (0.068)	0.044 (0.051)	-0.010 (0.070)	0.006 (0.057)
Constant	-0.062* (0.036)	-0.069* (0.039)	-0.069* (0.039)	-0.064* (0.038)	-0.397 (0.274)	-0.456* (0.264)	-0.163 (0.216)	-0.237 (0.209)

Table 3. Panel C

	(1)	(2)	(3)	(4)	(5)
Cash Flow	0.733*** (0.146)	0.733*** (0.146)	0.732*** (0.146)	0.733*** (0.146)	0.733*** (0.146)
Tobin's Q	-142.253 (165.474)	-151.974 (166.561)	-154.825 (164.649)	-151.630 (166.526)	-149.213 (166.453)
Stock Ownership	-416.825 (668.934)	-414.827 (665.006)	-454.791 (668.839)	-409.039 (662.358)	-407.058 (661.127)
Vested Options	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Size	28.089** (11.897)	29.025** (11.958)	29.622** (11.925)	30.891** (12.542)	29.879** (12.353)
Corporate Governance	-33.368 (36.915)	-32.722 (38.091)	-26.082 (38.596)	-31.772 (36.393)	-31.872 (36.443)
Stock*CF	0.958 (1.053)	0.961 (1.055)	0.955 (1.055)	0.958 (1.056)	0.959 (1.056)
Vested*CF	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Size*CF	-0.058*** (0.017)	-0.058*** (0.017)	-0.058*** (0.017)	-0.058*** (0.017)	-0.058*** (0.017)
CorpGov*CF	-0.053 (0.051)	-0.053 (0.051)	-0.053 (0.051)	-0.053 (0.051)	-0.053 (0.051)
Chairman	258.912 (335.579)	257.513 (335.601)	247.828 (334.484)	259.224 (335.294)	257.865 (335.302)
President	-41.393 (62.548)	-42.427 (61.859)	-36.569 (62.733)	-39.151 (62.462)	-40.281 (61.759)
Depression Baby	527.945 (453.057)	527.750 (453.778)	529.832 (453.656)	530.220 (454.454)	529.146 (454.210)
CEO Tenure	-0.003 (13.179)	-0.113 (13.180)	0.382 (13.236)	0.178 (13.164)	0.219 (13.138)

Table 4. Panel A

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	0.424 (0.274)	0.082 (0.052)	0.018 (0.071)	0.068 (0.055)	0.829 (0.679)	-0.058 (0.076)	0.457 (0.343)	0.304 (0.240)
Log (Total Current Comp)	-0.004 (0.007)	-0.028** (0.013)	-0.014 (0.009)	-0.010 (0.007)	-0.002 (0.008)	-0.037** (0.017)	0.011 (0.010)	-0.008 (0.008)
Log (Firm Age)	-0.027** (0.012)	-0.017 (0.015)	-0.030** (0.013)	-0.038*** (0.014)	-0.031** (0.013)	-0.015 (0.015)	-0.088*** (0.021)	-0.077*** (0.017)
Log (Total Assets)	0.078*** (0.006)	0.064*** (0.009)	0.067*** (0.012)	0.078*** (0.012)	0.084*** (0.009)	0.060*** (0.010)	0.122*** (0.015)	0.110*** (0.012)
M/B Ratio	-0.000* (0.000)	-0.001** (0.000)	-0.000* (0.000)	-0.000** (0.000)	-0.001 (0.001)	-0.001*** (0.000)	-0.000 (0.000)	-0.000** (0.000)
Sales Growth	0.000* (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	0.000** (0.000)	0.000*** (0.000)
Return	-0.000** (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000* (0.000)	-0.000** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
D/E Ratio	0.000 (0.000)	0.000** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000** (0.000)	-0.000 (0.000)	0.000 (0.000)
Cash Surplus	0.007 (0.019)	0.023 (0.022)	0.031 (0.033)	0.014 (0.025)	-0.009 (0.023)	0.027 (0.025)	-0.076 (0.050)	-0.035 (0.030)
Crisis					1.474*** (0.043)	1.517*** (0.036)	1.419*** (0.052)	1.477*** (0.045)
Constant	0.637*** (0.054)	0.643*** (0.053)	0.636*** (0.054)	0.635*** (0.055)	0.894*** (0.129)	0.707*** (0.072)	1.214*** (0.163)	0.922*** (0.117)

Table 4. Panel B

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	0.359 (0.263)	0.045 (0.040)	-0.046 (0.060)	-0.018 (0.040)	0.726 (0.619)	-0.071 (0.072)	0.379 (0.310)	0.231 (0.212)
Log (Total Current Comp)	0.023*** (0.006)	0.000 (0.013)	0.011 (0.009)	0.014** (0.007)	0.024*** (0.007)	-0.008 (0.017)	0.036*** (0.009)	0.019** (0.008)
Log (Firm Age)	-0.044*** (0.015)	-0.034* (0.018)	-0.042*** (0.016)	-0.042** (0.017)	-0.047*** (0.014)	-0.031* (0.018)	-0.097*** (0.020)	-0.085*** (0.017)
Log (Total Assets)	0.040*** (0.006)	0.028*** (0.009)	0.025** (0.013)	0.027** (0.012)	0.046*** (0.007)	0.024** (0.011)	0.079*** (0.013)	0.066*** (0.011)
M/B Ratio	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.001)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Sales Growth	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Return	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
D/E Ratio	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Cash Surplus	-0.005 (0.030)	0.010 (0.035)	0.028 (0.051)	0.023 (0.048)	-0.024 (0.030)	0.008 (0.039)	-0.083** (0.033)	-0.044* (0.023)
Crisis					1.426*** (0.039)	1.464*** (0.035)	1.380*** (0.048)	1.433*** (0.043)
Constant	-0.168*** (0.039)	-0.163*** (0.037)	-0.169*** (0.038)	-0.170*** (0.039)	0.185 (0.117)	0.023 (0.074)	0.461*** (0.148)	0.197* (0.113)

Table 5. Panel A

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	0.264** (0.103)	0.024 (0.016)	0.264** (0.103)	0.108** (0.045)	0.261 (0.176)	0.059*** (0.022)	0.181* (0.107)	0.112* (0.066)
Log (Total Current Comp)	0.018*** (0.002)	0.011*** (0.003)	0.034*** (0.005)	0.017*** (0.003)	0.016*** (0.002)	0.017*** (0.003)	0.022*** (0.003)	0.015*** (0.002)
Log (Firm Age)	0.032*** (0.005)	0.029*** (0.005)	0.001 (0.007)	0.008 (0.006)	0.029*** (0.005)	0.027*** (0.005)	0.008 (0.007)	0.012** (0.006)
Log (Total Assets)	-0.008*** (0.002)	-0.013*** (0.003)	0.027*** (0.007)	0.010** (0.005)	-0.009*** (0.003)	-0.011*** (0.003)	0.008 (0.005)	0.002 (0.004)
M/B Ratio	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
Sales Growth	-0.000 (0.000)	-0.000 (0.000)	-0.000** (0.000)	-0.000* (0.000)	-0.000 (0.000)	-0.000** (0.000)	-0.000 (0.000)	-0.000 (0.000)
Return	-0.000*** (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
D/E Ratio	0.000* (0.000)	0.000* (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Cash Surplus	0.891*** (0.036)	0.902*** (0.030)	0.833*** (0.074)	0.866*** (0.055)	0.892*** (0.033)	0.901*** (0.032)	0.863*** (0.054)	0.879*** (0.046)
Crisis					-0.021** (0.011)	0.002 (0.008)	-0.041*** (0.012)	-0.020** (0.010)
Constant	0.006 (0.008)	0.006 (0.008)	-0.001 (0.010)	0.004 (0.008)	0.078** (0.035)	-0.011 (0.020)	0.192*** (0.049)	0.088** (0.035)

Table 5. Panel B

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	0.999 (1.067)	0.200 (0.169)	0.663 (0.413)	0.329 (0.216)	1.028 (1.602)	0.173 (0.281)	0.335 (0.273)	0.195 (0.146)
Log (Total Current Comp)	0.012 (0.018)	-0.018 (0.034)	0.038* (0.020)	0.004 (0.010)	0.007 (0.016)	-0.012 (0.042)	0.007 (0.015)	-0.002 (0.012)
Log (Firm Age)	0.014 (0.026)	0.015 (0.018)	-0.054 (0.067)	-0.034 (0.054)	0.006 (0.037)	0.012 (0.018)	-0.016 (0.067)	-0.000 (0.053)
Log (Total Assets)	0.004 (0.027)	-0.015* (0.008)	0.070 (0.054)	0.032 (0.031)	0.003 (0.034)	-0.015 (0.012)	0.009 (0.037)	-0.007 (0.026)
M/B Ratio	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.001)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Sales Growth	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Return	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
D/E Ratio	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Cash Surplus	0.065 (0.065)	0.102 (0.077)	-0.038 (0.075)	0.037 (0.045)	0.064 (0.081)	0.100 (0.081)	0.060 (0.073)	0.092 (0.079)
Crisis					0.084 (0.124)	0.145*** (0.052)	0.106 (0.094)	0.141** (0.068)
Constant	0.226*** (0.074)	0.224*** (0.073)	0.159** (0.066)	0.188*** (0.068)	0.517 (0.541)	0.261** (0.130)	0.434 (0.350)	0.267* (0.147)

Table 5. Panel C

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	-0.193*	-0.016	0.076*	0.067*	-0.388	0.049**	-0.111	-0.044
	(0.100)	(0.019)	(0.039)	(0.036)	(0.295)	(0.023)	(0.094)	(0.049)
Log (Total Current Comp)	0.007***	0.021***	0.018***	0.015***	0.007**	0.026***	0.005**	0.011***
	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	(0.004)	(0.003)	(0.002)
Log (Firm Age)	0.004	-0.002	-0.001	-0.008	0.006	-0.003	0.022***	0.015***
	(0.004)	(0.004)	(0.005)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)
Log (Total Assets)	0.065***	0.072***	0.080***	0.084***	0.062***	0.074***	0.054***	0.060***
	(0.002)	(0.002)	(0.005)	(0.005)	(0.003)	(0.003)	(0.004)	(0.003)
M/B Ratio	-0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sales Growth	0.000	-0.000	-0.000*	-0.000	0.000	-0.000	-0.000	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Return	-0.000	-0.000***	-0.000***	-0.000***	0.000	-0.000***	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
D/E Ratio	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000*	0.000*	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash Surplus	-0.918***	-0.926***	-0.947***	-0.952***	-0.911***	-0.929***	-0.900***	-0.916***
	(0.039)	(0.036)	(0.021)	(0.023)	(0.040)	(0.035)	(0.051)	(0.044)
Crisis					0.047***	0.028***	0.044***	0.025***
					(0.013)	(0.007)	(0.011)	(0.009)
Constant	-0.017**	-0.020***	-0.017**	-0.016**	-0.124**	-0.039*	-0.138***	-0.042
	(0.007)	(0.006)	(0.007)	(0.007)	(0.053)	(0.023)	(0.043)	(0.036)

Table 5. Panel D

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Vega/Delta	-0.900	-0.150	-0.535	-0.248	-0.895	-0.128	-0.242	-0.102
	(1.064)	(0.162)	(0.404)	(0.210)	(1.584)	(0.278)	(0.265)	(0.139)
Log (Total Current Comp)	0.014	0.042	-0.006	0.023**	0.019	0.037	0.021	0.028**
	(0.018)	(0.034)	(0.021)	(0.010)	(0.016)	(0.042)	(0.015)	(0.012)
Log (Firm Age)	-0.022	-0.023	0.036	0.018	-0.014	-0.020	0.003	-0.016
	(0.026)	(0.018)	(0.066)	(0.054)	(0.037)	(0.018)	(0.067)	(0.054)
Log (Total Assets)	0.024	0.042***	-0.030	0.004	0.025	0.041***	0.023	0.040
	(0.027)	(0.008)	(0.055)	(0.032)	(0.034)	(0.012)	(0.037)	(0.026)
M/B Ratio	-0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
Sales Growth	0.000	-0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Return	0.000	-0.000*	0.000	0.000	0.000	-0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
D/E Ratio	-0.000	0.000	0.000	0.000	-0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash Surplus	-0.079	-0.114	0.003	-0.063	-0.081	-0.113	-0.084	-0.117
	(0.063)	(0.074)	(0.073)	(0.050)	(0.080)	(0.078)	(0.076)	(0.083)
Crisis					0.198	0.143***	0.177*	0.141**
					(0.125)	(0.054)	(0.095)	(0.069)
Constant	0.164**	0.166**	0.221***	0.195***	-0.330	-0.103	-0.242	-0.074
	(0.076)	(0.075)	(0.066)	(0.069)	(0.543)	(0.139)	(0.352)	(0.149)

Table 5. Panel E

	(1)	(2)	(3)	(4)	(5)
Profitability	0.120**	0.121**	0.120**	0.122**	0.122**
	(0.060)	(0.059)	(0.059)	(0.059)	(0.059)
Tangibility	0.050	0.051	0.050	0.053	0.056
	(0.052)	(0.052)	(0.052)	(0.052)	(0.052)
Log (Sales)	0.053***	0.051***	0.055***	0.048***	0.048***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)
Tobin's Q	-0.060	-0.056	-0.063	-0.055	-0.056
	(0.064)	(0.063)	(0.064)	(0.063)	(0.064)
Net Financing Deficit	-0.005	-0.005	-0.005	-0.005	-0.005
	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)
Return1	-0.134	-0.131	-0.128	-0.131	-0.132
	(0.127)	(0.127)	(0.127)	(0.126)	(0.126)
Return2	-0.161**	-0.158**	-0.160**	-0.155**	-0.154**
	(0.073)	(0.073)	(0.073)	(0.073)	(0.073)
Return3	-0.238	-0.238	-0.239	-0.238	-0.241
	(0.243)	(0.242)	(0.242)	(0.242)	(0.242)
Return4	-0.158**	-0.158**	-0.154**	-0.161**	-0.160**
	(0.078)	(0.077)	(0.078)	(0.077)	(0.078)
Return5	-0.125	-0.126	-0.122	-0.123	-0.122
	(0.132)	(0.132)	(0.132)	(0.133)	(0.133)
Stock Ownership	-0.440***	-0.457***	-0.484***	-0.445***	-0.454***
	(0.122)	(0.121)	(0.122)	(0.121)	(0.121)
Vested Options	0.000***	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CEO Age	0.001	0.001	0.001*	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
CEO Tenure	0.002	0.001	0.002	0.002	0.002
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
CEO Tenure * OC	-0.018	-0.016	-0.018	-0.017	-0.018
	(0.026)	(0.027)	(0.027)	(0.026)	(0.025)
Crisis		0.003	-0.008	0.001	0.000
		(0.027)	(0.028)	(0.028)	(0.028)
Constant	1.255***	1.272***	1.257***	1.301***	1.313***
	(0.056)	(0.055)	(0.053)	(0.055)	(0.057)

Table 6. Compensation and net financing deficit

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Vested Options	-0.000*	-0.000	-0.000*	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Stock Ownership	-0.073	-0.071	-0.076	-0.071	-0.071
	(0.047)	(0.048)	(0.054)	(0.049)	(0.048)
Book Leverage	0.022	0.022	0.022	0.022	0.022
	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)
Vested*NFD	0.000***	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Leverage*NFD	-0.147***	-0.147***	-0.147***	-0.147***	-0.147***
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Ownership*NFD	2.055***	2.062***	2.064***	2.058***	2.058***
	(0.442)	(0.445)	(0.445)	(0.444)	(0.444)
Constant	-0.089*	-0.110*	-0.118*	-0.116*	-0.114*
	(0.048)	(0.062)	(0.064)	(0.064)	(0.063)

Table 7. Compensation and firm value

	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
Ind-Adj Tobin's Q_{t+1}		0.574***	0.574***	0.574***	0.569***	0.569***
		(0.043)	(0.043)	(0.043)	(0.043)	(0.043)
E-Index		-0.002**	-0.002**	-0.002**	-0.002*	-0.002**
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Size		0.012***	0.012***	0.012***	0.013***	0.013***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Director Ownership		0.430	0.434	0.435	0.431	0.432
		(0.404)	(0.403)	(0.403)	(0.406)	(0.407)
Director Ownership ²		-0.652	-0.651	-0.656	-0.658	-0.658
		(0.403)	(0.402)	(0.402)	(0.405)	(0.406)
ROA		-0.004	-0.005	-0.005	-0.006	-0.005
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Capital Expenditures		0.083*	0.084*	0.082*	0.077*	0.078*
		(0.045)	(0.045)	(0.045)	(0.045)	(0.045)
Leverage		-0.003**	-0.003**	-0.003**	-0.003**	-0.003**
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
R&D		0.001***	0.001***	0.001***	0.001***	0.001***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R&D Missing		0.004	0.004	0.003	0.004	0.003
		(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Firm Age		0.003*	0.003*	0.003*	0.003*	0.003*
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
ATC		-0.000***	-0.000***	-0.000***	-0.000***	-0.000***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
REC		-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CEO Ownership > 20%		0.009	0.010	0.009	0.010	0.011
		(0.008)	(0.008)	(0.008)	(0.008)	(0.009)
Tenure = 1		-0.007	-0.007	-0.007	-0.006	-0.007
		(0.006)	(0.005)	(0.005)	(0.005)	(0.005)
Tenure = 2		0.003	0.003	0.003	0.003	0.003
		(0.003)	(0.003)	(0.003)	(0.002)	(0.003)
Tenure = 3 or 4		0.000	0.000	0.000	0.000	0.000
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tenure = 5 or 6		0.000	0.000	0.000	0.000	0.000
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tenure Missing		-0.005	-0.004	-0.005	-0.005	-0.005
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Diversified		-0.011	-0.010	-0.010	-0.009	-0.009
		(0.058)	(0.058)	(0.058)	(0.059)	(0.059)
CEO Outsider		-0.005	-0.004	-0.004	-0.003	-0.003
		(0.026)	(0.026)	(0.026)	(0.026)	(0.026)
Chairman		-0.079*	-0.081*	-0.081*	-0.083*	-0.083*
		(0.048)	(0.048)	(0.048)	(0.048)	(0.048)
Crisis			0.028***	0.029***	0.029***	0.028***
			(0.009)	(0.009)	(0.009)	(0.009)
Ind-Adj CEO Pay Slice	0.911***					
	(0.012)					
Number of VPs	0.008***					
	(0.001)					
CEO Only Director	0.570***					
	(0.027)					
Constant	0.017***	0.648***	0.658***	0.658***	0.662***	0.661***
	(0.002)	(0.062)	(0.063)	(0.064)	(0.064)	(0.064)

Table 8. Panel A

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Diversified	-0.061** (0.028)	-0.059** (0.027)	-0.059** (0.027)	-0.053** (0.027)	-0.054** (0.027)
Chairman	-0.068** (0.029)	-0.070** (0.030)	-0.069** (0.030)	-0.076** (0.032)	-0.078** (0.032)
Tenure = 1	-0.011 (0.009)	-0.010 (0.008)	-0.009 (0.008)	-0.007 (0.008)	-0.013 (0.009)
Tenure = 2	-0.003 (0.003)	-0.003 (0.003)	-0.003 (0.003)	-0.002 (0.002)	-0.003 (0.003)
Tenure Missing	-0.034*** (0.008)	-0.034*** (0.009)	-0.033*** (0.009)	-0.035*** (0.009)	-0.035*** (0.009)
CEO Outsider	-0.053** (0.022)	-0.052** (0.023)	-0.047** (0.024)	-0.052** (0.024)	-0.053** (0.024)
Ind-Adj Tobin's Q	-0.062 (0.063)	-0.063 (0.064)	-0.061 (0.064)	-0.072 (0.068)	-0.073 (0.068)
E-Index	-0.002 (0.002)	-0.001 (0.002)	-0.002 (0.002)	-0.000 (0.002)	-0.000 (0.002)
Size	0.036* (0.021)	0.036* (0.022)	0.036* (0.022)	0.040* (0.023)	0.040* (0.023)
Director Ownership	0.063 (0.215)	0.074 (0.220)	0.047 (0.218)	0.055 (0.219)	0.070 (0.221)
Director Ownership ²	-0.117 (0.241)	-0.122 (0.244)	-0.106 (0.243)	-0.129 (0.247)	-0.147 (0.250)
CAPEX/TA	0.331 (0.211)	0.324 (0.210)	0.330 (0.210)	0.309 (0.211)	0.308 (0.211)
Leverage	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
R&D	-0.013 (0.008)	-0.013 (0.008)	-0.013 (0.008)	-0.013 (0.008)	-0.013 (0.008)
R&D Missing	0.016 (0.016)	0.017 (0.016)	0.017 (0.016)	0.015 (0.016)	0.015 (0.016)
Firm Age	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
ATC	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
REC	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)
CEO Ownership > 20%	0.063 (0.046)	0.065 (0.047)	0.064 (0.046)	0.066 (0.046)	0.068 (0.047)
Crisis		-0.002 (0.017)	-0.002 (0.016)	-0.009 (0.016)	-0.009 (0.016)
Constant	0.120*** (0.031)	0.148*** (0.021)	0.155*** (0.022)	0.154*** (0.023)	0.151*** (0.023)

Table 8. Panel B

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Diversified	-0.059** (0.028)	-0.054** (0.027)	-0.054** (0.027)	-0.050* (0.027)	-0.050* (0.027)
Chairman	-0.068** (0.030)	-0.073** (0.033)	-0.070** (0.032)	-0.079** (0.034)	-0.081** (0.035)
Tenure = 1	-0.018 (0.014)	-0.017 (0.013)	-0.016 (0.013)	-0.014 (0.012)	-0.019 (0.014)
Tenure = 2	-0.005 (0.004)	-0.004 (0.003)	-0.004 (0.003)	-0.003 (0.003)	-0.005 (0.004)
Tenure = 3 or 4	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Tenure = 5 or 6	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Tenure = Missing	-0.038*** (0.008)	-0.038*** (0.008)	-0.037*** (0.009)	-0.038*** (0.009)	-0.039*** (0.009)
CEO Outsider	-0.047* (0.025)	-0.041 (0.029)	-0.033 (0.031)	-0.041 (0.029)	-0.042 (0.029)
Ind-Adj Tobin's Q	-0.062 (0.063)	-0.063 (0.063)	-0.062 (0.063)	-0.073 (0.069)	-0.074 (0.069)
E-Index	-0.001 (0.002)	-0.000 (0.002)	-0.000 (0.002)	0.001 (0.002)	0.001 (0.002)
Size	0.036* (0.022)	0.037* (0.022)	0.036* (0.022)	0.040* (0.023)	0.040* (0.023)
Director Ownership	0.082 (0.231)	0.092 (0.238)	0.062 (0.240)	0.073 (0.234)	0.086 (0.234)
Director Ownership ²	-0.111 (0.254)	-0.107 (0.258)	-0.098 (0.263)	-0.117 (0.260)	-0.133 (0.260)
CAPX/TA	0.321 (0.209)	0.314 (0.207)	0.316 (0.207)	0.298 (0.208)	0.297 (0.209)
Leverage	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
R&D	-0.013 (0.008)	-0.013 (0.008)	-0.013 (0.008)	-0.013 (0.008)	-0.013 (0.008)
R&D Missing	0.017 (0.016)	0.017 (0.016)	0.017 (0.016)	0.016 (0.016)	0.015 (0.016)
Firm Age	0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
ATC	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
REC	0.001 (0.003)	0.001 (0.002)	0.001 (0.003)	0.001 (0.002)	0.001 (0.002)
CEO Ownership > 20%	0.058 (0.043)	0.059 (0.043)	0.057 (0.042)	0.061 (0.043)	0.063 (0.044)
Crisis		-0.045*** (0.012)	-0.052*** (0.014)	-0.038*** (0.011)	-0.038*** (0.010)
Constant	0.242*** (0.058)	0.289*** (0.098)	0.318*** (0.118)	0.282*** (0.100)	0.275*** (0.095)

Table 9. Compensation and CEO turnover

	(1)	(2)	(3)	(4)	(5)
Stock Return	21.341 (23.986)	15.076 (22.545)	10.146 (22.130)	18.033 (23.523)	17.918 (23.083)
Firm Return	-18.465 (28.615)	-12.037 (27.889)	-7.113 (27.816)	-14.725 (28.242)	-14.629 (27.933)
Market Return	-18.694 (27.259)	-11.425 (29.002)	-0.610 (30.177)	-14.249 (27.982)	-13.615 (27.853)
CEO Age > 60	-1.646 (1.260)	-1.598 (1.237)	-1.519 (1.215)	-1.618 (1.234)	-1.619 (1.255)
Chairman	4.519*** (0.696)	3.948*** (0.694)	4.051*** (0.676)	3.983*** (0.683)	4.005*** (0.696)
Constant	-4.795*** (1.855)	-4.617*** (1.663)	-4.371** (1.728)	-4.542*** (1.752)	-4.528*** (1.749)