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Specialization Financial Economics

The Effects of Macroeconomic Factors on CEO Compensation

Author: Max Luijsterburg
Student number: 575439
Thesis supervisor: Dr. Jan Lemmen
Second reader: Dr. R. de Bliek
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PREFACE AND ACKNOWLEDGEMENTS

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ABSTRACT

In this thesis, I analyze the effects of macroeconomic factors on CEO compensation in the USA from 2006 to 2023. I gathered data on twelve macroeconomic factors and annual CEO compensation primarily from Federal Reserve Economic Data (FRED) and Execucomp. Subsequently, I was able to analyze the effect of each macroeconomic factor on CEO compensation, their influence on three components of CEO compensation, and their influence over time. I found robust evidence that Inflation, Exchange Rate, GDP, GDP Growth Rate, Unemployment, and Policy Uncertainty influence CEO compensation ranging from -14.96% up to 38.60% in my sample. Moreover, I found the Equity component to be more impacted by macroeconomic factors than Salary and Bonus. Additionally, I found robust long-lasting effects of Exchange Rate, GDP, GDP Growth Rate, Policy Uncertainty, and Terrorism Index on CEO compensation. Understanding the effects of macroeconomic factors on CEO compensation benefits firms, CEOs, and stakeholders by giving a deeper understanding of the CEO pay-setting process.

Keywords: CEO Compensation, Inflation, Interest Rate, Exchange Rate, GDP, GDP Growth Rate, Unemployment, Market Performance, Market Risk, Investor Sentiment, Policy Uncertainty, Geopolitical Risk, Terrorism Index

JEL Classification: M12, E24, E31, E32, E43, E60

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CHAPTER 1 Introduction

CEO (Chief Executive Officer) compensation is a widely discussed topic and remains one of the main subjects of debate regarding corporate governance within firms and beyond. In 2018, Ralph Hamers, who was the CEO of ING at the time, found himself the subject of widespread media attention due a proposed increase in his compensation (*DPG Media Privacy Gate*, n.d.). It led to heated public and political debates in the Netherlands and ended with Ralph Hamers resigning (*DPG Media Privacy Gate*, n.d.-b). It shows that debates regarding CEO compensation can have real-world implications. When debating the level of CEO compensation, the pay-ratio is often brought up. This ratio compares the CEO compensation to that of the firm's median employee. The many ways of CEO compensation are also debated as it can typically be dispersed in three different ways: cash, equity, or perks. These perks have a wide spectrum and do not necessarily involve direct monetary compensation to the CEO. However, in this thesis I will look at the total monetary CEO compensation expressed in dollars. During debates, other frequently discussed topics include performance metrics and benchmarking against industry peers, as well as CEO characteristics such as tenure, amount of equity in the firm, and gender, along with firm characteristics such as firm size and leverage. These are all factors that affect the level of CEO compensation. In this thesis I will add onto the discussion by looking at the effects of macroeconomic factors on CEO compensation. Therefore, this thesis will contribute to the ongoing debate and its findings can have real-world implications for CEO compensation levels and structures.

Dai et al. (2020) study the effect of terrorist attacks on CEO compensation. A terrorist attack is a clear exogenous shock because a CEO has no influence or control on the occurrence of a terrorist attack. Similarly, CEOs have no influence or control over macroeconomic factors. Therefore, I will replicate this paper, but instead of terrorist attacks I will use macroeconomic factors as clear exogenous factors. I will alter the methodology of this paper to suit certain characteristics of macroeconomic factors. Unlike specific terrorist attacks where the authors could make use of control groups, macroeconomic factors will affect all CEOs and therefore will not have control groups. I will also make a distinction between shocks in macroeconomic factors and anticipated macroeconomic movements. Previous studies have examined macroeconomic fluctuations as sources of luck for CEO compensation (Chiu et al., 2014). However, in this paper the authors only look at the effects of inflation, exchange rates and interest rates, while I will also examine the effects of GDP growth rate, unemployment rate, market performance and the business cycle. However, Chiu et al. (2014) find that macroeconomic fluctuations affect CEO compensation mainly through their Sales and Tobin's Q variables, as they find these factors have a direct impact on CEO compensation.

Moreover, Bertrand and Mullainathan (2001) found that CEOs are also rewarded for their luck. By examining oil prices as exogenous factor that CEOs cannot influence or control, they conclude that a

CEO's compensation due to luck is equivalent in magnitude to their compensation due to performance. It is considered luck because CEOs have no influence on these factors. However, these factors do have an influence on the CEO's compensation. Laschever (2013) finds that CEO compensation is also based on the CEO compensation of its peers (firms with similar firm characteristics). Bizjak et al. (2011) find that CEOs try to influence the peers they are compared to in order to justify the staggering levels of their CEO compensation. Many macroeconomic factors can be classified as luck because a CEO is unable to influence these factors. Chiu et al. (2014) find that these factors can have a significant impact on CEO compensation. However, this paper only examines a limited number of macroeconomic factors and uses a limited estimation period of the years 1993 until 2008, which does not include major macroeconomic fluctuations we have experienced in recent times. Subsequently, in this thesis I will use more recent data from 2000 until 2023. Therefore, my research question is: *"What are the effects of macroeconomic factors on CEO compensation?"*. To the best of my knowledge, this relationship has not been examined in this timeframe and to the extent of my additional macroeconomic factors.

To study the relationship between macroeconomic factors and CEO compensation I will perform several linear regressions. The dependent variable will be the natural logarithm of the annual total CEO compensation and the main variable of interest will be a macroeconomic factor. These regressions will contain many control variables such as size to control for their effect on CEO compensation. The use of control variables will be very important to estimate the true effect of the main variable of interest. Therefore, the control variables will always stem from the existing literature. By performing these linear regressions, I am able to estimate the coefficient of a macroeconomic factor. Subsequently, I can report if a particular macroeconomic factor has a significant negative or positive effect and its magnitude. If this coefficient is statistically significant and has a positive effect, it indicates that the macroeconomic factor plays a role in the level of CEO compensation, suggesting that the compensation of CEOs consists of components which CEOs have no influence on. This might have real-world implications for CEO compensation as both directors and investors believe CEO compensation should be linked to performance (Edmans et al., 2023). Tosi et al. (2000) find that approximately 40% of CEO pay can be attributed to firm size, while firm performance explains a significant portion of the variance in CEO compensation. However, they indicate that a substantial portion of CEO pay remains unaccounted for. They do not look at CEO characteristics such as tenure and age, suggesting that these factors contribute to the unexplained variation in CEO compensation. The data regarding CEO compensation can be gathered from ExecuComp within Wharton Research Data Services (WRDS). This dataset consists of CEO compensation in the US from 1992 until 2023. The data regarding firm characteristics and fundamentals can also be gathered from WRDS. The macroeconomics factors will mainly be gathered from Eikon and the World Bank's global economic monitor.

Langsam et al. (1997) have found that CEO compensation might have gotten so exaggerated that they are becoming disconnected from the relationship to a firm's performance. Macroeconomic factors might be a contributing factor to this disconnect. I found robust evidence that Inflation, Exchange Rate, GDP, GDP Growth Rate, Unemployment, and Policy Uncertainty influence CEO compensation ranging from -14.96% up to 38.60% in my sample. Similarly, Chiu et al. (2014) found that macroeconomic fluctuations explain between seven and twelve percent of changes in CEO compensation in the US. Moreover, I found the Equity component to be more impacted by macroeconomic factors than Salary and Bonus. Additionally, I found robust long-lasting effects of Exchange Rate, GDP, GDP Growth Rate, Policy Uncertainty, and Terrorism Index on CEO compensation. This thesis will contribute towards the discussion about factors that affect CEO compensation. I will add onto the literature by examining factors that have not yet been examined. However, macroeconomic factors not examined in this thesis might remain interesting and could be explored in future research.

CHAPTER 2 Theoretical Framework

2.1 CEO Compensation

CEO compensation refers to the total remuneration package a CEO receives from their respective firm. This compensation typically consists of a combination of their base salary, bonus payments, equity, stock options, and non-monetary perks. The level of compensation and ways of payment are determined by the board of directors, who represent the shareholders of the firm. Therefore, CEO compensation is often used as incentive to align the interests of a CEO with its shareholders.

Over the years, a long-term upwards trend for CEO compensation has become evident, as analyzed by Bivens and Kandra (2022) and released by the Economic Policy Institute, a non-profit think tank. This upwards trend makes it harder to justify the disproportional compensation when compared to the average employee. According to the findings of Bivens and Kandra (2022), CEO compensation outgrew even the stock market by approximately 28.1%. Meanwhile, salaries of employees grew at a more modest rate of 15.3%. This disparity leads to a growing gap in compensation and thus a higher pay-ratio. The pay-ratio compares the CEO compensation to that of the firm's median employee. This ratio peaked in the 2000s at a staggering 380-1 when considering realized compensation. Recently, the pay-ratio has seen fluctuations during crises such as the dotcom bubble and the 2008 financial crisis. Existing literature analyses how CEO compensation is determined and what has changed to justify the surge in total remuneration.

2.1.1 Agency Theory

Agency theory delves into the dynamics between agents and principals in organizational settings and focusses on aligning the interests of both parties (Jensen and Meckling, 1976; Grossman and Hart, 1983). Executives act as agents, as they are trusted with managing the firm on behalf of its shareholders, who are the principals. The agency theory suggests that contracts are constructed in such a way that mitigates agency costs between agents and principals as much as possible. Agency theory of optimal contracting focusses on designing the compensation package in such a way that the interests of executives and shareholders align, implying a positive relationship between pay and performance. (Edmans and Gabaix, 2009).

One of the earliest seminal papers regarding CEO compensation was conducted by Jensen and Murphy (1990a). In their paper, the authors state that critics of the high levels of CEO compensation are wrong and are focusing on the wrong aspects of compensation. At the time of research, CEO compensation levels were roughly at the same level as 50 years prior when correcting for inflation. Therefore, the authors stated that the level of CEO compensation isn't the primary concern, but rather how CEOs are paid. They substantiate their claims by analyzing the change in CEO wealth for every 1,000 dollars increase in market value of the firm. The results of this analysis show that there isn't a strong relationship

between pay and performance. They also found that the most significant performance incentives stemmed from the CEO's personal stock ownership. However, at the time of publication, such holdings were minimal and on the decline. Therefore, the authors argue that this compensation structure is an issue as it might attract the wrong candidates to these positions. They argue that competent people prefer a strong relationship between pay and performance, while less qualified people will be attracted to a more bureaucratic compensation structure. Later that year, Jensen and Murphy (1990b) publish another seminal paper examining the relationship between CEO compensation and the performance of the respective firm. They find that there is a clear lack of pay-for-performance incentives for CEOs. The authors find these results confounding and hypothesize possible explanations for further research.

Thereafter, Hall and Liebman (1998) use a new dataset to test the performance component in CEO compensation more accurately. In this paper, the authors argue that CEOs are not paid like bureaucrats as Jensen and Murphy (1990b) suggested. They hypothesize that it would be highly unlikely that performance has little effect on compensation, because it would be difficult to justify the notion that majority of capital is not managed efficiently. To examine the relationship between performance and CEO compensation, they use detailed data, including data on CEO stock holdings and stock options. Their results show that the value of these stocks and stock options encompasses the relationship between performance and CEO compensation almost fully. This conclusion highlights the importance of equity and in particular stock options as CEO compensation. Langsam et al. (1997) explain that historically, stock option plans were used by small and startup firms to entice high performing employees. Today, this has become an increasingly common way of remuneration for executives. In their paper, Langsam et al. (1997) aim to find out if CEO compensation is related to variables that traditionally represent a firm's performance. It could be that the board of directors use different measures of performance that are unobservable to researchers and therefore show a weak relationship between pay and performance. Their results show no significant relationship between pay and performance. This finding implies that CEO compensation is not affected by traditionally used performance variables. However, they do find a positive relationship between CEO compensation and fundamental variables of a firm, such as revenue, profit, market value, and assets. Langsam et al. (1997) attribute this relationship to the increased risks, responsibilities, and obligations that come with leading larger firms, for which CEOs receive additional compensation.

Lau and Vos (2004) clarify that while the agency theory indeed implies a positive relationship between pay and performance, it does not necessarily indicate a strongly correlated relationship. They find a positive relationship in New Zealand between CEO compensation and firm size, measured as the logarithm of a firm's total assets. However, their results show a weak relationship between pay and performance. Currently, a substantial component of CEO compensation can still not be explained by performance, despite both directors and investors thinking pay and performance should be linked

(Edmans et al., 2023). A possible explanation is the leverage a CEO has when negotiating their own compensation package. The amount of leverage a CEO has, is often determined by characteristics they possess. These attributes can strengthen their position within the firm and grants the CEO power during negotiation of their own remuneration.

2.1.2 CEO Power

Existing literature outlines several reasons why the board of directors fails to negotiate the optimal compensation contract that serves the interests of shareholders best (Bebchuk et al., 2002; Bebchuk and Fried, 2004). Inherently, there will always be agency costs, even after reducing it to a minimum amount. The compensation package has to be structured in such a way that it attracts and retains the right candidate, which does not have to be optimal for shareholders. Additionally, directors have incentives to appease the CEO, or at least to not demotivate the CEO. Bebchuk and Fried (2004) state that directors have shown to be willing to endorse arrangements that are advantageous to the CEO, even if it comes at the expense of shareholders. Yermack (1997) researches the timing of CEO stock options awards and finds robust evidence of favorable arrangements. The results show that CEO stock options are granted in tandem with advantageous movements in the firm's stock prices. The author attributes this favorable timing to the manager's power by rejecting several alternative explanations. Many studies have been done to find out to what extend CEOs are able to use this power to influence their own compensation packages (Core et al., 1999; Bebchuk et al., 2002; Bebchuk and Fried, 2003; Bebchuk and Fried, 2004).

One of the earliest seminal papers regarding power dynamics with a firm by Finkelstein (1992) states that the CEO is the most powerful person within a firm most of the time. Core et al. (1999) find that a significant portion of CEO compensation is explained by the composition of the board and the ownership structure of a firm. They find that CEOs in firms with less effective government structures tend to receive higher levels of compensation. Their results show that the most significant factor influencing CEO compensation is whether the CEO also holds the position of board chair. Furthermore, they find a negative relationship between a CEO's ownership stake in the firm and their total compensation. However, other characteristics of the board of directors do have significant effects such as the size of the board, number of outside directors and percentage of directors over the age of 69. Similarly, Bebchuk et al. (2002) state in their paper that powerful managers are able to extract rents, defined by the authors as "value in excess of that which they would receive under optimal contracting". The authors argue that a CEO's power increases not only with the increase of ownership stakes in the firm but other factors such as the composition of the board and shareholders also play a role.

These board characteristics allows a CEO to influence and negotiate better compensation packages. Furthermore, Bertrand and Schoar (2003) investigate differences between CEOs and examine if these difference in characteristics matter. Their results show a wide variance in managerial behavior and

decision making, which leads to a difference in compensation. They find some evidence that certain CEO characteristics such as holding an MBA degree dictates their managing behavior. Gottesman and Morey (2006) find no evidence that a CEO with an MBA degree performs better than a CEO that has not achieved an MBA. Brick et al. (2006) look further into the individual characteristics that affect not only the firm, but also director compensation. Their results show a positive relationship between variables such as gender and CEO experience. Similar to Core et al. (1999), a significant negative relationship is found between CEO equity and the levels of the CEO's own compensation package.

2.1.3 External Factors

It becomes clear that CEO compensation is influenced by a multitude of factors, reflecting the complexity of setting an executives pay. In existing literature, the reason behind the surge in CEO compensation is still discussed and has not reached a definitive consensus. However, academic research has also focused on external factors that influence CEO compensation. Janakiraman et al. (1992) looked at the effect of relative performance on CEO compensation. By comparing peer firms based on accounting measures and return performance, their paper finds evidence that CEO compensation is influenced by relative return performance. However, their findings suggest that firms should construct their compensation contracts based on accounting measures such as return on equity rather than relative return performance. Miller (1995) finds that the surge in CEO compensation is more closely tied to a firm's relative performance when comparing it to peer firms in the same industry, rather than to the past performance of the firm itself. Laschever (2013) was able to research the effect of compensation benchmarking with the use of datasets containing the actual firms considered as peers. He finds evidence of benchmarking within peer groups and a positive significant effect of other compensation on the compensation of the CEO. This implies a social aspect in which CEOs want to earn the same or more than their peers. Similarly, this social aspect has also been found by Bizjak et al. (2011). In their paper, they find that CEOs even try to influence the benchmark peer group choice to increase their pay. Bizjak et al. (2008) found that 96 out of 100 firms they examined incorporated the salary of peer CEOs as a factor when setting their own CEO compensation. If a CEO has many outside employment options, they have more leverage when negotiating their own compensation packages and vice versa.

Furthermore, Dai et al. (2020) study the effect of terrorist attacks on CEO compensation. A terrorist attack is a clear exogenous shock because a CEO has no influence or control on the occurrence of a terrorist attack. The authors used difference-in-difference regressions to compare CEO compensation in the area before and after the terrorist attacks. They found a significant positive relationship between the attack proximity and CEO compensation. Similar to terrorist attacks, CEOs have no influence or control over macroeconomic factors.

2.2 Macroeconomic factors

Macroeconomic factors are large-scale economic variables, shaping the overall performance and stability of an economy (Bloomenthal, 2023). These factors are far-reaching and have an impact on every aspect of the economy. These factors include aspects such as inflation, interest rates, exchange rates, economic growth, unemployment, relative stock market performance, investor sentiment, and indexes such as policy uncertainty, geopolitical risk and terrorism risk. Additionally, macroeconomic events such as the financial crisis and the coronavirus pandemic have widespread effects on an economy and are therefore interesting to research (Hertati et al., 2020).

Some macroeconomic factors have recently found themselves at the center of academic discussion, one of those is the Gross Domestic Product (GDP), which is one of the most widely recognized macroeconomic indicators, providing a comprehensive measure of a country's economic activity commonly measured per year (Fernando, 2024). However, GDP has been criticized over the past decades for its limitations. Van den Bergh (2009) summarizes the criticism about GDP coherently and states that the main problems with this indicator arise when it is used as a proxy for social welfare, these issues persist when using GDP per capita. However, even with these limitations GDP is still widely used as an indicator and has real-world impact. The GDP growth rate of each year has even more influence on political and business decisions. Furthermore, the question has been raised if investor sentiment even matters as macroeconomic factor. Chau et al. (2016) explains that this factor has not been held in high regard by classical asset pricing theory and this classical view finds investors using investor sentiment irrational. Their paper examines the importance of investor sentiment mainly regarding trading and investing. It finds that investor sentiment matters significantly as there is a big chunk of investors who use it in some way. Therefore, stock prices are sometimes significantly driven by the investor sentiment. However, this applies to investor sentiment that is based on individual investor surveys rather than on institutional or market-based sentiments.

2.3 Relationship between: Macroeconomic factors and CEO compensation

2.3.1 Exogenous shocks to CEO compensation

Macroeconomic factors function as exogenous factors, which means that CEOs have no direct influence or control over these factors. When these factors behave favorably for CEOs, it can be described as luck. Bertrand and Mullainathan (2001) defined luck as "observable shocks to the performance beyond the CEO's control". In their paper, they look at the oil price as an exogenous factor that has huge implications for a firm's profits. A CEO is not able to directly influence the oil price, yet this paper shows that they do receive higher compensation based on performance when an increase in oil price boosts their firm's profits. The paper finds evidence of asymmetry, indicating that CEO compensation always increases when they get lucky, yet it doesn't always decrease when they get unlucky.

Chiu et al. (2014) examine the influence of fluctuations in inflation, interest rates, and exchange rates on Sales, Tobin's Q, and CEO compensation in a timeframe of 1993 to 2007. By comparing anticipated rates with actual rates, they are able to identify "macroeconomic shocks". They find significant relationships between these macroeconomic factors and the dependent variables and explain that these macroeconomic factors effect CEO compensation indirectly through the Sales and Tobin's Q variables. I have not seen evidence that this relationship has changed in the past two decades. However, their methodology is limited by some assumptions, as their anticipated inflation rate is assumed to be the same as last year. This is not realistic, and a more realistic approach could have been achieved by gathering inflation forecasts of individuals as well as of analysts and institutions.

To answer my main research question, *"What are the effects of macroeconomic factors on CEO compensation?"*, I will generate several hypotheses to get a clearer insight into the potential ways the macroeconomic factors could influence CEO compensation. I will examine the effects of the macroeconomic factors on CEO compensation in the same year. Due to evidence of asymmetry (Bertrand and Mullainathan, 2001), I suspect that macroeconomic factors generally influence CEO compensation in a favorable way:

H1: "Macroeconomic factors have a significant positive effect on CEO compensation."

Dai et al. (2020) found strong evidence that CEOs in closer proximity of a terrorist attack preferred salary and bonus increases rather than equity-based compensation compared to CEOs in safer areas. I will examine the effects of macroeconomic factors on the Equity, Salary, and Bonus components of CEO compensation. I suspect to find a similar result when looking at the effects of macroeconomic factors as their findings imply that CEOs can have a very myopic view on their own compensation package:

H2: "The Salary and Bonus components of CEO compensation will be more severely impacted by macroeconomic factors than the Equity component"

As previously discussed, CEO compensation is set by the board of directors and often needs approval from the shareholders (Edmans et al., 2023). The process of executive pay setting, proposing, voting, and approving takes time. Macroeconomic factors can also have a long-lasting effect (Bloomenthal, 2023) and might therefore not affect the CEO compensation package immediately. Therefore, I suspect that CEO compensation is affected by macroeconomic factors that were present at an earlier time:

H3: "CEO compensation will be significantly affected by the macroeconomic factors of prior periods."

CHAPTER 3 Data

Data regarding CEO compensation, CEO characteristics, firm fundamentals, and firm performance has been gathered from Wharton Research Data Services (WRDS). My total sample consists of panel data with 43,350 CEO year observations. Execucomp has been used to gather data regarding CEO compensation in the United States in a timeframe of 2006 until 2023. FAS 123R is an accounting standard introduced in 2006 by the Financial Accounting Standards Board, which changed the reporting requirements for executive compensation (Team, 2023). Therefore, I have chosen to start the timeframe in 2006 to keep the main variable of interest as consistent as possible. CEO characteristics have been gathered from Execucomp. Annual firm fundamentals have been gathered from Compustat and annual firm performance from the Center for Research in Security Prices (CRSP). Macroeconomic factors have been gathered from Federal Reserve Economic Data (FRED) and several other databases which can be found in their respective variable description. See Appendix A for an overview of all variables and their definitions.

Table 1, Panel A: Descriptive statistics

This table presents the descriptive statistics of the main variables of interest defined in 3.1 after basic cleaning of the data as described in 3.2, but prior to any logarithmic transformations. All variables are defined in Table 2 in Appendix A.

Variable	Obs.	Mean	Median	Min	Max	Skewness	Kurtosis
CEO Compensation							
Total Awarded Comp.	43,004	6,077.412	3,828.739	0	4,773,420	170.460	32,984.21
Ex Post Pay	43,014	8,099.353	3,741.511	0	2.35e+07	183.073	35,899.21
Total Compensation	43,350	988.017	800	0	77,926	18.261	682.639
Salary	43,350	771.519	727.413	0	20,000	8.608	283.424
Bonus	43,349	216.504	0	0	76,951	23.059	1,006.925
Equity	42,993	3,955.652	1998.568	0	7,813,093	179.000	34,424.94
Macroeconomic Factors							
Inflation	41,992	2.305	2.069	-.3556	8.003	1.394	6.047
Interest Rate	43,350	1.290	.376	.080	5.024	1.397	3.573
Exchange Rate	43,350	.809	.796	.680	.949	.114	1.603
GDP	43,350	18,164.31	17,608.14	13,815.58	27,360.93	.851	2.925
GDP Growth Rate	41,992	3.976	3.943	-1.976	10.651	.099	4.014
Unemployment	43,350	6.116	5.35	3.625	9.608	.443	1.754
Market Performance	43,350	10.958	14.821	-36.552	32.145	-1.225	4.271
Market Risk	43,350	19.794	17.8	11.09	32.7	.770	2.379
Investor Sentiment	43,350	2.017	3.163	-21.465	13.432	-1.197	4.606
Policy Uncertainty	43,350	132.314	127.833	71.329	242.987	.870	4.296
Geopolitical Risk	43,350	2.735	2.578	2.107	4.045	1.306	4.588
Terrorism Index	43,350	4.965	4.961	3.7	6.624	.407	1.951

Table 1, Panel B: Descriptive statistics

This table presents the descriptive statistics of all control variables defined in 3.1 after basic cleaning of the data as described in 3.2, but prior to any logarithmic transformations. All variables are defined in Table 2 in Appendix A

Variable	Obs.	Mean	Median	Min	Max	Skewness	Kurtosis
CEO Characteristics							
Age	43,042	55.326	55	25	96	.232	3.780
Tenure	42,822	11.478	9.369	0	61.415	1.451	5.756
Ownership	36,533	2.258	.523	0	100	6.124	54.542
DualCEO	43,350	.446	0	0	1	.218	1.047
Gender	43,350	.951	1	0	1	-4.165	18.347
Education	2,426	.019	0	0	1	7.054	50.758
Firm Characteristics							
Firm size	42,955	22,042.84	2,885.72	0	4,325,437	17.516	379.780
Sales	34,728	7,513.429	1,796.316	0	608,481	10.610	164.573
Cash/Assets	34,745	.155	.093	0	1	1.814	6.478
Capex/Assets	34,698	.047	.031	-.186	.744	3.701	24.990
Leverage	37,267	.250	.220	0	3.784	3.117	32.225
Tobin's Q	39,502	1.394	.916	0	34.712	4.340	38.647
ROE	36,175	.086	.103	-391.732	138.979	-123.066	21,647.12
ROA	37,343	.120	.115	-1.735	1.327	-1.099	21.053
$RET_{[-12,0]}$	39,229	.165	.088	-5.378	55.664	21.443	825.395
M/B	36,224	4.350	1.996	0	8,174.769	149.722	25,774.66

3.1 Variables

3.1.1 Dependent variable

CEO compensation

Variable *TDC1* has been gathered from Execucomp within WRDS and represents the total annual compensation consisting of salary, bonus, other annual, restricted stock grants, LTIP Payouts, all other, and the value of option grants, measured in thousands of dollars. I have transformed this variable by taking the natural logarithm to normalize the distribution. Additionally, I will use *Salary, Bonus* and *Equity* to test the difference between certain components of CEO Compensation. Subsequently, I will use the *Ex Post Pay* and *Total Compensation* variables, to test my results for robustness. All variables are defined in Table 2 in Appendix A.

3.1.2 Independent variables

Inflation

Annual Consumer Price Index (CPI) data has been gathered from FRED and the year-on-year change in the CPI represents the annual inflation percentage. The CPI measures the percentual change of the costs of a basket of goods and services.

Interest Rate

The Federal Fund Effective Rate has been gathered from FRED and represents the central interest rate in the financial market of the United States. The data collected consists of monthly rates, which I transformed into yearly rates by calculating the average of each year.

Exchange Rate

The Euro per 1 U.S Dollar exchange rate has been constructed by first gathering the U.S Dollar to Euro Spot Exchange Rate from FRED. The data collected consists of monthly rates, which I transformed into yearly rates by calculating the average of each year. Finally, I was able to calculate the Euro per 1 U.S Dollar exchange rate by dividing 1 by the U.S Dollar per 1 Euro exchange rate for each year.

Gross Domestic Product (GDP)

The Gross Domestic Product (GDP) has been gathered from FRED and represents the market value of all products and services produced in the United States through labor and property. This variable is measured in billions of dollars. The data collected consists of quarterly data, which I transformed into yearly data by calculating the average of each year. I have also created an additional variable **GDP Growth Rate** by calculating the GDP growth rate of each year compared to the previous year.

Unemployment

The Unemployment Rate has been gathered from FRED and represents the number of unemployed as a percentage of the labor force. The data collected consists of monthly rates, which I transformed into yearly rates by calculating the average of each year.

Market Performance

The market performance has been constructed by gathering the annual return of the S&P 500 with dividends in percentages from NYU Stern School of Business.

Market Risk

The market risk has been constructed by gathering the annual average Volatility Index (VIX) from FRED.

Investor Sentiment

The Investor Sentiment has been gathered from the American Association of Individual Investors and is constructed by surveying if investors feel bullish, neutral, or bearish about the stock market. The Investor Sentiment is measured by calculating the spread between the bullish and bearish percentages.

Policy Uncertainty

The Economic Policy Uncertainty Index for the United States has been gathered from Economic Policy Uncertainty and consists of three components: news coverage, tax code expiration data, and economic forecaster disagreement. Each month is given a weighted score, which I transformed into annual scores by calculating the average score of each year.

Geopolitical Risk

The Geopolitical Risk Index has been collected from Economic Policy Uncertainty and has been developed by the Federal Reserve Board. This index is constructed with the use of news coverage and provides a score for each month, which I transformed into annual scores by calculating the average score of each year.

Terrorism Index

The Terrorism Index for the United States has been gathered from Trading Economics and consists of an annual score.

3.1.3 Control variables

I use several control variables based on the findings discussed in the theoretical framework of this thesis. To control for the effect a CEO has on its own compensation I use certain CEO characteristics which have been gathered from Execucomp and BoardEx. These CEO characteristics consist of: *Age*, *Tenure*, *Ownership, DualCEO*, *Gender*, and *Education*.

The *Education* variable has been gathered from BoardEx and only matched with 2,426 names in my CEO sample. Therefore, I will not include this variable in my models as it reduces the number of observations disproportionately.

Additionally, to control for the effect the firm has on the compensation of the CEO I use certain firm characteristics which have been gathered from Compustat and are measured in millions of dollars or take a value as they are a ratio. These firm characteristics consist of: *Firm size*, *Sales*, *Cash/Assets*, *Capex/Assets*, *Leverage*, *Tobin's Q*, *ROE*, *ROA*, $RET_{[-12,0]}$, and *M/B*.

Furthermore, I have collected unique industry and firm identifiers from Execucomp regarding the firm a CEO works at. Therefore, I will be able to use industry fixed effects as well as year fixed effects in my regression models.

3.2 Data transformation

I have performed some basic cleaning of the data by removing negative values for *Tenure* as this is impossible. I have manually checked why these values are negatives and it seems to be a mistake in the database as the date when the CEO leaves is prior to when the CEO begins, which is impossible. Other impossible values, such as a singular observation with a value higher than 100 percent in the CEO ownership variable and a negative bonus or equity value, have been checked and removed in a similar manner.

Furthermore, the variables *Total Compensation*, *Total Awarded Compensation*, *Ex Post Pay*, *Salary*, *Bonus*, *Ownership*, *Firm size*, *Sales*, *Tobin's Q*, *M/B*, and *Leverage* have been transformed by adding 1 before taking their natural logarithm to normalize their distribution. I've added 1, because 0 was present as a value in these variables. Subsequently, I have winsorized the variables *Total Compensation*, *Total Awarded Compensation*, *Ex Post Pay*, and *Salary* at percentiles ranging from the 1st, 2nd, and 3rd percentiles and 97th, 98th, and 99th percentiles. Choosing their respective percentiles is performed as suggested by Hair et al. (2010) and Byrne (2010), who argue that skewness should be between -2 and 2, and kurtosis between -7 and 7, to be considered normal. Other variables have not been transformed, because this was not needed or not possible due to many negative values in that variable.

3.2 Data validity

I will be using clustered standard errors in my regression models. Therefore, my models will be robust to heteroskedasticity. Furthermore, I tested my models for multicollinearity by examining their variance inflation factor (VIF) values. As seen in Table 1 in Appendix D there is no evidence of multicollinearity in my models. The mean VIF is around 2.5 for all models and the highest VIF of a single variable across all models is 8.11. Table 2 in Appendix D shows the correlation matrix between all variables. Similarly, there are no concerns for correlations within variables in my models.

CHAPTER 4 Method

To answer my main research question, *"What are the effects of macroeconomic factors on CEO compensation?"*, I will test several hypotheses.

To test my first hypothesis: *"Macroeconomic factors have a significant positive effect on CEO compensation"*, I will perform linear regressions with clustered standard errors by firm and year:

$$\boldsymbol{Total\ Awarded\ Compensation}_{i,t} = \beta 0 + \beta 1 * \boldsymbol{Macroeconomic\ Factor}_{t} + \beta 2 * \boldsymbol{Age}_{i,t} + \beta 3 * \boldsymbol{Tenure}_{i,t} + \beta 4 * \boldsymbol{Ownership}_{i,t} + \beta 5 * \boldsymbol{DualCEO}_{i,t} + \beta 6 * \boldsymbol{Gender}_{i,t} + \beta 7 * \boldsymbol{Firm\ Size}_{i,t} + \beta 8 * \boldsymbol{Sales}_{i,t} + \beta 9 * \frac{\boldsymbol{Cash}}{\boldsymbol{Assets}_{i,t}} + \beta 10 * \frac{\boldsymbol{Capex}}{\boldsymbol{Assets}_{i,t}} + \beta 11 * \boldsymbol{Leverage}_{i,t} + \beta 12 * \boldsymbol{Tobin's\ Q}_{i,t} + \beta 13 * \boldsymbol{ROE}_{i,t} + \beta 14 * \boldsymbol{ROA}_{i,t} + \beta 15 * \boldsymbol{RET}_{[-12,0]i,t} + \beta 16 * \frac{\boldsymbol{M}}{\boldsymbol{B}}_{i,t} + \boldsymbol{\gamma_i} + \boldsymbol{\varepsilon_i}$$

with *Total Awarded Compensation*$_{i,t}$ as the dependent variable for firm *i* in the year *t*. The *Macroeconomic Factor*$_t$ represents **Inflation**, **Interest Rate**, **Exchange Rate**, **GDP**, **GDP growth rate**, **Unemployment**, **Market Performance**, **Market Risk**, **Investor Sentiment**, **Policy Uncertainty**, **Geopolitical Risk**, and **Terrorism Index** as the main independent variable of interest in the year *t*. My control variables consist of the CEO characteristics **Age**$_{i,t}$, **Tenure**$_{,t}$, **Ownership**$_{i,t}$, **DualCEO**$_{i,t}$ and **Gender**$_{i,t}$, as well as the firm characteristics **Firm size**$_{,t}$, **Sales**$_{,t}$, **Cash/Assets**$_{,t}$, **Capex/Assets**$_{i,t}$, **Leverage**$_{i,t}$, **Tobin's Q**$_{i,t}$, **ROE**$_{i,t}$, **ROA**$_{i,t}$, **RET**$_{[-12,0]i,t}$, and **M/B**$_{i,t}$ for the firm *i* in the year *t*. Furthermore, γ_i represents the industry fixed effects, and ε_i represents the clustered standard errors. For robustness, I will use *Ex Post Pay*$_{i,t}$ as the dependent variable as this measures the total compensation in a different way. It includes the value of the options exercised instead of the value of options granted. Additionally, I will perform regressions with firm fixed effects instead of industry fixed effects.

To test my second hypothesis: *"The Salary and Bonus components of CEO compensation will be more severely impacted by macroeconomic factors than the Equity component"*, I will perform linear regressions with clustered standard errors by firm and year and use multiple components of CEO compensation to be able to compare them:

$$\boldsymbol{CEO\ Compensation\ Components}_{i,t} = \beta 0 + \beta 1 * \boldsymbol{Macroeconomic\ Factor}_{t} + \beta 2 * \boldsymbol{Age}_{i,t} + \beta 3 * \boldsymbol{Tenure}_{i,t} + \beta 4 * \boldsymbol{Ownership}_{i,t} + \beta 5 * \boldsymbol{DualCEO}_{i,t} + \beta 6 * \boldsymbol{Gender}_{i,t} + \beta 7 * \boldsymbol{Firm\ Size}_{i,t} + \beta 8 * \boldsymbol{Sales}_{i,t} + \beta 9 * \frac{\boldsymbol{Cash}}{\boldsymbol{Assets}_{i,t}} + \beta 10 * \frac{\boldsymbol{Capex}}{\boldsymbol{Assets}_{i,t}} + \beta 11 * \boldsymbol{Leverage}_{i,t} + \beta 12 * \boldsymbol{Tobin's\ Q}_{i,t} + \beta 13 * \boldsymbol{ROE}_{i,t} + \beta 14 * \boldsymbol{ROA}_{i,t} + \beta 15 * \boldsymbol{RET}_{[-12,0]i,t} + \beta 16 * \frac{\boldsymbol{M}}{\boldsymbol{B}}_{i,t} + \boldsymbol{\gamma_i} + \boldsymbol{\varepsilon_i}$$

with *CEO Compensation Components*$_{i,t}$ as the dependent variable, which represents the variables **Salary**, **Bonus**, and **Equity** for firm *i* in the year *t*. By testing the different components of CEO compensation, I will be able to see if some parts of CEO compensation might be affected differently. The *Macroeconomic Factor*$_t$ represents **Inflation**, **Interest Rate**, **Exchange Rate**, **GDP**, **GDP growth rate**, **Unemployment**, **Market Performance**, **Market Risk**, **Investor Sentiment**, **Policy Uncertainty**, **Geopolitical Risk**, and **Terrorism Index** as the main independent variable of interest in the year *t*. My control variables consist of the CEO characteristics **Age**$_{i,t}$, **Tenure**$_{,t}$, **Ownership**$_{i,t}$, **DualCEO**$_{i,t}$ and **Gender**$_{i,t}$, as well as the firm characteristics **Firm size**$_{,t}$, **Sales**$_{,t}$, **Cash/Assets**$_{,t}$, **Capex/Assets**$_{i,t}$, **Leverage**$_{i,t}$, **Tobin's Q**$_{i,t}$, **ROE**$_{i,t}$, **ROA**$_{i,t}$, **RET**$_{[-12,0]i,t}$, and **M/B**$_{i,t}$ for the firm *i* in the year *t*. Furthermore, γ_i represents the industry fixed effects, and ε_i represents the clustered standard errors. For robustness, I will use Total Compensation as the dependent variable. The Total Compensation variable has been gathered from Execucomp and consists of both the salary and bonus components.

To test my third hypothesis: *"CEO compensation will be significantly affected by the macroeconomic factors of prior periods."*, I will perform linear regressions with clustered standard errors by firm and year and use a lagged variant of CEO compensation to see if the macroeconomic factors have long-lasting effects:

$$\boldsymbol{Total\ Awarded\ Compensation}_{i,t+1} = \beta0 + \beta1 * \boldsymbol{Macroeconomic\ Factor}_t + \beta2 * \boldsymbol{Age}_{i,t} + \beta3 * \boldsymbol{Tenure}_{i,t} + \beta4 * \boldsymbol{Ownership}_{i,t} + \beta5 * \boldsymbol{DualCEO}_{i,t} + \beta6 * \boldsymbol{Gender}_{i,t} + \beta7 * \boldsymbol{Firm\ Size}_{i,t} + \beta8 * \boldsymbol{Sales}_{i,t} + \beta9 * \frac{\boldsymbol{Cash}}{\boldsymbol{Assets}_{i,t}} + \beta10 * \frac{\boldsymbol{Capex}}{\boldsymbol{Assets}_{i,t}} + \beta11 * \boldsymbol{Leverage}_{i,t} + \beta12 * \boldsymbol{Tobin's\ Q}_{i,t} + \beta13 * \boldsymbol{ROE}_{i,t} + \beta14 * \boldsymbol{ROA}_{i,t} + \beta15 * \boldsymbol{RET}_{[-12,0]i,t} + \beta16 * \frac{\boldsymbol{M}}{\boldsymbol{B}}_{i,t} + \boldsymbol{\gamma_i} + \boldsymbol{\varepsilon_i}$$

with *Total Awarded Compensation*$_{i,t}$ as the dependent variable for firm *i* in the year *t+1*. By testing different ways of measuring CEO compensation, I will be able to see if CEO compensation might be affected differently when the timeframe between economic indicators and the dependent variable increases. The *Macroeconomic Factor*$_t$ represents **Inflation**, **Interest Rate**, **Exchange Rate**, **GDP**, **GDP growth rate**, **Unemployment**, **Market Performance**, **Market Risk**, **Investor Sentiment**, **Policy Uncertainty**, **Geopolitical Risk**, and **Terrorism Index** as the main independent variable of interest in the year *t*. My control variables consist of the CEO characteristics **Age**$_{i,t}$, **Tenure**$_{,t}$, **Ownership**$_{i,t}$, **DualCEO**$_{i,t}$ and **Gender**$_{i,t}$, as well as the firm characteristics **Firm size**$_{,t}$, **Sales**$_{,t}$, **Cash/Assets**$_{,t}$, **Capex/Assets**$_{i,t}$, **Leverage**$_{i,t}$, **Tobin's Q**$_{i,t}$, **ROE**$_{i,t}$, **ROA**$_{i,t}$, **RET**$_{[-12,0]i,t}$, and **M/B**$_{i,t}$ for the firm *i* in the year *t*. Furthermore, γ_i represents the industry fixed effects, and ε_i represents the clustered standard errors. For robustness, I will look at CEO compensation in the years *y+2* and *y+5*.

CHAPTER 5 Results

5.1 Results Total Awarded Compensation

In this thesis, linear regression models with high-dimensional fixed effects and standard errors clustered by firm and year have been estimated. It is important to note that all models use dependent variables that have been transformed by adding 1 before taking their natural logarithm. Due to this transformation the coefficients are interpreted by exponentiating the coefficient. After exponentiating, the outcome is the percentual effect a one-unit increase in the independent variable has on the dependent variable, all else being equal. In this section, I will present my findings based on my first hypothesis: *"Macroeconomic factors have a significant positive effect on CEO compensation"*.

Table 2: Abridged Regression Results Total Awarded Compensation (1) - (6)

This table is an abridged version of the regression results for the models (1) - (6), presenting the results for the main variables of interest and their respective intercept. The models use **Total Awarded Compensation** as their dependent variable. See Table 1 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(1)	(2)	(3)	(4)	(5)	(6)
Inflation	0.039***					
	(0.008)					
Interest Rate		0.009				
		(0.012)				
Exchange Rate			0.890**			
			(0.236)			
GDP				0.000***		
				(0.000)		
GDP Growth Rate					0.016*	
					(0.008)	
Unemployment						-0.026**
						(0.008)
Intercept	4.153***	4.180***	3.590***	3.883***	4.157***	4.157***
	(0.173)	(0.167)	(0.212)	(0.168)	(0.171)	(0.171)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	24,002	24,891	24,891	24,891	24,002	24,891
R-squared	0.57	0.56	0.56	0.57	0.56	0.56
Adj. R-squared	0.56	0.55	0.56	0.56	0.56	0.56

Table 2 presents an abridged version showing the macroeconomic factors as main variables of interest and their respective intercept. In model 1, the effect of Inflation is positive and statistically significant at the 1% level. It has a positive coefficient of 0.039. Due to the transformation of the dependent variable, I exponentiate the coefficient to calculate the effect of this coefficient. A one percentage point increase in

the Inflation rate increases Total Compensation by 4.0%. Model 2 presents a slightly positive coefficient of 0.009 for the macroeconomic factor Interest Rate. It is not statistically significant, thus there is not enough evidence that there is a relationship between Interest Rate and Total Awarded Compensation. In model 3, the effect of the exchange rate of the amount of Euros per 1 U.S Dollar has a positive coefficient of 0.890 and is statistically significant at the 5% level. This coefficient is by far the highest magnitude when compared to all other macroeconomic factors tested in this thesis. An increase of 1 Euro per 1 U.S Dollar increases Total Compensation by 143.5%. This effect might seem extreme at first glance, but Table 1 shows that the minimum and maximum values for Exchange Rate differ by only 0.269 Euros per 1 U.S Dollar. In model 4, the effect of GDP on Total Compensation is 0.000. This effect is statistically significant at the 1% level. Therefore, we can conclude that GDP does not have a meaningful influence on Total Awarded Compensation. However, in model 5 the coefficient of the growth rate of GDP has a slightly positive effect and is statistically significant at the 10% level. It has a coefficient of 0.016, which means that when the growth rate of GDP increases by one percentage point Total Awarded Compensation increases by 1.61%. Model 6 shows that Unemployment has a negative coefficient and is statistically significant at the 5% level. It has a coefficient of -0.026, which means that when the Unemployment rate increases by one percentage point Total Compensation decreases by 2.5%.

The coefficients of the control variables of models 1 - 6 are shown in Table 1 in Appendix B. It shows that the CEO characteristics Age and Ownership have significant coefficients at the 1% level. However, the effect of Age is positive while the effect of Ownership is negative in all models. Tenure and DualCEO have a positive significant effect in all models ranging between the 5% and 10% significance levels. The Gender dummy variable is not significant in any of the models, implying that there is not enough evidence that gender affects Total Awarded Compensation. The firm characteristics Firm Size, Leverage, Tobin's Q and M/B are significant at the 1% and 5% level in all models and have a positive coefficient. The variable Sales is only significant at the 10% level in the models 3 and 4. Sales is not statistically significant in the other models. Capex/Assets has a negative coefficient and is statistically significant in almost all models at the 5% and 10% significance level, with exception of model 4 where the variable is not statistically significant. In contrast, ROA has a positive coefficient and is only significant in model 4 at the 10% level and not statistically significant in all other models. The variables Cash/Assets, ROE, and $RET_{[-12,0]}$ are not statistically significant in any of the models. This means that there is not enough evidence of a relationship between these variables and Total Awarded Compensation.

The number of observations for the models 1 - 6 ranges from 24,110 to 25,003. All models have statistically significant and positive intercepts at the 1% level. The intercept indicates the baseline for Total Awarded Compensation. All models have an R-squared of 0.56 or 0.57 and an adjusted R-squared of 0.55 or 0.56. These values indicate that the input variables of these models explain about 55% of the output.

Table 3: Abridged Regression Results Total Awarded Compensation (7) - (12)

This table is an abridged version of the regression results for the models (7) - (12), presenting the results for the main variables of interest and their respective intercept. The models use **Total Awarded Compensation** as their dependent variable. See Table 2 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(7)	(8)	(9)	(10)	(11)	(12)
Market Performance	-0.001					
	(0.002)					
Market Risk		-0.001				
		(0.004)				
Investor Sentiment			-0.002			
			(0.004)			
Policy Uncertainty				0.001*		
				(0.000)		
Geopolitical Risk					0.66	
					(0.064)	
Terrorism Index						0.025
						(0.017)
Intercept	4.190***	4.208***	4.196***	4.122***	4.028***	4.079***
	(0.167)	(0.159)	(0.173)	(0.169)	(0.236)	(0.196)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	24,891	24,891	24,891	24,891	24,891	24,891
R-squared	0.56	0.56	0.56	0.56	0.56	0.56
Adj. R-squared	0.55	0.55	0.55	0.55	0.56	0.55

Table 5 presents an abridged version showing the macroeconomic factors as main variables of interest and their respective intercept. In the models 7, 8, 9, 11, and 12 there is not enough statistical evidence of a relationship between these variables and Total Awarded Compensation. Therefore, we cannot interpret these coefficients. However, model 10 is statistically significant at the 10% level. Policy uncertainty has a slightly positive coefficient of 0.001. After exponentiating this coefficient, the effect of a one-unit increase in Policy Uncertainty means an increase of 0.1% in Total Awarded Compensation. This effect may seem small at first glance, but Table 1 shows that the minimum and maximum values of Policy Uncertainty differ by 171 units. This implies that Policy Uncertainty can potentially have a real impact on Total Awarded Compensation.

The coefficients of the control variables of models 7 - 12 are shown in Table 2 in Appendix B. The CEO characteristics Age and Ownership are statistically significant at the 1% level. Age has a positive effect on Total Awarded Compensation, while the effect of Ownership is negative. Furthermore, DualCEO is statistically significant at the 5% level and has a positive coefficient in all models. Tenure is statistically significant at the 10% level and has a positive effect in all models. Furthermore, the firm fundamentals

Firm Size, Leverage and Tobin's Q are positive and significant at the 1% level in all models. Cash/Assets and M/B have a positive relationship with Total Awarded Compensation and are significant at the 5% and 10% level.

All models have statistically significant intercepts at the 1% level and are positive. The intercept indicates the baseline for Total Compensation. All models have an R-squared of 0.56 and an adjusted R-squared of 0.55 or 0.56. These values indicate that the input variables of these models explain about 55% of the output. The models 7 – 12 all have 24,891 observations.

In conclusion, my first hypothesis: *"Macroeconomic factors have a significant positive effect on CEO compensation"*, is rejected based on these results. These results show not enough statistical evidence of a relationship with Total Awarded Compensation with the macroeconomic factors Interest Rate, Market Performance, Market Risk, Investor Sentiment, and Terrorism Index. Furthermore, Unemployment does have a significant coefficient at the 5% level, but it has a negative effect on Total Awarded Compensation.

5.2 Results CEO Compensation Components

In this section, I present the regression results regarding the components of CEO Compensation based on my second hypothesis: *"The Salary and Bonus components of CEO compensation will be more severely impacted by macroeconomic factors than the Equity component"*. I tested the effect of all macroeconomic factors on certain components of CEO Compensation to see if they would be affected differently. Each abridged table consists of two macroeconomic factors and their respective coefficients for the transformed Salary, Bonus and Equity variables.

Table 4: Abridged Regression Results CEO Compensation Components (13) - (18)

This table is an abridged version of the regression results for the models (13) - (18), presenting the results for the main variables of interest. The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. See Table 3 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(13) Salary	(14) Salary	(15) Bonus	(16) Bonus	(17) Equity	(18) Equity
Inflation	0.014**		-0.005		0.066***	
	(0.004)		(0.014)		(0.015)	
Interest Rate		0.012		0.014		0.054
		(0.009)		(0.031)		(0.038)
Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	24,110	24,999	24,109	24,998	24,102	24,991
R-squared	0.50	0.50	0.13	0.13	0.29	0.30
Adj. R-squared	0.50	0.50	0.12	0.12	0.28	0.29

Table 4 presents an abridged version of the results for the effects of Inflation and Interest Rate on Salary, Bonus, and Equity. In model 13, Inflation has a positive coefficient that is significant at the 5% level. It has a coefficient of 0.014, which means that Salary increases by 1.41% when Inflation increases by one percentage point. The coefficients in the models 14, 15, 16 and 18 are not significant. This implies that the sample used does not contain enough statistical evidence of a relationship between Interest Rate and Salary, Bonus, and Equity. Similarly, there is not enough statistical evidence of a relationship between Inflation and Bonus. In model 17, Inflation has a positive coefficient that is statistically significant at the 1% level. It has a coefficient of 0.066, which means that Equity increases by 6,82% when Inflation increases by one percentage point.

In Table 3 in Appendix B the full results are shown including the coefficients of all control variables and the intercept. The intercept is statistically significant and positive for all models. For the models 13 and 14 with Salary as the dependent variable, the control variables Age, Tenure, DualCEO, Firm Size, Sales, Leverage are positive and statistically significant at the 1% and 5% levels. The control variables Ownership, Cash/Assets, and Capex/Assets are negative and statistically significant at the 1% and 5% levels. ROE is only statistically significant in model 14 at the 10% level, with a positive coefficient of 0.013. The models 15 and 16, with Bonus as their dependent variable, have Firm Size, Sales, Cash/Assets, and Capex/Assets as statistically significant control variables. The models 17 and 18 are very similar to models 13 and 14, with the exception of Tobin's Q and $RET_{[-12,0]}$ now being statistically

significant at the 1%, 5% and 10% significance levels. The Intercept is positive and significant at the 15 level for all models.

Table 5: Abridged Regression Results CEO Compensation Components (19) - (24)

This table is an abridged version of the regression results for the models (19) - (24), presenting the results for the main variables of interest. The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. See Table 4 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(19) Salary	(20) Salary	(21) Bonus	(22) Bonus	(23) Equity	(24) Equity
Exchange Rate	0.414**		-1.394**		2.277***	
	(0.116)		(0.362)		(0.470)	
GDP		0.000***		0.000***		0.000***
		(0.000)		(0.000)		(0.000)
Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	24,999	24,999	24,998	24,998	24,991	24,991
R-squared	0.51	0.51	0.13	0.13	0.30	0.30
Adj. R-squared	0.50	0.50	0.12	0.12	0.29	0.29

Table 5 presents an abridged version of the results for the effects of Exchange Rate and GDP on Salary, Bonus, and Equity. In model 19, Exchange Rate has a positive coefficient of 0.414 and is significant at the 5% level. This means that Salary increases by 51% when the Exchange Rate increases by one percentage point. GDP has does not influence Salary, Bonus, and Equity as shown in models 20, 22, and 24. It has a coefficient of 0.000 in all models and is statistically significant at the 1% level. Exchange rate has a negative effect on Bonus in model 21. It has a negative coefficient of 1.394 and is statistically significant at the 5% level. This implies a decrease of 75.2% in the Bonus component of CEO compensation when the Exchange Rate increases by one percentage point. In contrast, model 23 shows a positive and relatively high coefficient of 2.277 for the Exchange Rate. This means an increase of 875% in the Equity portion of CEO Compensation when the Exchange Rate increases by one percentage point. The models 19 and 20 show significant coefficients for all CEO characteristics except for Gender. This implies that there is not enough statistical evidence in my sample to find a relationship between gender and CEO compensation. This implies that gender does not influence the Salary component. Similarly, Gender is not statistically significant in the models 21, 22, 23, and 24. This implies that gender does not play a role when setting the remuneration package of a CEO. The full table including the control variables and the intercept can be found in Table 4 in Appendix B.

Table 6: Abridged Regression Results CEO Compensation Components (25) - (30)

This table is an abridged version of the regression results for the models (25) - (30), presenting the results for the main variables of interest. The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. See Table 5 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(25) Salary	(26) Salary	(27) Bonus	(28) Bonus	(29) Equity	(30) Equity
GDP Growth Rate	0.004		-0.002		0.026*	
	(0.003)		(0.013)		(0.014)	
Unemployment		-0.014**		0.040**		-0.075***
		(0.004)		(0.013)		(0.017)
Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	24,110	24,999	24,109	24,998	24,102	24,991
R-squared	0.50	0.50	0.13	0.13	0.29	0.30
Adj. R-squared	0.49	0.50	0.12	0.12	0.28	0.29

Table 6 presents an abridged version of the results for the effects of GDP Growth Rate and Unemployment on Salary, Bonus, and Equity. GDP Growth Rate does not have a statistically significant coefficient in the models 25 and 27. However, there was enough statistical evidence in the sample to find a positive and significant coefficient in model 29. It is a positive coefficient of 0.026 at the 10% significance level. This means that when the GDP Growth Rate increases by one percentage point, Equity increases by 2.63%. The independent variable Unemployment is statistically significant at the 5% and 1% levels. It has a negative coefficient of 0.014 in model 26. Implying a decrease of 1.4% in Salary when Unemployment increases by one percentage point. In model 28, the coefficient is positive. Implying an increase of 4.1% in Bonus when Unemployment increases by one percentage point. In contrast, model 30 shows a negative coefficient of 0.075. Implying a decrease of 7.2% in Equity when Unemployment increases by one percentage point. The full table including the control variables and the intercept can be found in Table 5 in Appendix B.

Table 7: Abridged Regression Results CEO Compensation Components (31) - (36)

This table is an abridged version of the regression results for the models (31) - (36), presenting the results for the main variables of interest. The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. See Table 6 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(31) Salary	(32) Salary	(33) Bonus	(34) Bonus	(35) Equity	(36) Equity
Market Performance	0.000		-0.001		-0.002	
	(0.001)		(0.002)		(0.003)	
Market Risk		-0.001		0.008**		-0.006
		(0.001)		(0.003)		(0.006)
Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	24,999	24,999	24,998	24,998	24,991	24,991
R-squared	0.50	0.50	0.13	0.13	0.29	0.29
Adj. R-squared	0.49	0.49	0.12	0.12	0.28	0.28

Table 7 presents an abridged version of the results for the effects of Market Performance and Market Risk on Salary, Bonus, and Equity. The models 31, 32, 33, 35, and 36 did not find statistically significant coefficients. This implies that there was not enough statistical evidence found in the sample to find an influence by Market Performance on Salary, Bonus, and Equity. Moreover, not enough statistical evidence has been found of influence by Market Risk on Salary and Equity. However, model 34 does show a positive coefficient that is significant at the 5% level. It implies a Bonus increase of 0.08% when Market Risk increase by one-unit. The full table including the control variables and the intercept can be found in Table 6 in Appendix B.

Table 8: Abridged Regression Results CEO Compensation Components (37) - (42)

This table is an abridged version of the regression results for the models (37) - (42), presenting the results for the main variables of interest. The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. See Table 7 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(37) Salary	(38) Salary	(39) Bonus	(40) Bonus	(41) Equity	(42) Equity
Investor Sentiment	-0.001		0.000		-0.006	
	(0.001)		(0.003)		(0.006)	
Policy Uncertainty		0.000		0.000		0.000
		(0.000)		(0.001)		(0.001)
Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	24,999	24,999	24,998	24,998	24,991	24,991
R-squared	0.50	0.50	0.13	0.13	0.29	0.29
Adj. R-squared	0.50	0.50	0.12	0.12	0.28	0.28

Table 8 presents an abridged version of the results for the effects of Investor Sentiment and Policy Uncertainty on Salary, Bonus, and Equity. All models show a lack of statistical significance. This implies that there was not enough statistical evidence found in the sample to find an influence of Investor Sentiment on Salary, Bonus, and Equity. Similarly, not enough statistical evidence has been found of an influence by Policy Uncertainty and Salary, Bonus, and Equity. The full table including the control variables and the intercept can be found in Table 7 in Appendix B. It is noteworthy to mention that the R-squared and adjusted R-squared values are consistently lower in the Bonus models when compared to the Salary and Equity models.

Table 9: Abridged Regression Results CEO Compensation Components (43) - (48)

This table is an abridged version of the regression results for the models (43) - (48), presenting the results for the main variables of interest. The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. See Table 8 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(43) Salary	(44) Salary	(45) Bonus	(46) Bonus	(47) Equity	(48) Equity
Geopolitical Risk	0.051*		-0.083*		0.221**	
	(0.025)		(0.046)		(0.101)	
Terrorism Index		0.001		-0.098**		0.061
		(0.011)		(0.046)		(0.051)
Intercept	Yes	Yes	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	24,999	24,999	24,998	24,998	24,991	24,991
R-squared	0.50	0.50	0.13	0.13	0.30	0.29
Adj. R-squared	0.50	0.50	0.12	0.12	0.29	0.28

Table 9 presents an abridged version of the results for the effects of Geopolitical Risk and the Terrorism Index on Salary, Bonus, and Equity. In model 43, Geopolitical Risk has a positive significant coefficient of 0.051. It is significant at the 10% level and implies a Salary increase of 5.2% when the Geopolitical Risk increases by one-unit. The models 44 and 48 are not statistically significant and are therefore not reliable enough to be interpreted. Geopolitical Risk has a negative coefficient of 0.083 in model 45. The coefficient is significant at the 10% level and implies a Bonus decrease of 8% when the Geopolitical Risk increases by one-unit. In contrast, Model 47 shows a relatively high coefficient that is significant at the 5% level. It implies an increase in Equity of 24.8% when the Geopolitical Risk increases by one-unit. The Terrorism Index has a negative coefficient of 0.098 in model 46. The coefficient implies a Bonus decrease of 9.3% when the Terrorism Index increases by one-unit. The full table including the control variables and the intercept can be found in Table 8 in Appendix B.

In conclusion, my second hypothesis: *"The Salary and Bonus components of CEO compensation will be more severely impacted by macroeconomic factors than the Equity component"*, is rejected based on these results. My findings show consistently higher magnitudes for the Equity component when compared to the Salary and Bonus components.

5.3 Results Lagged Total Awarded Compensation

In this section, I present the regression results of the models using a lagged version of Total Awarded Compensation based on my third hypothesis: *"CEO compensation will be significantly affected by the macroeconomic factors of prior periods."*. I tested the effect of all macroeconomic factors on Total Awarded Compensation, which is delayed by one year, to see how this would affect CEO Compensation.

Table 10: Abridged Regression Results Lagged Total Awarded Compensation (49) - (54)

This table is an abridged version of the regression results for the models (49) - (54), presenting the results for the main variables of interest and their respective intercept. The models use a lagged version of **Total Awarded Compensation** as their dependent variable. This lagged version is delayed by one year. See Table 9 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(49)	(50)	(51)	(52)	(53)	(54)
Inflation	0.010					
	(0.008)					
Interest Rate		-0.018				
		(0.013)				
Exchange Rate			0.824***			
			(0.177)			
GDP				0.000***		
				(0.000)		
GDP Growth Rate					0.022**	
					(0.009)	
Unemployment						-0.008
						(0.009)
Intercept	4.460***	4.488***	3.910***	4.154***	4.446***	4.531***
	(0.169)	(0.166)	(0.193)	(0.174)	(0.173)	(0.189)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	21,309	21,309	21,309	21,309	21,309	21,309
R-squared	0.57	0.57	0.57	0.57	0.57	0.56
Adj. R-squared	0.56	0.56	0.56	0.56	0.56	0.56

Table 10 presents an abridged version of the regression results for the effects of Inflation, Interest Rate, Exchange Rate, GDP, GDP Growth Rate, and Unemployment on a lagged version of Total Awarded Compensation. This lagged version is delayed by one year. The models 49, 50, and 54 do not find a statistically significant coefficient for the main independent variable of interest. In contrast, model 51 finds a relatively high coefficient of 0.824 for the independent variable Exchange Rate. This coefficient is statistically significant at the 1% level and implies an increase of 128% of Total Awarded Compensation in the next year when the Exchange rate increases by one percentage point. In model 52, the coefficient of GDP is statistically significant. However, a coefficient of 0.000 implies that GDP does not have an influence on Total Awarded Compensation of next year. Furthermore, GDP growth rate does have a

slightly positive coefficient of 0.022. The coefficient is significant at the 5% level and implies an increase of 2.2% in Total Awarded Compensation in the subsequent year when the GDP Growth Rate increase by one percentage point. The intercepts of all models are positive and statistically significant at the 1% level. The full table including the control variables can be found in Table 9 in Appendix B

Table 11: Abridged Regression Results Lagged Total Awarded Compensation (55) - (60)

This table is an abridged version of the regression results for the models (55) - (60), presenting the results for the main variables of interest and their respective intercept. The models use a lagged version of **Total Awarded Compensation** as their dependent variable. This lagged version is delayed by one year. See Table 10 in Appendix B for the full table including the results of the control variables. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory Variables	(55)	(56)	(57)	(58)	(59)	(60)
Market Performance	0.001					
	(0.001)					
Market Risk		0.002				
		(0.003)				
Investor Sentiment			-0.002			
			(0.002)			
Policy Uncertainty				0.001**		
				(0.000)		
Geopolitical Risk					-0.007	
					(0.049)	
Terrorism Index						0.070**
						(0.020)
Intercept	4.461***	4.431***	4.474***	4.329***	4.483***	4.196***
	(0.169)	(0.170)	(0.173)	(0.171)	(0.215)	(0.180)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	21,309	21,309	21,309	21,309	21,309	21,309
R-squared	0.56	0.56	0.56	0.57	0.56	0.57
Adj. R-squared	0.56	0.56	0.56	0.56	0.56	0.56

Table 11 presents an abridged version of the regression results for the effects of Market Performance, Market Risk, Investor Sentiment, Policy Uncertainty, Geopolitical Risk, and the Terrorism Index on a lagged version of Total Awarded Compensation. The models 55, 56, 57, and 59 did not find enough statistical evidence of a relationship between the main independent variable of interest and Total Awarded Compensation of next year. Therefore, the respective coefficients cannot be interpreted. Model 58 finds a slightly positive coefficient of 0.001 for Policy Uncertainty. The coefficient is statistically significant at the 5% level and implies an increase of 0.1% in Total Awarded Compensation next year when Policy Uncertainty increases by one unit. Furthermore, the Terrorism Index has a positive coefficient in model 60. The coefficient of 0.070 us significant at the 5% level. This means that when the Terrorism Index increases by one unit, the Total Awarded Compensation of next year increases by 7.3%. The intercepts of

all models are positive and statistically significant at the 1% level. The full table including the control variables can be found in Table 10 in Appendix B.
In conclusion, my third hypothesis: *"CEO compensation will be significantly affected by the macroeconomic factors of prior periods."*, is rejected based on these results. These results show not enough statistical evidence of a delayed effect with Total Awarded Compensation by the macroeconomic factors Inflation, Interest Rates, Unemployment, Market Performance, Market Risk, Investor Sentiment, and Geopolitical Risk.

5.4 Robustness

To test the robustness of my first hypothesis: *"Macroeconomic factors have a significant positive effect on CEO compensation"*, I performed similar regressions with Ex Post Pay as their dependent variable. This variable is constructed differently than the Total Awarded Pay. While Total Awarded Pay considers to value of options awarded, Ex Post Pay measures the value of options granted. Table 1 and 2 in Appendix C show very similar results to the models with Total Awarded Compensation as their dependent variable. The significance of the main variable of interest stays on the same level or is slightly reduced. Furthermore, the signs of the coefficients stay the same and their magnitudes change very slightly. Similarly, Table 9 and Table 10 in Appendix C show the results for similar regressions with firm fixed effects instead of industry fixed effects. By controlling for all time-invariant characteristics for each firm I was able to tests the robustness of my findings. The coefficients and significance of these regression models are very similar. Therefore, I conclude that my findings are robust when measuring CEO compensation in different ways and when using firm fixed effects instead of industry fixed effects.

To test the robustness of second hypothesis: *"The Salary and Bonus components of CEO compensation will be more severely impacted by macroeconomic factors than the Equity component"*, I performed similar regressions with Total Compensation as the dependent variable. This variable has been gathered from Execucomp and consists of the salary as well as the bonus components of CEO compensation. Table 3 and 4 in Appendix C show the results of using the combined salary and bonus components as the dependent variable. The coefficients of the main dependent variables of interest get noticeably more statistically significant. Similarly to the Salary and Bonus components, most signs are positive. The magnitudes of the coefficients of the main variables of interest do get larger overall, but not to the extent where it interferes with my previous findings. Therefore, I conclude that my findings are robust when measuring the salary and bonus compartment combined.

To test the robustness of my third hypothesis: *"CEO compensation will be significantly affected by the macroeconomic factors of prior periods"*, I performed regressions and used a more severe lagged variant of CEO compensation as the dependent variable. Table 5 and 6 consist of models with the dependent

variable being delayed by 2 years. Table 7 and 8 consist of models with the dependent variable being delayed by 5 years. When looking at Table 5 and 6 the findings are very similar to the findings when looking at a delay of 1 year. However, when looking at Table 7 and 8 the variable Interest Rate becomes statistically significant at the 5% level and has a negative effect when this was not the case in my findings. Furthermore, the variable Policy Uncertainty becomes unsignificant when this variable was significant at the 5% level before. Taking everything into consideration, I conclude my findings are robust when changing the delay period.

CHAPTER 6 Discussion

I have tested 12 macroeconomic factors in this thesis, of which a subset of these macroeconomic factors has been studied before. Therefore, I am able to compare my findings with previous literature. My results show that Inflation has a significant positive effect on CEO compensation measured as the Total Awarded Compensation and is robust when measured as Ex Post Pay. This finding is similar to the findings of Chiu et al. (2014), who find that inflation has a significant positive effect on Ex Post pay. Moreover, inflation has a significant positive effect through Sales and Tobin's Q, which subsequently have a positive effect on the CEO compensation. My findings show that the Interest Rate does not significantly affect CEO compensation, which contrasts with the findings of Chiu et al. (2014), where the interest rate does have a significant relationship on CEO compensation. This difference can be explained by the different timeframe of our samples and the construction of their anticipated and unanticipated interest rate variables. During the construction, the assumption is made that the anticipated rate is the same as last year, this assumption is not realistic and might skew the results. Similarly, I find a significant positive effect for the exchange rate of the amount of euros per dollar. However, Chiu et al. (2014) find a significant negative effect on CEO compensation. This could very well be due to the different timeframes of our samples and the construction of the exchange rate variable. I have gathered the amount of dollars per euro exchange rate from FRED and converted it to the amount of euros per dollar. Chiu et al. (2014) construct the exchange rate variable differently by looking at the uncovered interest rate parity. These differences could explain why our findings are different.

My results show a significant effect of GDP on CEO compensation. However, the coefficient is so close to zero that I find that GDP does not influence CEO compensation. Finding this lack of influence rejects my first hypothesis: *"Macroeconomic factors have a significant positive effect on CEO compensation"*. I expected a higher CEO compensation in years when GDP was higher because GDP increases indicate that the economy is doing better than before. A higher GDP would indicate more economic activity and despite its criticisms earlier discussed in section 2.3, GDP remains the most closely monitored measure of economic activity (Fernando, 2024). Contrary to my expectations I find that GDP does not meaningfully influence CEO compensation. However, the GDP Growth Rate does have a slightly positive and significant effect on CEO compensation. This indicates that during the pay-setting process, the relative GDP growth compared to the year before is more relevant than the overall GDP factor. Although the effect of the GDP Growth Rate remains minimal, it aligns with my expectations. In contrast, Unemployment has a significant negative effect on CEO compensation. I expected a positive impact as there is evidence in the literature that a higher level of unemployment enables firms to have more bargaining power to find the best candidates for a modest salary (Malloy, 2020). I expected this benefit to contribute to the 'luck' of the CEO to increase margins and hit targets, certainly leading to an increase in the bonus and equity components of CEO compensation. However, the negative relationship with CEO

compensation can be explained by the economic downturn during these years. The Unemployment variable peaks in the years 2007, 2008 and 2020. Therefore, when unemployment is high, the little benefit it would have towards the 'luck' of the CEO is negated by the overall economic downturn. Market Performance, Market Risk, and Investor Sentiment are all related to the US stock market and not significant in my results. I expected the stock market to have an effect and be a factor in the pay-setting process. In section 2.1, I discuss existing literature indicating that benchmarking can often play a factor. However, my results indicate that firms do not use the S&P 500 as a benchmark and are either not aware or do not give any weight to the market risk during the pay-setting process. Furthermore, the Investor Sentiment about the stock market is not considered during this process as I find it does not influence the CEO's remuneration package.

My results show that Policy Uncertainty has a significant positive effect. This finding aligns with my expectations, as uncertainty about (future) policy could lead to a CEO demanding a higher compensation. Despite the effect it has on CEO compensation being quite small, it is an aspect that is considered during the pay-setting process. In contrast, I find that Geopolitical Risk does not affect the CEO compensation. I expected this risk factor to play a role similar to that of Policy Uncertainty. A possible explanation of these results can be explained by the relevancy of Geopolitical Risk during the timeframe of my sample. Future research could dive further into this topic to see if it does become a factor that is considered during times of extremely high Geopolitical Risk. Other explanations could be that firms, CEOs and stakeholders are simply not aware or do not give any weight to it. Furthermore, my results found that the Terrorism Index does not have a significant effect. This is contrary to my expectations and existing literature. Dai et al. (2020) found significant evidence of terrorist attacks affect CEO compensation. However, both findings can be true at the same time. I have used the nationwide Terrorism Index for the USA, while Dai et al. (2020) use a DID-analysis to research the effects of terrorist attacks in relation to their proximity of the attack. It is possible that these terrorist attacks in a nearby proximity to the CEOs does affect their remuneration, while the nationwide Terrorism Index is not as relevant during the pay-setting process.

For my second hypothesis: *"The Salary and Bonus components of CEO compensation will be more severely impacted by macroeconomic factors than the Equity component"*, I looked at the different components of CEO compensation to be able to compare to what extent they are affected by the macroeconomic factors. In my results every significant value of Equity is larger than those of the significant Salary and Bonus values of the same macroeconomic factor. Therefore, my sample indicates that the Equity component is affected more severe than the Salary and Bonus component. Dai et al. (2020) found that CEOs can have a myopic view on their remuneration package and prefer Salary and Bonus compensation over Equity compensation after a terrorist attack in a nearby proximity. I expected a similar reaction with my macroeconomic variables as they all influence the time value of money. However, my results show that these macroeconomic factors do not necessarily contribute to this myopic

view. It could also be possible that macroeconomic factors have more impact on the Equity component in a shorter timeframe due to their influence on the stock market and subsequent market reactions.

Furthermore, I researched the implications of the macroeconomic factors on CEO compensation after a longer period. The pay-setting process can be a time-consuming process and often needs to be approved by several parties including the shareholders making the process even more rigid and not suspectable to fast adaptation when the macroeconomic factors make rapid fluctuations. My results for my third hypothesis: *"CEO compensation will be significantly affected by the macroeconomic factors of prior periods"* show that CEO compensation is not influenced by the Inflation of a year prior. This finding is quite robust as I found that CEO compensation is also not influenced by Inflation two years prior and five years prior. I had expected a significant value for the Inflation factor due to the decline in purchasing power of the CEO. However, my results show that the inflation value of the current year is considered during the pay-setting process, while prior inflation values or not.

Similarly, my results do not find CEO compensation to be significantly affected by the Interest Rate factor in prior years. Interest Rate was not significant in my results regarding the first hypothesis, implying that current values of this factor also do not affect CEO compensation. My results show that the Exchange Rate of prior periods does significantly and positively affect the CEO compensation. These results align with the expectations I had during the process of hypothesis generating. My results show that GDP has a significant effect, but similarly to my previous findings it does not have an influence on CEO compensation. When examining the robustness of my results over a period of two years, I found that GDP has a slightly positive effect. Similarly, the GDP Growth Rate aligns with my expectations by having a significant and positive effect. However, this significant effect disappears when checking the robustness by delaying by two years and five years. This implies that the GDP Growth Rate of the current year and the year prior play a factor in the pay-setting process, while the GDP Growth Rate of earlier years do not. These findings could very well be explained by the weight and relevancy a firm and CEO give to these earlier years. Furthermore, I find that Unemployment, Market Performance, Market Risk, Investor Sentiment and Geopolitical Risk do not have a significant effect on the Total Awarded Compensation of next year. Most of these variables did not or slightly affect the CEO compensation in the current year, logically these factors do not play a role when the following year. During the robustness testing these variables stay insignificant in the following two and five years. Furthermore, my results show that Policy Uncertainty aligns with my expectations. The effect it has is very minimal but does play a role in the pay-setting process. The most interesting results I found is the Terrorism Index, which is now significant and positive in line with my expectations. Despite not behaving according to my expectations during the current year, these results imply that the nationwide Terrorism Index is considered in the pay-setting process of the subsequent year. When testing the robustness of the Terrorism Index I found that the variable stays significant, although decreasing in magnitude.

It is noteworthy to mention that my results indicate the magnitude of the coefficients for all significant variables either remains stable or decreases when testing their robustness over a delayed period of two and five years. This suggests a decrease in the importance and relevance of these variables for the pay-setting process when time goes by.

CHAPTER 7 Conclusion

In this thesis I have looked at the effects of several macroeconomic factors and their effects on CEO compensation. Existing literature has shown a significant impact by macroeconomic factors on CEO compensation (Chiu et al., 2014). Furthermore, previous studies have shown that CEO compensation can be influenced by exogenous factors over which a CEO has no influence or control (Dai et al., 2020; Bertrand and Mullainathan, 2001). However, many macroeconomic factors and their long-lasting influence of economic conditions on executive pay were yet to be explored. Therefore, the main research question of this thesis was: *"What are the effects of macroeconomic factors on CEO compensation?"*.

To answer this research question, I gathered data on twelve macroeconomic factors, annual data on CEO compensation, and the respective CEO and firm characteristics over the period of 2006 to 2023. Subsequently, I was able to analyze the effect of each macroeconomic factor on the current CEO compensation, their influence on three components of CEO compensation, and their influence on CEO compensation over time. I found robust evidence that Inflation, Exchange Rate, GDP, GDP Growth Rate, Unemployment, and Policy Uncertainty influence the CEO compensation in the current year ranging from -2.5% up to 143.5% when they increase by one unit. In practice, the percentual influence I found in my sample by comparing their maximum and minimum influence ranges from -14.96% up to 38.60%. I did not find enough statistical evidence of a relationship between Interest Rate, Market Performance, Market Risk, Investor Sentiment, Geopolitical Risk, and Terrorism Index on CEO compensation in the current year. Subsequently, I found the Equity component of CEO compensation to be consistently more severely affected by the significant macroeconomic factors than the Salary and Bonus components. Furthermore, I found robust long-lasting effects of Exchange Rate, GDP, GDP Growth Rate, Policy Uncertainty, and Terrorism Index on CEO compensation. Implying that these macroeconomic factors have an influence on the CEO compensation of subsequent years. I did not find enough robust statistical evidence of a longer lasting effect of Inflation, Interest Rate, Unemployment, Market Performance, Market Risk, Investor Sentiment, and Geopolitical Risk on CEO compensation.

My research contributes to the existing body of literature by examining macroeconomic factors previously unexplored. Additionally, my sample was gathered in a more recent timeframe, providing up-to-date insights into the current CEO compensation process. Furthermore, I examine three components of CEO compensation, allowing for a detailed understanding of how macroeconomic factors influence certain components within CEO compensation. Subsequently, I examine the long-lasting effects of macroeconomic factors on CEO compensation, providing a deeper understanding how economic conditions influence the CEO pay-setting process over time. My findings could be useful during the CEO pay-setting process, by providing firms, CEOs, and other stakeholders with an insight into the dynamics that influence CEO compensation.

7.1 Limitations

I gathered firm fundamentals from Compustat and annual data on CEO compensation from Execucomp within Compustat. When a public company goes private, Compustat drops the entire firm including previous years from the database. Dropping these firms might skew my data as these firms could potentially exhibit certain characteristics the rest do not. Similarly, I gathered data on the education of CEOs from BoardEx. However, this database has a very small overlap with the sample I gathered from Execucomp. Therefore, I wasn't able to include education as a control variable in my models as it would decrease the number of observations severely. Nonetheless, I encourage further research into the effects of macroeconomic factors on CEO compensation to gain a deeper understanding of the CEO pay-setting process. Exploring the effects of additional macroeconomic factors or delving into certain exogenous factors, such as regulatory changes, appears promising and worthy of investigation.

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APPENDIX A Variable Overview and Definition

This table presents an overview of the variables used in this thesis in Panel A and definitions of these variables in Panel B.

Table 1: Overview

This table provides an overview of the variables used in this thesis

CEO Compensation	Macroeconomic Factors	CEO Characteristics	Firm Characteristics
Total Compensation	Inflation	Age	Firm size
Total Awarded Comp.	Interest Rate	Tenure	Sales
Ex Post Pay	Exchange Rate	Ownership	Cash/Assets
Salary	GDP	DualCEO	Capex/Assets
Bonus	GDP Growth Rate	Gender	Leverage
Equity	Unemployment	Education	Tobin's Q
	Market Performance		ROE
	Market Risk		ROA
	Investor Sentiment		$RET_{[-12,0]}$
	Policy Uncertainty		M/B
	Geopolitical Risk		
	Terrorism Index		

Table 2: Variable definitions

Variable	Definition
CEO Compensation	*All data regarding CEO Compensation is annual data.*
Total Awarded Compensation	Total Compensation (Salary + Bonus + Other Annual + Restricted Stock Grants + LTIP Payouts + All Other + Value of Option Grants) measured in thousands of dollars. TDC1 variable in Execucomp. This variable has been transformed by adding 1 before taking its natural logarithm and winsorized at the 1st and 99th percentiles.
Ex Post Pay	Total Compensation (Salary + Bonus + Other Annual + Restricted Stock Grants + LTIP Payouts + All Other + Value of Options Exercised) measured in thousands of dollars. TDC2 variable in Execucomp. This variable has been transformed by adding 1 before taking its natural logarithm and winsorized at the 1st and 99th percentiles.
Total Compensation	Total Current Compensation (Salary + Bonus) measured in thousands of dollars. TOTAL_CURR variable in Execucomp. This variable has been transformed by adding 1 before taking its natural logarithm and winsorized at the 2nd and 98th percentiles.
Salary	Base salary measured in thousands of dollars. SALARY variable in Execucomp. This variable has been transformed by adding 1 before taking its natural logarithm and winsorized at the 3rd and 97th percentiles.
Bonus	Bonus cash and non-cash measured in thousands of dollars. BONUS variable in Execucomp. This variable has been transformed by adding 1 before taking its natural logarithm.
Equity	Sum of the value of stock awards and the value of option awards (STOCK_AWARD and OPTION_AWARD in Execucomp) ($).

Macroeconomic Factors	
Inflation	Annual CPI gathered from FRED in percentages.
Interest Rate	Annual average of Federal Fund Effective Rate gathered from FRED in percentages.
Exchange Rate	Amount of Euros per 1 U.S Dollar rate calculated gathered from FRED.
GDP	Gross Domestic Product gathered from FRED.
GDP Growth Rate	Gross Domestic Product yearly growth rate calculated from FRED.
Unemployment	Unemployment rate gathered from FRED in percentages.
Market Performance	Annual returns of the S&P500 with dividends gathered from NYU Stern School of Business in percentages.
Market Risk	Annual average VIX gathered from FRED.
Investor Sentiment	Spread between bullish and bearish investor sentiment gathered from the American Association of Individual Investors.
Policy Uncertainty	Annual average score of the Economic Policy Uncertainty index for the USA gathered from Economic Policy Uncertainty.
Geopolitical Risk	Annual average score of the Geopolitical Risk index for the USA gathered from Economic Policy Uncertainty.
Terrorism Index	Annual score of the Terrorism Index gathered from Trading Economics.
CEO Characteristics	
Age	Executive's Age. AGE variable in Execucomp.
Tenure	Number of years in CEO position. Calculated from the BEGINCEO and LEFTOFC variable in Execucomp.
Ownership	Percentage of shares the CEO owns of his own firm. SHROWN_TOT_PCT variable in Execucomp. This variable has been transformed by adding 1 before taking its natural logarithm.
DualCEO	Dummy variable with a value of 1 when the CEO is also the chairman of the board and 0 otherwise. Calculated from the TITLE variable in Execucomp.
Gender	Dummy variable with a value of 1 if the CEO is male and 0 if female. Calculated from the GENDER variable in Execucomp.
Education	Dummy variable with a value of 1 when the CEO has achieved an MBA in that year or in prior years and takes a value of 0 otherwise. Constructed from the education variable from the Individual Profile Details within BoardEx.
Firm Characteristics	
Firm size	Annual total value of assets in millions of dollars. AT variable in Compustat. This variable has been transformed by adding 1 before taking its natural logarithm.
Sales	Net sales measured in millions of dollars. SALE variable in Compustat. This variable has been transformed by adding 1 before taking its natural logarithm.
Cash/Assets	Ratio of cash items to total assets. Calculated by dividing CHE by AT, gathered from Compustat.
Capex/Assets	Ratio of capital expenditures to total assets. Calculated by dividing CAPX by AT, gathered from Compustat.
Tobin's Q	Firm value, calculated by dividing MKVALT by AT, both variables are gathered from Compustat. This variable has been transformed by adding 1 before taking its natural logarithm and is measured in millions of dollars.
Leverage	Debt/Assets variable gathered from Compustat Financial Ratios. This variable has been transformed by adding 1 before taking its natural logarithm
Return on Equity	ROE variable gathered from Compustat Financial Ratios.
Return on Assets	ROA variable gathered from Compustat Financial Ratios.
$RET_{[-12,0]}$	Buy-and-hold return of a firm's stock of the past 12 months. Calculated with the use of the PRC and DIVAMT variables gathered from CRSP.
M/B	Market/Book ratio, calculated by dividing 1 by the Book/Market ratio gathered from Compustat Financial Ratios. This variable has been transformed by adding 1 before taking its natural logarithm.

APPENDIX B Regression results

Table 1: Regression Results Total Awarded Compensation (1) – (6)
This table shows the regression results for the models (1) - (6). The models use **Total Awarded Compensation** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(1)		(2)		(3)		(4)		(5)		(6)	
Inflation	0.039	***										
	(0.008)											
Interest Rates			0.009									
			(0.012)									
Exchange Rate					0.890	**						
					(0.236)							
GDP							0.000	***				
							(0.000)					
GDP Growth Rate									0.016	*		
									(0.008)			
Unemployment											-0.026	**
											(0.008)	
Age	0.016	***	0.017	***	0.015	***	0.014	***	0.016	***	0.016	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.006	**	0.005	*	0.006	**	0.007	**	0.005	**	0.005	**
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Ownership	-0.178	***	-0.169	***	-0.166	***	-0.170	***	-0.166	***	-0.174	***
	(0.032)		(0.032)		(0.031)		(0.031)		(0.032)		(0.031)	
DualCEO	0.104	**	0.088	**	0.107	**	0.121	***	0.097	**	0.101	**
	(0.027)		(0.030)		(0.027)		(0.027)		(0.029)		(0.028)	
Gender	-0.052		-0.057		-0.048		-0.044		-0.054		-0.052	
	(0.041)		(0.040)		(0.040)		(0.040)		(0.041)		(0.040)	
Firm Size	0.349	***	0.350	***	0.333	***	0.322	***	0.348	***	0.341	***
	(0.028)		(0.029)		(0.028)		(0.027)		(0.029)		(0.029)	
Sales	0.040		0.040		0.050	*	0.057	**	0.040		0.046	
	(0.027)		(0.028)		(0.028)		(0.026)		(0.027)		(0.028)	
Cash/Assets	-0.032		-0.030		0.008		0.014		-0.044		0.010	
	(0.117)		(0.118)		(0.119)		(0.116)		(0.120)		(0.118)	
Capex/Assets	-0.657	**	-0.682	**	-0.562	*	-0.479		-0.586	*	-0.685	**
	(0.278)		(0.295)		(0.294)		(0.275)		(0.292)		(0.285)	
Leverage	0.548	***	0.586	***	0.487	***	0.442	***	0.522	***	0.563	***
	(0.093)		(0.093)		(0.094)		(0.088)		(0.094)		(0.097)	
Tobin's Q	0.127	***	0.126	***	0.103	***	0.098	***	0.108	***	0.123	***
	(0.019)		(0.019)		(0.019)		(0.018)		(0.023)		(0.018)	
ROE	0.003		0.005		0.005		0.003		0.005		0.005	
	(0.008)		(0.008)		(0.008)		(0.008)		(0.008)		(0.008)	
ROA	0.097		0.131		0.178		0.183	*	0.146		0.154	
	(0.101)		(0.105)		(0.107)		(0.105)		(0.111)		(0.104)	
$RET_{[-12,0]}$	0.001		-0.012		-0.008		-0.004		-0.016		-0.003	
	(0.010)		(0.010)		(0.006)		(0.007)		(0.010)		(0.007)	
M/B	0.050	**	0.050	**	0.053	**	0.051	**	0.061	**	0.039	**
	(0.018)		(0.018)		(0.017)		(0.016)		(0.020)		(0.017)	
Intercept	4.153	***	4.180	***	3.590	***	3.883	***	4.157	***	4.414	***
	(0.173)		(0.167)		(0.212)		(0.168)		(0.171)		(0.185)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,002		24,891		24,891		24,891		24,002		24,891	

R-squared	0.57	0.56	0.56	0.57	0.56	0.56
Adj. R-squared	0.56	0.55	0.56	0.56	0.56	0.56

Table 2: Regression Results Total Awarded Compensation (7) – (12)

This table shows the regression results for the models (7) - (12). The models use **Total Awarded Compensation** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(1)		(2)		(3)		(4)		(5)		(6)	
Market Performance	-0.001											
	(0.002)											
Market Risk			-0.001									
			(0.004)									
Investor Sentiment					-0.002							
					(0.004)							
Policy Uncertainty							0.001	*				
							(0.000)					
Geopolitical Risk									0.066			
									(0.064)			
Terrorism Index											0.025	
											(0.017)	
Age	0.017	***	0.017	***	0.017	***	0.017	***	0.017	***	.0166	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(.002)	
Tenure	0.004	*	0.005	*	0.005	*	0.005	*	0.005	**	0.005	*
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Ownership	-0.167	***	-0.165	***	-0.167	***	-0.164	***	-0.167	***	-0.163	***
	(0.032)		(0.032)		(0.032)		(0.032)		(0.032)		(0.032)	
DualCEO	0.085	**	0.086	**	0.086	**	0.085	**	0.089	**	0.089	**
	(0.030)		(0.030)		(0.030)		(0.029)		(0.030)		(0.031)	
Gender	-0.057		-0.057		-0.057		-0.057		-0.055		-0.055	
	(0.040)		(0.040)		(0.040)		(0.040)		(0.040)		(0.040)	
Firm Size	0.353	***	0.351	***	0.351	***	0.350		0.350	***	0.347	***
	(0.029)		(0.028)		(0.029)		(0.029)		(0.030)		(0.029)	
Sales	0.038		0.039		0.039		0.039		0.039		0.042	
	(0.027)		(0.027)		(0.028)		(0.027)		(0.028)		(0.028)	
Cash/Assets	-0.039		-0.032		-0.040		-0.047		-0.029		-0.027	
	(0.117)		(0.121)		(0.118)		(0.118)		(0.120)		(0.119)	
Capex/Assets	-0.691	**	-0.677	**	-0.661	**	-0.631	**	-0.681	**	-0.639	*
	(0.293)		(0.292)		(0.301)		(0.295)		(0.300)		(0.307)	
Leverage	0.597	***	0.588	***	0.576	***	0.565	***	0.572	***	0.564	***
	(0.093)		(0.093)		(0.093)		(0.091)		(0.095)		(0.102)	
Tobin's Q	0.132	***	0.124	***	0.128	***	0.123	***	0.122	***	0.120	***
	(0.021)		(0.019)		(0.019)		(0.019)		(0.020)		(0.019)	
ROE	0.005		0.005		0.005		0.005		0.005		0.006	
	(0.008)		(0.008)		(0.008)		(0.008)		(0.008)		(0.008)	
ROA	0.122		0.134		0.127		0.130		0.133		0.150	
	(0.103)		(0.105)		(0.105)		(0.108)		(0.103)		(0.103)	
$RET_{[-12,0]}$	-0.010		-0.014		-0.014		-0.015		-0.011		-0.014	
	(0.010)		(0.009)		(0.012)		(0.011)		(0.010)		(0.009)	
M/B	0.049	**	0.051	**	0.052	**	0.056	**	0.054	**	0.051	**
	(0.018)		(0.017)		(0.017)		(0.018)		(0.018)		(0.017)	
Intercept	4.190	***	4.208	***	4.196	***	4.122	***	4.028	***	4.079	***
	(0.167)		(0.159)		(0.173)		(0.169)		(0.236)		(0.196)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24891		24891		24891		24891		24891		24891	
R-squared	0.56		0.56		0.56		0.56		0.56		0.56	

Adj. R-squared	0.55		0.55		0.55		0.55		0.56		0.55	

Table 3: Regression Results CEO Compensation Components (13) – (18)
This table shows the regression results for the models (13) - (18). The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(13) Salary		(14) Salary		(15) Bonus		(16) Bonus		(17) Equity		(18) Equity	
Inflation	0.014	**			-0.005				0.066	***		
	(0.004)				(0.014)				(0.015)			
Interest Rate			0.012				0.014				0.054	
			(0.009)				(0.031)				(0.038)	
Age	0.013	***	0.013	***	0.002		0.001		0.012	**	0.015	**
	(0.001)		(0.001)		(0.005)		(0.005)		(0.005)		(0.005)	
Tenure	0.006	***	0.005	**	0.006		0.006		-0.001		-0.003	
	(0.001)		(0.001)		(0.005)		(0.005)		(0.005)		(0.005)	
Ownership	-0.075	***	-0.074	**	0.087		0.080		-0.746	***	-0.746	***
	(0.019)		(0.019)		(0.057)		(0.056)		(0.088)		(0.087)	
DualCEO	0.059	***	0.054	**	-0.080		-0.064		0.188	**	0.154	*
	(0.013)		(0.014)		(0.070)		(0.069)		(0.066)		(0.073)	
Gender	-0.044		-0.046	*	0.083		0.085		-0.156		-0.170	*
	(0.026)		(0.025)		(0.112)		(0.109)		(0.094)		(0.092)	
Firm Size	0.084	***	0.086	***	0.143	*	0.140	*	0.501	***	0.504	***
	(0.015)		(0.014)		(0.070)		(0.069)		(0.073)		(0.073)	
Sales	0.068	***	0.067	***	-0.253	**	-0.254	**	-0.049		-0.048	
	(0.015)		(0.015)		(0.073)		(0.072)		(0.074)		(0.074)	
Cash/Assets	-0.180	**	-0.175	**	0.291		0.282		-0.505		-0.482	
	(0.054)		(0.053)		(0.254)		(0.254)		(0.293)		(0.295)	
Capex/Assets	-0.395	**	-0.404	**	1.722	*	1.639	*	-0.347		-0.505	
	(0.155)		(0.155)		(0.903)		(0.885)		(0.795)		(0.804)	
Leverage	0.247	***	0.267	***	-0.481		-0.567		1.141	***	1.256	***
	(0.052)		(0.056)		(0.374)		(0.374)		(0.251)		(0.262)	
Tobin's Q	-0.013		-0.010		-0.174	**	-0.188	**	0.234	***	0.242	***
	(0.011)		(0.012)		(0.073)		(0.073)		(0.057)		(0.055)	
ROE	0.011		0.013	*	-0.033		-0.035		-0.021		-0.021	
	(0.007)		(0.007)		(0.025)		(0.024)		(0.026)		(0.026)	
ROA	-0.070		-0.061		1.209	***	1.245	***	-0.390		-0.335	
	(0.065)		(0.066)		(0.268)		(0.267)		(0.255)		(0.261)	
$RET_{[-12,0]}$	0.001		-0.003		0.120	***	0.128	***	-0.037	*	-0.055	**
	(0.004)		(0.003)		(0.023)		(0.022)		(0.018)		(0.016)	
M/B	0.004		0.002		0.018		0.023		0.073		0.058	
	(0.009)		(0.009)		(0.061)		(0.061)		(0.052)		(0.049)	
Intercept	4.650	***	4.648	***	1.299	**	1.349	**	3.151	***	3.117	***
	(0.104)		(0.102)		(0.343)		(0.340)		(0.443)		(0.433)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,110		24,999		24,109		24,998		24,102		24,991	
R-squared	0.50		0.50		0.13		0.13		0.29		0.30	
Adj. R-squared	0.50		0.50		0.12		0.12		0.28		0.29	

Table 4: Regression Results CEO Compensation Components (19) – (24)

This table shows the regression results for the models (19) - (24). The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(19) Salary		(20) Salary		(21) Bonus		(22) Bonus		(23) Equity		(24) Equity	
Exchange Rate	0.414	**			-1.394	**			2.277	***		
	(0.116)				(0.362)				(0.470)			
GDP			0.000	***			-0.000	**			0.000	***
			(0.000)				(0.000)				(0.000)	
Age	0.012	***	0.011	***	0.005		0.006		0.010	*	0.008	
	(0.001)		(0.001)		(0.005)		(0.005)		(0.005)		(0.005)	
Tenure	0.006	***	0.007	***	0.004		0.003		0.000		0.003	
	(0.001)		(0.001)		(0.005)		(0.005)		(0.005)		(0.005)	
Ownership	-0.069	**	-0.071	**	0.087		0.092		-0.726	***	-0.735	***
	(0.019)		(0.019)		(0.057)		(0.056)		(0.085)		(0.085)	
DualCEO	0.061	***	0.067	***	-0.103		-0.112		0.197	**	0.222	**
	(0.013)		(0.014)		(0.070)		(0.071)		(0.069)		(0.070)	
Gender	-0.041		-0.039		0.070		0.068		-0.145		-0.139	
	(0.025)		(0.026)		(0.109)		(0.108)		(0.093)		(0.092)	
Firm Size	0.079	***	0.073	***	0.169	**	0.178	**	0.463	***	0.441	***
	(0.015)		(0.015)		(0.070)		(0.072)		(0.073)		(0.073)	
Sales	0.072	***	0.075	***	-0.274	**	-0.279	**	-0.023		-0.010	
	(0.015)		(0.015)		(0.071)		(0.072)		(0.074)		(0.072)	
Cash/Assets	-0.162	**	-0.159	**	0.202		0.209		-0.403		-0.401	
	(0.054)		(0.053)		(0.251)		(0.251)		(0.298)		(0.296)	
Capex/Assets	-0.336	**	-0.295	*	1.483		1.418		-0.154		0.006	
	(0.156)		(0.157)		(0.890)		(0.879)		(0.811)		(0.781)	
Leverage	0.222	**	0.199	**	-0.409		-0.387		1.006	***	0.931	**
	(0.058)		(0.057)		(0.376)		(0.377)		(0.252)		(0.243)	
Tobin's Q	-0.021	*	-0.024	**	-0.152	*	-0.154	*	0.180	**	0.176	**
	(0.011)		(0.011)		(0.079)		(0.077)		(0.056)		(0.053)	
ROE	0.012	*	0.012		-0.035		-0.032		-0.022		-0.026	
	(0.007)		(0.007)		(0.024)		(0.024)		(0.025)		(0.025)	
ROA	-0.039		-0.036		1.172	***	1.181	***	-0.214		-0.214	
	(0.067)		(0.067)		(0.268)		(0.267)		(0.258)		(0.252)	
$RET_{[-12,0]}$	-0.003		-0.000		0.116	***	0.112	***	-0.051	**	-0.042	**
	(0.002)		(0.002)		(0.025)		(0.025)		(0.016)		(0.015)	
M/B	0.004		0.003		0.024		0.027		0.070		0.066	
	(0.009)		(0.009)		(0.059)		(0.058)		(0.047)		(0.044)	
Intercept	4.377	***	4.509	***	2.287	***	1.728	***	1.620	**	2.450	***
	(0.117)		(0.096)		(0.345)		(0.302)		(0.510)		(0.405)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,999		24,999		24,998		24,998		24,991		24,991	
R-squared	0.51		0.51		0.13		0.13		0.30		0.30	
Adj. R-squared	0.50		0.50		0.12		0.12		0.29		0.29	

Table 5: Regression Results CEO Compensation Components (25) – (30)

This table shows the regression results for the models (25) - (30). The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(25) Salary		(26) Salary		(27) Bonus		(28) Bonus		(29) Equity		(30) Equity	
GDP Growth Rate	0.004				-0.002				0.026	*		
	(0.003)				(0.013)				(0.014)			
Unemployment			-0.014	**			0.040	**			-0.075	***
			(0.004)				(0.013)				(0.017)	
Age	0.013	***	0.012	***	0.002		0.003		0.013	**	0.012	**
	(0.001)		(0.001)		(0.005)		(0.005)		(0.006)		(0.005)	
Tenure	0.006	***	0.006	***	0.006		0.005		-0.001		-0.001	
	(0.001)		(0.001)		(0.005)		(0.005)		(0.006)		(0.005)	
Ownership	-0.071	**	-0.073	***	0.086		0.099		-0.725	***	-0.748	***
	(0.019)		(0.018)		(0.057)		(0.058)		(0.088)		(0.088)	
DualCEO	0.056	***	0.059	***	-0.079		-0.093		0.176	**	0.187	**
	(0.014)		(0.014)		(0.071)		(0.070)		(0.071)		(0.071)	
Gender	-0.045		-0.043		0.083		0.077		-0.158		-0.154	
	(0.026)		(0.025)		(0.111)		(0.109)		(0.093)		(0.093)	
Firm Size	0.084	***	0.082	***	0.143	*	0.156	**	0.499	***	0.480	***
	(0.015)		(0.014)		(0.071)		(0.071)		(0.075)		(0.074)	
Sales	0.068	***	0.070	***	-0.253	**	-0.267	**	-0.048		-0.031	
	(0.015)		(0.015)		(0.073)		(0.071)		(0.074)		(0.075)	
Cash/Assets	-0.184	**	-0.158	**	0.292		0.200		-0.525	*	-0.381	
	(0.054)		(0.053)		(0.253)		(0.252)		(0.299)		(0.300)	
Capex/Assets	-0.377	**	-0.395	**	1.714	*	1.676	*	-0.230		-0.474	
	(0.154)		(0.152)		(0.931)		(0.873)		(0.817)		(0.789)	
Leverage	0.241	***	0.256	***	-0.478		-0.528		1.097	***	1.192	***
	(0.057)		(0.055)		(0.386)		(0.352)		(0.248)		(0.262)	
Tobin's Q	-0.019		-0.012		-0.172	**	-0.184	**	0.203	**	0.232	***
	(0.011)		(0.012)		(0.078)		(0.071)		(0.061)		(0.053)	
ROE	0.012		0.013	*	-0.033		-0.035		-0.018		-0.021	
	(0.007)		(0.007)		(0.025)		(0.024)		(0.027)		(0.025)	
ROA	-0.054		-0.049		1.203	***	1.210	***	-0.307		-0.268	
	(0.068)		(0.066)		(0.266)		(0.268)		(0.273)		(0.252)	
$RET_{[-12,0]}$	-0.005		0.000		0.122	***	0.108	***	-0.066	**	-0.035	**
	(0.004)		(0.002)		(0.022)		(0.023)		(0.020)		(0.013)	
M/B	0.008		-0.003		0.017		0.045		0.092	*	0.030	
	(0.009)		(0.009)		(0.063)		(0.058)		(0.051)		(0.047)	
Intercept	4.653	***	4.776	***	1.298	**	1.003	**	3.159	***	3.805	***
	(0.104)		(0.111)		(0.344)		(0.400)		(0.444)		(0.449)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,110		24,999		24,109		24,998		24,102		24,991	
R-squared	0.50		0.50		0.13		0.13		0.29		0.30	
Adj. R-squared	0.49		0.50		0.12		0.12		0.28		0.29	

Table 6: Regression Results CEO Compensation Components (31) – (36)

This table shows the regression results for the models (31) - (36). The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(31) Salary		(32) Salary		(33) Bonus		(34) Bonus		(35) Equity		(36) Equity	
Market Performance	0.000				-0.001				-0.002			
	(0.001)				(0.002)				(0.003)			
Market Risk			-0.001				0.008	**			-0.006	
			(0.001)				(0.003)				(0.006)	
Age	0.013	***	0.013	***	0.001		0.002		0.016	**	0.015	**
	(0.001)		(0.001)		(0.005)		(0.005)		(0.005)		(0.006)	
Tenure	0.005	**	0.005	**	0.006		0.006		-0.004		-0.003	
	(0.001)		(0.001)		(0.005)		(0.005)		(0.006)		(0.006)	
Ownership	-0.069	**	-0.068	**	0.084		0.084		-0.726	***	-0.722	***
	(0.019)		(0.019)		(0.058)		(0.058)		(0.088)		(0.088)	
DualCEO	0.050	**	0.051	**	-0.069		-0.074		0.139	*	0.144	*
	(0.014)		(0.014)		(0.070)		(0.071)		(0.074)		(0.075)	
Gender	-0.046	*	-0.045	*	0.085		0.083		-0.169	*	-0.168	*
	(0.025)		(0.025)		(0.109)		(0.109)		(0.092)		(0.092)	
Firm Size	0.088	***	0.087	***	0.143	*	0.144	*	0.512	***	0.506	***
	(0.014)		(0.014)		(0.070)		(0.070)		(0.072)		(0.071)	
Sales	0.066	***	0.066	***	-0.257	**	-0.257	**	-0.055		-0.052	
	(0.015)		(0.015)		(0.072)		(0.071)		(0.073)		(0.073)	
Cash/Assets	-0.183	**	-0.179	**	0.269		0.236		-0.523	*	-0.489	
	(0.053)		(0.054)		(0.251)		(0.249)		(0.292)		(0.296)	
Capex/Assets	-0.388	**	-0.393	**	1.627	*	1.705	*	-0.474		-0.475	
	(0.158)		(0.155)		(0.891)		(0.887)		(0.809)		(0.812)	
Leverage	0.269	***	0.269	***	-0.552		-0.574		1.279	***	1.269	***
	(0.058)		(0.056)		(0.369)		(0.363)		(0.262)		(0.265)	
Tobin's Q	-0.010		-0.012		-0.180	**	-0.177	**	0.250	***	0.232	***
	(0.012)		(0.012)		(0.074)		(0.075)		(0.060)		(0.056)	
ROE	0.013	*	0.013	*	-0.035		-0.035		-0.020		-0.021	
	(0.007)		(0.007)		(0.024)		(0.024)		(0.025)		(0.025)	
ROA	-0.061		-0.058		1.232	***	1.222	***	-0.350		-0.316	
	(0.066)		(0.066)		(0.263)		(0.264)		(0.260)		(0.256)	
$RET_{[-12,0]}$	-0.005		-0.005		0.131	***	0.121	***	-0.059	**	-0.063	**
	(0.004)		(0.004)		(0.026)		(0.027)		(0.020)		(0.018)	
M/B	0.004		0.003		0.022		0.030		0.062		0.064	
	(0.010)		(0.009)		(0.060)		(0.059)		(0.051)		(0.049)	
Intercept	4.654	***	4.674	***	1.363	***	1.172	**	3.153	***	3.286	***
	(0.102)		(0.101)		(0.339)		(0.374)		(0.435)		(0.428)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,999		24,999		24,998		24,998		24,991		24,991	
R-squared	0.50		0.50		0.13		0.13		0.29		0.29	
Adj. R-squared	0.49		0.49		0.12		0.12		0.28		0.28	

Table 7: Regression Results CEO Compensation Components (37) – (42)

This table shows the regression results for the models (37) - (42). The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(37) Salary		(38) Salary		(39) Bonus		(40) Bonus		(41) Equity		(42) Equity	
Investor Sentiment	-0.001				0.000				-0.006			
	(0.001)				(0.003)				(0.006)			
Policy Uncertainty			-0.000				0.000				0.000	
			(0.000)				(0.001)				(0.001)	
Age	0.013	***	0.013	***	0.001		0.001		0.015	**	0.015	**
	(0.001)		(0.001)		(0.005)		(0.005)		(0.005)		(0.005)	
Tenure	0.005	**	0.005	**	0.006		0.006		-0.003		-0.003	
	(0.001)		(0.001)		(0.005)		(0.005)		(0.006)		(0.006)	
Ownership	-0.070	**	-0.069	**	0.086		0.087		-0.728	***	-0.723	***
	(0.019)		(0.019)		(0.058)		(0.057)		(0.088)		(0.088)	
DualCEO	0.051	**	0.050	**	-0.068		-0.068		0.143	*	0.140	*
	(0.014)		(0.014)		(0.069)		(0.070)		(0.074)		(0.074)	
Gender	-0.045	*	-0.046	*	0.085		0.085		-0.168	*	-0.169	*
	(0.025)		(0.025)		(0.109)		(0.109)		(0.092)		(0.092)	
Firm Size	0.087	***	0.088	***	0.141	*	0.140	*	0.508	***	0.509	***
	(0.015)		(0.015)		(0.069)		(0.069)		(0.073)		(0.072)	
Sales	0.067	***	0.066	***	-0.256	**	-0.255	**	-0.052		-0.053	
	(0.015)		(0.015)		(0.072)		(0.072)		(0.074)		(0.073)	
Cash/Assets	-0.186	**	-0.183	**	0.273		0.264		-0.527	*	-0.521	*
	(0.053)		(0.053)		(0.251)		(0.250)		(0.293)		(0.294)	
Capex/Assets	-0.383	**	-0.389	**	1.656	*	1.686	*	-0.416		-0.428	
	(0.160)		(0.156)		(0.879)		(0.888)		(0.809)		(0.802)	
Leverage	0.262	***	0.269	***	-0.565		-0.582		1.236	***	1.257	***
	(0.057)		(0.055)		(0.370)		(0.367)		(0.262)		(0.267)	
Tobin's Q	-0.009		-0.010		-0.188	**	-0.190	**	0.245	***	0.239	***
	(0.012)		(0.011)		(0.073)		(0.072)		(0.057)		(0.056)	
ROE	0.013	*	0.013	*	-0.035		-0.035		-0.020		-0.020	
	(0.007)		(0.007)		(0.024)		(0.024)		(0.026)		(0.026)	
ROA	-0.064		-0.061		1.246	***	1.245	***	-0.344		-0.334	
	(0.067)		(0.066)		(0.266)		(0.266)		(0.258)		(0.264)	
$RET_{[-12,0]}$	-0.005		-0.005		0.125	***	0.124	***	-0.065	**	-0.067	**
	(0.004)		(0.004)		(0.023)		(0.022)		(0.019)		(0.018)	
M/B	0.004		0.004		0.026		0.029		0.068		0.068	
	(0.009)		(0.009)		(0.060)		(0.060)		(0.050)		(0.050)	
Intercept	4.661	***	4.656	***	1.355	***	1.308	**	3.170	***	3.127	***
	(0.104)		(0.103)		(0.342)		(0.368)		(0.438)		(0.424)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,999		24,999		24,998		24,998		24,991		24,991	
R-squared	0.50		0.50		0.13		0.13		0.29		0.29	
Adj. R-squared	0.50		0.49		0.12		0.12		0.28		0.28	

Table 8: Regression Results CEO Compensation Components (43) – (48)

This table shows the regression results for the models (43) - (48). The models use **Salary**, **Bonus**, and **Equity** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(43) Salary		(44) Salary		(45) Bonus		(46) Bonus		(47) Equity		(48) Equity	
Geopolitical Risk	0.051	*			-0.083	*			0.221	**		
	(0.025)				(0.046)				(0.101)			
Terrorism Index			0.001				-0.098	**			0.061	
			(0.011)				(0.046)				(0.051)	
Age	0.013	***	0.013	***	0.002		0.003		0.014	**	0.014	**
	(0.001)		(0.001)		(0.005)		(0.005)		(0.005)		(0.006)	
Tenure	0.006	***	0.005	**	0.006		0.005		-0.002		-0.003	
	(0.001)		(0.002)		(0.005)		(0.005)		(0.005)		(0.006)	
Ownership	-0.070	**	-0.068	**	0.088		0.076		-0.731	***	-0.718	***
	(0.018)		(0.019)		(0.057)		(0.056)		(0.087)		(0.087)	
DualCEO	0.054	**	0.050	**	-0.074		-0.083		0.155	**	0.149	*
	(0.014)		(0.015)		(0.070)		(0.072)		(0.072)		(0.079)	
Gender	-0.044		-0.045	*	0.082		0.076		-0.163	*	-0.164	*
	(0.025)		(0.025)		(0.109)		(0.108)		(0.093)		(0.093)	
Firm Size	0.087	***	0.087	***	0.143	*	0.157	**	0.505	***	0.499	***
	(0.015)		(0.015)		(0.069)		(0.071)		(0.074)		(0.072)	
Sales	0.066	***	0.066	***	-0.256	**	-0.267	**	-0.053		-0.046	
	(0.015)		(0.015)		(0.071)		(0.071)		(0.075)		(0.074)	
Cash/Assets	-0.177	**	-0.183	**	0.262		0.235		-0.491		-0.495	
	(0.054)		(0.054)		(0.250)		(0.253)		(0.297)		(0.296)	
Capex/Assets	-0.395	**	-0.387	**	1.669	*	1.533		-0.469		-0.361	
	(0.154)		(0.157)		(0.881)		(0.891)		(0.827)		(0.828)	
Leverage	0.257	***	0.267	***	-0.546		-0.478		1.211	***	1.208	***
	(0.054)		(0.061)		(0.368)		(0.390)		(0.254)		(0.288)	
Tobin's Q	-0.014		-0.011		-0.183	**	-0.166	*	0.226	**	0.226	***
	(0.011)		(0.013)		(0.073)		(0.079)		(0.057)		(0.057)	
ROE	0.012	*	0.013	*	-0.035		-0.037		-0.022		-0.019	
	(0.007)		(0.007)		(0.024)		(0.025)		(0.026)		(0.026)	
ROA	-0.059		-0.060		1.243	***	1.174	***	-0.327		-0.289	
	(0.065)		(0.065)		(0.265)		(0.272)		(0.256)		(0.255)	
$RET_{[-12,0]}$	-0.003		-0.005		0.121	***	0.124	***	-0.055	**	-0.066	**
	(0.003)		(0.004)		(0.023)		(0.026)		(0.019)		(0.017)	
M/B	0.005		0.004		0.023		0.028		0.073		0.065	
	(0.008)		(0.009)		(0.060)		(0.060)		(0.052)		(0.047)	
Intercept	4.532	***	4.649	***	1.554	***	1.759	***	2.617	***	2.891	***
	(0.118)		(0.120)		(0.316)		(0.340)		(0.523)		(0.480)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,999		24,999		24,998		24,998		24,991		24,991	
R-squared	0.50		0.50		0.13		0.13		0.30		0.29	
Adj. R-squared	0.50		0.49		0.12		0.12		0.29		0.28	

Table 9: Regression Results Lagged CEO Compensation (49) – (54)

This table shows the regression results for the models (49) - (54). The models use a lagged version of **Total Awarded Compensation** as their dependent variable. This lagged version is delayed by one year. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(49)		(50)		(51)		(52)		(53)		(54)	
Inflation	0.010											
	(0.008)											
Interest Rates			-0.018									
			(0.013)									
Exchange Rate					0.824	***						
					(0.177)							
GDP							0.000	***				
							(0.000)					
GDP Growth Rate									0.022	**		
									(0.009)			
Unemployment											-0.008	
											(0.009)	
Age	0.015	***	0.015	***	0.014	***	0.012	***	0.014	***	0.015	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.006	**	0.006	**	0.007	**	0.008	**	0.006	**	0.006	**
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Ownership	-0.189	***	-0.180	***	-0.187	***	-0.189	***	-0.185	***	-0.189	***
	(0.033)		(0.033)		(0.032)		(0.032)		(0.032)		(0.032)	
DualCEO	0.112	**	0.108	**	0.130	***	0.141	***	0.120	***	0.114	**
	(0.030)		(0.030)		(0.029)		(0.028)		(0.029)		(0.032)	
Gender	-0.075		-0.075		-0.068		-0.066		-0.072		-0.074	
	(0.045)		(0.045)		(0.045)		(0.045)		(0.044)		(0.045)	
Firm Size	0.349	***	0.351	***	0.334	***	0.325	***	0.340	***	0.348	***
	(0.030)		(0.029)		(0.029)		(0.028)		(0.029)		(0.031)	
Sales	0.028		0.026		0.038		0.044		0.034		0.029	
	(0.028)		(0.028)		(0.028)		(0.027)		(0.027)		(0.029)	
Cash/Assets	-0.069		-0.083		-0.029		-0.024		-0.073		-0.057	
	(0.123)		(0.121)		(0.124)		(0.121)		(0.122)		(0.123)	
Capex/Assets	-0.861	**	-0.840	**	-0.772	**	-0.695	**	-0.721	**	-0.870	**
	(0.298)		(0.296)		(0.291)		(0.276)		(0.284)		(0.296)	
Leverage	0.679	***	0.679	***	0.598	***	0.565	***	0.608	***	0.679	***
	(0.120)		(0.114)		(0.105)		(0.099)		(0.105)		(0.124)	
Tobin's Q	0.165	***	0.162	***	0.143	***	0.140	***	0.140	***	0.164	***
	(0.023)		(0.021)		(0.020)		(0.020)		(0.023)		(0.023)	
ROE	0.000		0.000		0.000		-0.002		-0.000		0.001	
	(0.010)		(0.010)		(0.010)		(0.010)		(0.010)		(0.010)	
ROA	-0.022		-0.011		0.032		0.034		0.013		-0.008	
	(0.104)		(0.108)		(0.105)		(0.101)		(0.110)		(0.107)	
$RET_{[-12,0]}$	0.036	**	0.029	**	0.037	**	0.041	**	0.028	**	0.035	**
	(0.014)		(0.013)		(0.011)		(0.012)		(0.013)		(0.014)	
M/B	0.027		0.033		0.029		0.026		0.040	*	0.024	
	(0.021)		(0.020)		(0.019)		(0.019)		(0.019)		(0.019)	
Intercept	4.460	***	4.488	***	3.910	***	4.154	***	4.446	***	4.531	***
	(0.169)		(0.166)		(0.193)		(0.174)		(0.173)		(0.189)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	21,309		21,309		21,309		21,309		21,309		21,309	
R-squared	0.57		0.57		0.57		0.57		0.57		0.56	

Adj. R-squared	0.56		0.56		0.56		0.56		0.56		0.56	

Table 10: Regression Results Lagged CEO Compensation (55) – (60)
This table shows the regression results for the models (55) - (60). The models use a lagged version of **Total Awarded Compensation** as their dependent variable. This lagged version is delayed by one year. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(55)		(56)		(57)		(58)		(59)		(60)	
Market Performance	0.001											
	(0.001)											
Market Risk			0.002									
			(0.003)									
Investor Sentiment					-0.002							
					(0.002)							
Policy Uncertainty							0.001	**				
							(0.000)					
Geopolitical Risk									-0.007			
									(0.049)			
Terrorism Index											0.070	**
											(0.020)	
Age	0.015	***	0.015	***	0.015	***	0.015	***	0.015	***	0.014	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.006	**	0.006	**	0.006	**	0.006	**	0.006	**	0.007	**
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Ownership	-0.185	***	-0.187	***	-0.188	***	-0.183	***	-0.186	***	-0.181	***
	(0.032)		(0.032)		(0.032)		(0.032)		(0.032)		(0.032)	
DualCEO	0.110	**	0.108	**	0.110	**	0.111	**	0.109	**	0.125	***
	(0.030)		(0.031)		(0.030)		(0.029)		(0.031)		(0.031)	
Gender	-0.075		-0.076		-0.075		-0.075		-0.076		-0.069	
	(0.045)		(0.045)		(0.045)		(0.044)		(0.045)		(0.045)	
Firm Size	0.350	***	0.351	***	0.350	***	0.346	***	0.351	***	0.336	***
	(0.029)		(0.030)		(0.030)		(0.028)		(0.029)		(0.028)	
Sales	0.028		0.027		0.028		0.030		0.027		0.037	
	(0.028)		(0.028)		(0.028)		(0.027)		(0.028)		(0.028)	
Cash/Assets	-0.070		-0.079		-0.075		-0.098		-0.073		-0.040	
	(0.122)		(0.123)		(0.122)		(0.121)		(0.123)		(0.123)	
Capex/Assets	-0.847	**	-0.856	**	-0.861	**	-0.777	**	-0.862	**	-0.772	**
	(0.296)		(0.293)		(0.297)		(0.291)		(0.296)		(0.289)	
Leverage	0.676	***	0.682	***	0.677	***	0.632	***	0.685	***	0.613	***
	(0.116)		(0.111)		(0.111)		(0.089)		(0.118)		(0.100)	
Tobin's Q	0.160	***	0.167	***	0.167	***	0.158	***	0.165	***	0.146	***
	(0.020)		(0.023)		(0.022)		(0.021)		(0.023)		(0.021)	
ROE	0.001		0.001		0.001		0.001		0.001		0.001	
	(0.010)		(0.010)		(0.010)		(0.010)		(0.010)		(0.010)	
ROA	-0.008		-0.020		-0.018		-0.018		-0.015		0.043	
	(0.107)		(0.107)		(0.106)		(0.108)		(0.107)		(0.104)	
$RET_{[-12,0]}$	0.029	**	0.031	*	0.032	*	0.030	*	0.032	**	0.034	**
	(0.013)		(0.015)		(0.015)		(0.014)		(0.014)		(0.012)	
M/B	0.031		0.029		0.029		0.040	**	0.028		0.027	
	(0.020)		(0.020)		(0.020)		(0.018)		(0.021)		(0.018)	
Intercept	4.461	***	4.431	***	4.474	***	4.329	***	4.483	***	4.196	***
	(0.169)		(0.170)		(0.173)		(0.171)		(0.215)		(0.180)	

Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	21,309	21,309	21,309	21,309	21,309	21,309
R-squared	0.56	0.56	0.56	0.57	0.56	0.57
Adj. R-squared	0.56	0.56	0.56	0.56	0.56	0.56

APPENDIX C Robustness results

Table 1: Regression Results Ex Post Pay (1) – (6)
This table shows the regression results for the models (1) - (6). The models use **Ex Post Pay** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(1)		(2)		(3)		(4)		(5)		(6)	
Inflation	0.042	**										
	(0.012)											
Interest Rates			0.020									
			(0.012)									
Exchange Rate					0.977	**						
					(0.288)							
GDP							0.000	***				
							(0.000)					
GDP Growth Rate									0.019	*		
									(0.009)			
Unemployment											-0.032	**
											(0.011)	
Age	0.019	***	0.020	***	0.018	***	0.016	***	0.019	***	0.019	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.011	***	0.009	**	0.011	***	0.012	***	0.010	***	0.010	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Ownership	-0.169	***	-0.162	***	-0.155	***	-0.159	***	-0.155	***	-0.164	***
	(0.035)		(0.035)		(0.035)		(0.035)		(0.036)		(0.034)	
DualCEO	0.105	**	0.088	**	0.107	**	0.122	**	0.099	**	0.103	**
	(0.034)		(0.037)		(0.033)		(0.033)		(0.036)		(0.035)	
Gender	-0.064		-0.070		-0.059		-0.055		-0.064		-0.063	
	(0.048)		(0.047)		(0.048)		(0.048)		(0.048)		(0.048)	
Firm Size	0.370	***	0.372	***	0.355	***	0.342	***	0.368	***	0.362	***
	(0.031)		(0.032)		(0.031)		(0.029)		(0.030)		(0.032)	
Sales	0.032		0.032		0.043		0.051	*	0.033		0.040	
	(0.030)		(0.031)		(0.030)		(0.028)		(0.029)		(0.031)	
Cash/Assets	-0.197		-0.182		-0.146		-0.140		-0.210	*	-0.137	
	(0.116)		(0.118)		(0.118)		(0.115)		(0.118)		(0.119)	
Capex/Assets	-0.762	**	-0.812	**	-0.667	*	-0.578	*	-0.672	**	-0.804	**
	(0.304)		(0.318)		(0.323)		(0.300)		(0.317)		(0.311)	
Leverage	0.577	***	0.614	***	0.507	***	0.459	***	0.541	***	0.586	***
	(0.108)		(0.104)		(0.104)		(0.095)		(0.100)		(0.114)	
Tobin's Q	0.235	***	0.235	***	0.209	***	0.204	***	0.213	***	0.231	***
	(0.028)		(0.026)		(0.026)		(0.023)		(0.028)		(0.026)	
ROE	0.005		0.006		0.005		0.003		0.006		0.006	
	(0.013)		(0.013)		(0.013)		(0.013)		(0.014)		(0.013)	
ROA	0.402	***	0.427	***	0.479	***	0.483	***	0.457	***	0.455	***
	(0.098)		(0.098)		(0.100)		(0.099)		(0.102)		(0.098)	
$RET_{[-12,0]}$	-0.006		-0.018		-0.015		-0.011		-0.024		-0.009	
	(0.013)		(0.014)		(0.010)		(0.011)		(0.014)		(0.010)	
M/B	0.075	**	0.072	***	0.077	***	0.075	***	0.088	***	0.060	**
	(0.019)		(0.018)		(0.017)		(0.016)		(0.020)		(0.017)	
Intercept	3.801	***	3.825	***	3.180	***	3.506	***	3.803	***	4.117	***
	(0.191)		(0.184)		(0.269)		(0.197)		(0.185)		(0.193)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,003		24,892		24,892		24,892		24,003		24,892	

R-squared	0.52	0.52	0.52	0.52	0.52	0.52
Adj. R-squared	0.51	0.51	0.51	0.52	0.51	0.51

Table 2: Regression Results Ex Post Pay (7) – (12)

This table shows the regression results for the models (7) - (12). The models use **Ex Post Pay** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(1)		(2)		(3)		(4)		(5)		(6)	
Market Performance	-0.001											
	(0.002)											
Market Risk			-0.004									
			(0.005)									
Investor Sentiment					-0.001							
					(0.004)							
Policy Uncertainty							0.001	*				
							(0.000)					
Geopolitical Risk									0.060			
									(0.065)			
Terrorism Index											0.028	
											(0.023)	
Age	0.020	***	0.020	***	0.020	***	0.020	***	0.020	***	0.020	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.009	**	0.009	**	0.009	**	0.009	**	0.009	***	0.009	**
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.003)	
Ownership	-0.155	***	-0.153	***	-0.155	***	-0.153	***	-0.156	***	-0.151	***
	(0.035)		(0.035)		(0.036)		(0.035)		(0.035)		(0.035)	
DualCEO	0.082	**	0.085	**	0.083	**	0.083	**	0.087	**	0.087	**
	(0.037)		(0.036)		(0.037)		(0.036)		(0.037)		(0.037)	
Gender	-0.070		-0.069		-0.070		-0.069		-0.068		-0.067	
	(0.047)		(0.048)		(0.047)		(0.047)		(0.048)		(0.048)	
Firm Size	0.376	***	0.373	***	0.374	***	0.373	***	0.373	***	0.370	***
	(0.031)		(0.030)		(0.031)		(0.030)		(0.032)		(0.031)	
Sales	0.030		0.031		0.031		0.031		0.030		0.034	
	(0.030)		(0.030)		(0.030)		(0.030)		(0.031)		(0.030)	
Cash/Assets	-0.197		-0.179		-0.196		-0.205	*	-0.188		-0.184	
	(0.115)		(0.118)		(0.115)		(0.116)		(0.119)		(0.117)	
Capex/Assets	-0.804	**	-0.809	**	-0.784	**	-0.750	**	-0.796	**	-0.753	**
	(0.315)		(0.316)		(0.324)		(0.321)		(0.324)		(0.334)	
Leverage	0.624	***	0.620	***	0.612	***	0.596	***	0.602	***	0.591	***
	(0.102)		(0.107)		(0.106)		(0.097)		(0.110)		(0.107)	
Tobin's Q	0.239	***	0.230	***	0.235	***	0.232	***	0.231	***	0.228	***
	(0.026)		(0.026)		(0.025)		(0.026)		(0.029)		(0.025)	
ROE	0.006		0.006		0.006		0.006		0.006		0.006	
	(0.013)		(0.013)		(0.013)		(0.013)		(0.013)		(0.013)	
ROA	0.419	***	0.437	***	0.425	***	0.426	***	0.429	***	0.447	***
	(0.097)		(0.098)		(0.097)		(0.100)		(0.098)		(0.100)	
$RET_{[-12,0]}$	-0.019		-0.020	*	-0.022		-0.023		-0.019		-0.022	
	(0.013)		(0.011)		(0.016)		(0.015)		(0.014)		(0.013)	
M/B	0.073	***	0.074	***	0.076	***	0.080	***	0.077	***	0.075	***
	(0.018)		(0.018)		(0.018)		(0.017)		(0.018)		(0.017)	
Intercept	3.838	***	3.913	***	3.837	***	3.774	***	3.691	***	3.718	***
	(0.181)		(0.165)		(0.189)		(0.175)		(0.259)		(0.230)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,892		24,892		24,892		24,892		24,892		24,892	
R-squared	0.52		0.52		0.52		0.52		0.52		0.52	

Adj. R-squared	0.51		0.51		0.51		0.51		0.51		0.51	

Table 3: Regression Results Total Compensation (13) – (18)
This table shows the regression results for the models (13) - (18). The models use **Total Compensation** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(13)		(14)		(15)		(16)		(17)		(18)	
Inflation	0.014	***										
	(0.003)											
Interest Rates			0.015	*								
			(0.007)									
Exchange Rate					0.272	*						
					(0.136)							
GDP							0.000	***				
							(0.000)					
GDP Growth Rate									0.045	***		
									(0.011)			
Unemployment											-0.131	***
											(0.017)	
Age	0.013	***	0.013	***	0.013	***	0.012	***	0.013	***	0.012	***
	(0.002)		(0.001)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.007	***	0.006	**	0.007	**	0.007	***	0.007	***	0.007	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Ownership	-0.083	**	-0.082	**	-0.076	**	-0.082	**	-0.084	**	-0.082	**
	(0.026)		(0.026)		(0.026)		(0.026)		(0.027)		(0.027)	
DualCEO	0.057	**	0.052	**	0.055	**	0.062	**	0.061	**	0.062	**
	(0.018)		(0.018)		(0.017)		(0.018)		(0.018)		(0.018)	
Gender	-0.046		-0.048		-0.045		-0.045		-0.045		-0.045	
	(0.032)		(0.031)		(0.031)		(0.031)		(0.032)		(0.031)	
Firm Size	0.105	***	0.107	***	0.103	***	0.100	***	0.101	***	0.100	***
	(0.021)		(0.021)		(0.021)		(0.021)		(0.021)		(0.021)	
Sales	0.039	*	0.038	*	0.041	*	0.042	*	0.042	*	0.042	*
	(0.021)		(0.020)		(0.020)		(0.020)		(0.021)		(0.020)	
Cash/Assets	-0.160	**	-0.152	**	-0.149	*	-0.146	*	-0.150	*	-0.146	*
	(0.072)		(0.071)		(0.071)		(0.071)		(0.072)		(0.071)	
Capex/Assets	-0.233		-0.253		-0.200		-0.182		-0.194		-0.182	
	(0.213)		(0.208)		(0.208)		(0.215)		(0.218)		(0.215)	
Leverage	0.224	**	0.237	**	0.208	**	0.199	**	0.204	**	0.199	**
	(0.067)		(0.070)		(0.069)		(0.068)		(0.069)		(0.068)	
Tobin's Q	-0.036	**	-0.034	**	-0.041	**	-0.043	**	-0.042	**	-0.043	**
	(0.015)		(0.014)		(0.014)		(0.014)		(0.015)		(0.014)	
ROE	0.012		0.013	*	0.013	*	0.011	*	0.012		0.011	*
	(0.007)		(0.006)		(0.007)		(0.007)		(0.007)		(0.007)	
ROA	0.107		0.117		0.131		0.122		0.118		0.122	
	(0.085)		(0.085)		(0.085)		(0.085)		(0.087)		(0.085)	
$RET_{[-12,0]}$	0.012	**	0.009		0.007		0.010		0.011		0.010	
	(0.006)		(0.005)		(0.005)		(0.006)		(0.006)		(0.006)	
M/B	0.009		0.007		0.010		0.010		0.010		0.010	
	(0.012)		(0.011)		(0.011)		(0.012)		(0.012)		(0.012)	
Intercept	4.734	***	4.732	***	4.798	***	4.712	***	4.608	***	5.449	***
	(0.127)		(0.123)		(0.175)		(0.129)		(0.128)		(0.178)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	

N	24,110	24,999	25,003	24,999	24,110	24,999
R-squared	0.40	0.40	0.40	0.40	0.40	0.40
Adj. R-squared	0.39	0.39	0.39	0.39	0.39	0.39

Table 4: Regression Results Total Compensation (19) – (24)
This table shows the regression results for the models (19) - (24). The models use **Total Compensation** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(19)		(20)		(21)		(22)		(23)		(24)	
Market Performance	0.012	***										
	(0.002)											
Market Risk			0.032	***								
			(0.004)									
Investor Sentiment					-0.045	***						
					(0.006)							
Policy Uncertainty							0.002	***				
							(0.000)					
Geopolitical Risk									0.192	***		
									(0.026)			
Terrorism Index											0.339	***
											(0.045)	
Age	0.012	***	0.012	***	0.012	***	0.012	***	0.012	***	0.012	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.007	***	0.007	***	0.007	***	0.007	***	0.007	***	0.007	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Ownership	-0.082	**	-0.082	**	-0.082	**	-0.082	**	-0.082	**	-0.082	**
	(0.027)		(0.026)		(0.027)		(0.026)		(0.027)		(0.027)	
DualCEO	0.062	**	0.062	**	0.062	**	0.062	**	0.062	**	0.062	**
	(0.018)		(0.018)		(0.018)		(0.018)		(0.018)		(0.018)	
Gender	-0.045		-0.045		-0.045		-0.045		-0.045		-0.045	
	(0.031)		(0.031)		(0.031)		(0.031)		(0.031)		(0.031)	
Firm Size	0.100	***	0.100	***	0.100	***	0.100	***	0.100	***	0.100	***
	(0.021)		(0.021)		(0.021)		(0.021)		(0.021)		(0.021)	
Sales	0.042	*	0.042	*	0.042	*	0.042	*	0.042	*	0.042	*
	(0.020)		(0.020)		(0.020)		(0.020)		(0.020)		(0.020)	
Cash/Assets	-0.146	*	-0.146	*	-0.146	*	-0.146	*	-0.146	*	-0.146	*
	(0.071)		(0.071)		(0.071)		(0.071)		(0.071)		(0.071)	
Capex/Assets	-0.182		-0.182		-0.182		-0.182		-0.182		-0.182	
	(0.215)		(0.215)		(0.215)		(0.215)		(0.215)		(0.216)	
Leverage	0.199	**	0.199	**	0.199	**	0.199	**	0.199	**	0.199	**
	(0.068)		(0.068)		(0.068)		(0.068)		(0.068)		(0.068)	
Tobin's Q	-0.043	**	-0.043	**	-0.043	**	-0.043	**	-0.043	**	-0.043	**
	(0.015)		(0.014)		(0.014)		(0.014)		(0.015)		(0.014)	
ROE	0.011	*	0.011	*	0.011	*	0.011	*	0.011	*	0.011	*
	(0.007)		(0.007)		(0.007)		(0.007)		(0.007)		(0.007)	
ROA	0.122		0.122		0.122		0.122		0.122		0.122	
	(0.085)		(0.085)		(0.085)		(0.085)		(0.085)		(0.085)	
$RET_{[-12,0]}$	0.010		0.010		0.010		0.010		0.010		0.010	
	(0.006)		(0.006)		(0.006)		(0.006)		(0.006)		(0.006)	
M/B	0.010		0.010		0.010		0.010		0.010		0.010	
	(0.012)		(0.012)		(0.012)		(0.012)		(0.012)		(0.012)	
Intercept	4.651	***	4.435	***	5.038	***	4.681	***	4.285	***	3.570	***
	(0.127)		(0.126)		(0.145)		(0.128)		(0.128)		(0.175)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,999		24,999		24,999		24,999		24,999		24,999	

R-squared	0.40	0.40	0.40	0.40	0.40	0.40
Adj. R-squared	0.39	0.39	0.39	0.39	0.39	0.39

Table 5: Regression Results Lagged Total Awarded Compensation (25) – (30)
This table shows the regression results for the models (25) - (30). The models use a lagged version of **Total Awarded Compensation** as their dependent variable. The lagged dependent variable is delayed by 2 years. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(25)		(26)		(27)		(28)		(29)		(30)	
Inflation	-0.013											
	(0.011)											
Interest Rates			-0.021									
			(0.023)									
Exchange Rate					0.930	**						
					(0.266)							
GDP							0.000	**				
							(0.000)					
GDP Growth Rate									0.002			
									(0.014)			
Unemployment											-0.011	
											(0.013)	
Age	0.013	***	0.013	***	0.011	***	0.010	***	0.013	***	0.013	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.005	*	0.006	*	0.007	**	0.008	**	0.006	*	0.006	*
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)		(0.003)	
Ownership	-0.200	***	-0.195	***	-0.202	***	-0.203	***	-0.202	***	-0.205	***
	(0.035)		(0.035)		(0.035)		(0.035)		(0.035)		(0.035)	
DualCEO	0.122	**	0.122	**	0.144	***	0.156	***	0.123	**	0.128	**
	(0.032)		(0.032)		(0.030)		(0.030)		(0.033)		(0.032)	
Gender	-0.093	*	-0.093	*	-0.087	*	-0.086		-0.093	*	-0.092	*
	(0.048)		(0.048)		(0.049)		(0.049)		(0.048)		(0.048)	
Firm Size	0.327	***	0.326	***	0.308	***	0.298	***	0.325	***	0.322	***
	(0.029)		(0.029)		(0.029)		(0.029)		(0.031)		(0.030)	
Sales	0.037		0.036		0.049	*	0.057	*	0.038		0.040	
	(0.028)		(0.028)		(0.028)		(0.028)		(0.029)		(0.028)	
Cash/Assets	-0.051		-0.061		0.002		0.009		-0.048		-0.027	
	(0.132)		(0.130)		(0.133)		(0.131)		(0.132)		(0.132)	
Capex/Assets	-0.728	**	-0.708	**	-0.638	**	-0.568	*	-0.722	**	-0.745	**
	(0.310)		(0.306)		(0.296)		(0.287)		(0.307)		(0.308)	
Leverage	0.607	***	0.604	***	0.523	***	0.492	***	0.604	***	0.607	***
	(0.122)		(0.125)		(0.109)		(0.108)		(0.136)		(0.129)	
Tobin's Q	0.108	**	0.106	**	0.084	**	0.081	**	0.107	**	0.109	**
	(0.030)		(0.029)		(0.031)		(0.030)		(0.033)		(0.030)	
ROE	0.018		0.017		0.017		0.015		0.018		0.018	
	(0.015)		(0.015)		(0.014)		(0.015)		(0.015)		(0.015)	
ROA	-0.070		-0.072		-0.015		-0.005		-0.075		-0.066	
	(0.105)		(0.106)		(0.108)		(0.106)		(0.108)		(0.107)	
$RET_{[-12,0]}$	0.005		0.005		0.013		0.015	*	0.008		0.012	
	(0.010)		(0.010)		(0.009)		(0.009)		(0.011)		(0.011)	
M/B	0.058	**	0.062	**	0.055	*	0.051	*	0.057	*	0.049	*
	(0.026)		(0.026)		(0.027)		(0.026)		(0.027)		(0.026)	
Intercept	4.807	***	4.817	***	4.154	***	4.391	***	4.785	***	4.879	***
	(0.179)		(0.172)		(0.231)		(0.206)		(0.179)		(0.225)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	

Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	17,794	17,794	17,794	17,794	17,794	17,794
R-squared	0.55	0.55	0.56	0.56	0.55	0.55
Adj. R-squared	0.54	0.54	0.55	0.55	0.54	0.54

Table 6: Regression Results Lagged Total Awarded Compensation (31) – (36)
This table shows the regression results for the models (31) - (36). The models use a lagged version of **Total Awarded Compensation** as their dependent variable. The lagged dependent variable is delayed by 2 years. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(31)		(32)		(33)		(34)		(35)		(36)	
Market Performance	0.001											
	(0.001)											
Market Risk			0.001									
			(0.003)									
Investor Sentiment					-0.004							
					(0.003)							
Policy Uncertainty							0.001	**				
							(0.000)					
Geopolitical Risk									-0.057			
									(0.054)			
Terrorism Index											0.091	**
											(0.026)	
Age	0.013	***	0.013	***	0.013	***	0.013	***	0.013	***	0.011	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.006	*	0.006	*	0.006	*	0.006	**	0.006	**	0.007	**
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)		(0.003)	
Ownership	-0.201	***	-0.202	***	-0.204	***	-0.199	***	-0.202	***	-0.198	***
	(0.035)		(0.035)		(0.035)		(0.035)		(0.035)		(0.035)	
DualCEO	0.124	**	0.122	**	0.121	**	0.124	***	0.123	**	0.149	***
	(0.031)		(0.032)		(0.031)		(0.030)		(0.031)		(0.030)	
Gender	-0.093	*	-0.094	*	-0.094	*	-0.094	*	-0.094	*	-0.086	*
	(0.048)		(0.048)		(0.048)		(0.048)		(0.048)		(0.049)	
Firm Size	0.324	***	0.327	***	0.327	***	0.322	***	0.325	***	0.306	***
	(0.029)		(0.029)		(0.029)		(0.029)		(0.029)		(0.029)	
Sales	0.038		0.037		0.038		0.040		0.038		0.051	*
	(0.028)		(0.028)		(0.028)		(0.028)		(0.028)		(0.028)	
Cash/Assets	-0.046		-0.054		-0.057		-0.074		-0.054		-0.003	
	(0.132)		(0.132)		(0.131)		(0.130)		(0.131)		(0.131)	
Capex/Assets	-0.709	**	-0.728	**	-0.729	**	-0.652	**	-0.715	**	-0.601	*
	(0.310)		(0.305)		(0.306)		(0.296)		(0.305)		(0.290)	
Leverage	0.597	***	0.611	***	0.605	***	0.562	***	0.611	***	0.507	***
	(0.117)		(0.122)		(0.117)		(0.108)		(0.121)		(0.110)	
Tobin's Q	0.103	**	0.112	**	0.117	***	0.103	**	0.112	**	0.082	**
	(0.030)		(0.031)		(0.028)		(0.027)		(0.030)		(0.031)	
ROE	0.017		0.018		0.019		0.018		0.018		0.018	
	(0.015)		(0.015)		(0.015)		(0.015)		(0.015)		(0.014)	
ROA	-0.069		-0.082		-0.083		-0.081		-0.084		0.001	
	(0.107)		(0.106)		(0.105)		(0.109)		(0.106)		(0.108)	
$RET_{[-12,0]}$	0.005		0.008		0.007		0.006		0.007		0.011	
	(0.010)		(0.011)		(0.012)		(0.010)		(0.011)		(0.009)	
M/B	0.059	**	0.056	*	0.055	**	0.068	**	0.055	*	0.055	**
	(0.027)		(0.026)		(0.026)		(0.023)		(0.027)		(0.026)	
Intercept	4.786	***	4.759	***	4.790	***	4.653	***	4.944	***	4.465	***
	(0.178)		(0.192)		(0.181)		(0.183)		(0.229)		(0.186)	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	

Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	17,794	17,794	17,794	17,794	17,794	17,794
R-squared	0.55	0.55	0.55	0.56	0.55	0.56
Adj. R-squared	0.54	0.54	0.54	0.55	0.54	0.55

Table 7: Regression Results Lagged Total Awarded Compensation (37) – (42)
This table shows the regression results for the models (37) - (42). The models use a lagged version of **Total Awarded Compensation** as their dependent variable. The lagged dependent variable is delayed by 5 years. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(37)		(38)		(39)		(40)		(41)		(42)	
Inflation	-0.007											
	(0.013)											
Interest Rates			-0.031	**								
			(0.011)									
Exchange Rate					0.758	**						
					(0.308)							
GDP							0.000	**				
							(0.000)					
GDP Growth Rate									0.017			
									(0.014)			
Unemployment											-0.011	
											(0.012)	
Age	0.006	*	0.006	*	0.004		0.004		0.006	*	0.006	*
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)		(0.003)	
Tenure	0.006	*	0.006	*	0.007	**	0.008	**	0.007	*	0.007	*
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)		(0.004)	
Ownership	-0.215	***	-0.205	***	-0.216	***	-0.213	***	-0.213	***	-0.220	***
	(0.040)		(0.042)		(0.041)		(0.041)		(0.041)		(0.041)	
DualCEO	0.142	**	0.143	**	0.158	**	0.165	**	0.145	**	0.147	**
	(0.039)		(0.040)		(0.038)		(0.039)		(0.038)		(0.037)	
Gender	-0.118	*	-0.118	*	-0.115	*	-0.116	*	-0.117	*	-0.117	*
	(0.064)		(0.063)		(0.063)		(0.064)		(0.064)		(0.064)	
Firm Size	0.279	***	0.279	***	0.267	***	0.264	***	0.276	***	0.276	***
	(0.037)		(0.036)		(0.037)		(0.037)		(0.037)		(0.037)	
Sales	0.053		0.050		0.061		0.062		0.054		0.056	
	(0.037)		(0.036)		(0.037)		(0.037)		(0.037)		(0.036)	
Cash/Assets	-0.147		-0.165		-0.102		-0.095		-0.137		-0.126	
	(0.166)		(0.161)		(0.169)		(0.166)		(0.166)		(0.162)	
Capex/Assets	-0.509		-0.484		-0.461		-0.465		-0.476		-0.529	
	(0.352)		(0.359)		(0.355)		(0.346)		(0.356)		(0.344)	
Leverage	0.506	**	0.499	**	0.468	**	0.478	**	0.489	**	0.502	**
	(0.143)		(0.142)		(0.140)		(0.138)		(0.140)		(0.144)	
Tobin's Q	0.101	**	0.097	**	0.082	**	0.087	**	0.087	**	0.101	**
	(0.038)		(0.037)		(0.037)		(0.035)		(0.035)		(0.035)	
ROE	0.003		0.001		0.002		0.002		0.003		0.003	
	(0.009)		(0.009)		(0.009)		(0.009)		(0.009)		(0.009)	
ROA	-0.206		-0.197		-0.167		-0.158		-0.193		-0.199	
	(0.143)		(0.143)		(0.148)		(0.145)		(0.142)		(0.149)	
$RET_{[-12,0]}$	0.007		0.003		0.013		0.017		0.005		0.014	
	(0.010)		(0.010)		(0.011)		(0.012)		(0.011)		(0.013)	
M/B	0.089	**	0.099	**	0.085	**	0.078	**	0.095	**	0.081	**
	(0.027)		(0.027)		(0.029)		(0.029)		(0.026)		(0.029)	
Intercept	5.648	***	5.683	***	5.131	***	5.215	***	5.601	***	5.736	***
	(0.186)		(0.181)		(0.257)		(0.214)		(0.190)		(0.260)	

Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	9,779	9,779	9,779	9,779	9,779	9,779
R-squared	0.54	0.54	0.55	0.55	0.54	0.54
Adj. R-squared	0.53	0.53	0.53	0.53	0.53	0.53

Table 8: Regression Results Lagged Total Awarded Compensation (43) – (48)
This table shows the regression results for the models (43) - (48). The models use a lagged version of **Total Awarded Compensation** as their dependent variable. The lagged dependent variable is delayed by 5 years. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(43)		(44)		(45)		(46)		(47)		(48)	
Market Performance	0.000											
	(0.001)											
Market Risk			-0.004									
			(0.003)									
Investor Sentiment					-0.001							
					(0.002)							
Policy Uncertainty							0.000					
							(0.001)					
Geopolitical Risk									0.071			
									(0.067)			
Terrorism Index											0.086	**
											(0.022)	
Age	0.006	*	0.005	*	0.006	*	0.006	*	0.006	*	0.004	
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)		(0.003)	
Tenure	0.006	*	0.007	*	0.006	*	0.006	*	0.007	*	0.008	**
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)		(0.003)	
Ownership	-0.215	***	-0.217	***	-0.217	***	-0.215	***	-0.217	***	-0.212	***
	(0.041)		(0.041)		(0.041)		(0.041)		(0.041)		(0.041)	
DualCEO	0.141	**	0.149	**	0.140	**	0.140	**	0.145	**	0.167	**
	(0.039)		(0.038)		(0.039)		(0.038)		(0.038)		(0.039)	
Gender	-0.118	*	-0.116	*	-0.118	*	-0.118	*	-0.117	*	-0.117	*
	(0.064)		(0.064)		(0.064)		(0.063)		(0.064)		(0.063)	
Firm Size	0.279	***	0.274	***	0.280	***	0.280	***	0.277	***	0.262	***
	(0.037)		(0.037)		(0.037)		(0.036)		(0.036)		(0.037)	
Sales	0.053		0.055		0.053		0.053		0.055		0.063	
	(0.037)		(0.036)		(0.037)		(0.036)		(0.036)		(0.037)	
Cash/Assets	-0.146		-0.122		-0.149		-0.151		-0.135		-0.093	
	(0.166)		(0.165)		(0.167)		(0.162)		(0.165)		(0.166)	
Capex/Assets	-0.511		-0.522		-0.520		-0.518		-0.516		-0.412	
	(0.351)		(0.348)		(0.348)		(0.350)		(0.347)		(0.349)	
Leverage	0.505	**	0.491	**	0.511	**	0.511	**	0.491	**	0.459	**
	(0.144)		(0.145)		(0.144)		(0.145)		(0.145)		(0.138)	
Tobin's Q	0.099	**	0.087	**	0.106	**	0.104	**	0.094	**	0.080	**
	(0.038)		(0.038)		(0.038)		(0.037)		(0.037)		(0.035)	
ROE	0.003		0.002		0.004		0.003		0.003		0.002	
	(0.009)		(0.009)		(0.009)		(0.009)		(0.009)		(0.009)	
ROA	-0.206		-0.185		-0.214		-0.214		-0.198		-0.148	
	(0.144)		(0.148)		(0.144)		(0.151)		(0.148)		(0.145)	
$RET_{[-12,0]}$	0.007		0.013		0.009		0.008		0.011		0.012	
	(0.011)		(0.011)		(0.012)		(0.012)		(0.012)		(0.011)	
M/B	0.090	**	0.089	**	0.087	**	0.089	**	0.089	**	0.081	**
	(0.027)		(0.028)		(0.027)		(0.027)		(0.028)		(0.028)	
Intercept	5.631	***	5.760	***	5.632	***	5.606	***	5.458	***	5.354	***

	(0.186)	(0.230)	(0.186)	(0.246)	(0.206)	(0.185)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustered by Firm and Year	Yes	Yes	Yes	Yes	Yes	Yes
N	9,779	9,779	9,779	9,779	9,779	9,779
R-squared	0.54	0.54	0.54	0.54	0.54	0.55
Adj. R-squared	0.53	0.53	0.53	0.53	0.53	0.53

Table 9: Regression Results Total Awarded Compensation (49) – (54)
This table shows the regression results for the models (49) - (54). The models use **Total Awarded Compensation** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(49)		(50)		(51)		(52)		(53)		(54)	
Inflation	0.033	***										
	(0.007)											
Interest Rates			0.002									
			(0.009)									
Exchange Rate					0.986	**						
					(0.263)							
GDP							0.000	***				
							(0.000)					
GDP Growth Rate									0.013	*		
									(0.007)			
Unemployment											-0.022	**
											(0.008)	
Age	0.022	***	0.023	***	0.020	***	0.016	***	0.022	***	0.022	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.008	**	0.005	*	0.008	**	0.012	***	0.006	**	0.006	**
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)		(0.003)	
Ownership	-0.120	***	-0.102	**	-0.097	**	-0.104	***	-0.102	**	-0.111	***
	(0.027)		(0.028)		(0.026)		(0.026)		(0.028)		(0.027)	
DualCEO	0.101	**	0.083	**	0.105	**	0.131	***	0.092	**	0.097	**
	(0.028)		(0.032)		(0.030)		(0.028)		(0.032)		(0.030)	
Gender	0.011		0.000		0.018		0.035		0.005		0.010	
	(0.045)		(0.043)		(0.043)		(0.043)		(0.045)		(0.044)	
Firm Size	0.420	***	0.423	***	0.370	***	0.315	***	0.413	***	0.403	***
	(0.028)		(0.032)		(0.037)		(0.026)		(0.032)		(0.033)	
Sales	0.090	**	0.099	**	0.100	**	0.083	**	0.107	**	0.097	**
	(0.028)		(0.028)		(0.027)		(0.024)		(0.029)		(0.028)	
Cash/Assets	-0.024		-0.040		0.000		-0.013		-0.055		0.011	
	(0.073)		(0.075)		(0.075)		(0.073)		(0.082)		(0.072)	
Capex/Assets	-0.115		-0.061		0.024		0.117		0.020		-0.135	
	(0.233)		(0.252)		(0.250)		(0.212)		(0.238)		(0.238)	
Leverage	0.267	**	0.292	**	0.158		0.077		0.224	**	0.277	**
	(0.103)		(0.092)		(0.102)		(0.093)		(0.096)		(0.103)	
Tobin's Q	0.192	***	0.181	***	0.157	***	0.159	***	0.164	***	0.183	***
	(0.023)		(0.021)		(0.024)		(0.019)		(0.026)		(0.021)	
ROE	-0.011		-0.009		-0.009		-0.011		-0.009		-0.009	
	(0.007)		(0.008)		(0.008)		(0.008)		(0.008)		(0.007)	
ROA	0.032		0.069		0.141		0.196	*	0.085		0.104	
	(0.098)		(0.100)		(0.102)		(0.095)		(0.107)		(0.099)	
$RET_{[-12,0]}$	-0.005		-0.015		-0.011		-0.006		-0.017	*	-0.007	
	(0.009)		(0.009)		(0.007)		(0.007)		(0.009)		(0.008)	
M/B	0.035	*	0.041	**	0.036	*	0.024		0.048	**	0.020	
	(0.019)		(0.019)		(0.020)		(0.016)		(0.020)		(0.019)	

Intercept	2.852	***	2.792	***	2.511	***	3.264	***	2.772	***	3.157	***
	(0.217)		(0.209)		(0.206)		(0.225)		(0.210)		(0.250)	
Firm fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	23,884		24,776		24,776		24,776		23,884		24,776	
R-squared	0.74		0.74		0.74		0.74		0.74		0.74	
Adj. R-squared	0.72		0.71		0.72		0.72		0.72		0.71	

Table 10: Regression Results Total Awarded Compensation (55) – (60)
This table shows the regression results for the models (55) - (60). The models use **Total Awarded Compensation** as their dependent variable. All variables are defined in Table 2 of Appendix A. Standard errors clustered by firm and year are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Explanatory variables	(55)		(56)		(57)		(58)		(59)		(60)	
Market Performance	-0.001											
	(0.001)											
Market Risk			-0.000									
			(0.003)									
Investor Sentiment					-0.002							
					(0.003)							
Policy Uncertainty							0.000	**				
							(0.000)					
Geopolitical Risk									0.042			
									(0.055)			
Terrorism Index											0.029	
											(0.020)	
Age	0.023	***	0.023	***	0.023	***	0.023	***	0.022	***	0.022	***
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Tenure	0.005	*	0.005	*	0.005	*	0.005	*	0.005	*	0.005	*
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)		(0.003)	
Ownership	-0.104	**	-0.100	**	-0.103	**	-0.098	**	-0.103	**	-0.094	**
	(0.027)		(0.027)		(0.027)		(0.027)		(0.027)		(0.027)	
DualCEO	0.083	**	0.082	**	0.084	**	0.082	**	0.085	**	0.086	**
	(0.031)		(0.032)		(0.031)		(0.031)		(0.031)		(0.033)	
Gender	0.001		0.000		0.001		0.001		0.002		0.004	
	(0.043)		(0.043)		(0.043)		(0.043)		(0.043)		(0.043)	
Firm Size	0.430	***	0.424	***	0.424	***	0.419	***	0.422	***	0.411	***
	(0.031)		(0.030)		(0.032)		(0.031)		(0.033)		(0.034)	
Sales	0.095	**	0.099	**	0.098	**	0.101	**	0.095	**	0.102	**
	(0.027)		(0.028)		(0.027)		(0.028)		(0.026)		(0.028)	
Cash/Assets	-0.039		-0.039		-0.044		-0.060		-0.034		-0.034	
	(0.074)		(0.078)		(0.074)		(0.076)		(0.077)		(0.077)	
Capex/Assets	-0.095		-0.059		-0.056		-0.006		-0.083		-0.011	
	(0.249)		(0.246)		(0.259)		(0.256)		(0.248)		(0.273)	
Leverage	0.306	**	0.293	**	0.277	**	0.261	**	0.282	**	0.258	**
	(0.090)		(0.091)		(0.097)		(0.093)		(0.096)		(0.105)	
Tobin's Q	0.191	***	0.180	***	0.184	***	0.179	***	0.178	***	0.174	***
	(0.023)		(0.021)		(0.022)		(0.021)		(0.022)		(0.020)	
ROE	-0.009		-0.009		-0.009		-0.009		-0.009		-0.008	
	(0.007)		(0.008)		(0.008)		(0.008)		(0.008)		(0.008)	
ROA	0.056		0.071		0.065		0.065		0.071		0.098	
	(0.100)		(0.102)		(0.101)		(0.101)		(0.099)		(0.099)	
$RET_{[-12,0]}$	-0.011		-0.015	*	-0.016		-0.017	*	-0.013		-0.015	*
	(0.009)		(0.009)		(0.010)		(0.009)		(0.009)		(0.008)	
M/B	0.037	*	0.041	**	0.042	**	0.048	**	0.043	**	0.037	**

	(0.019)		(0.018)		(0.018)		(0.018)		(0.018)		(0.017)	
Intercept	2.785	***	2.798	***	2.812	***	2.759	***	2.731	***	2.742	***
	(0.198)		(0.211)		(0.221)		(0.210)		(0.219)		(0.198)	
Firm fixed effects	Yes		Yes		Yes		Yes		Yes		Yes	
Clustered by Firm and Year	Yes		Yes		Yes		Yes		Yes		Yes	
N	24,776		24,776		24,776		24,776		24,776		24,776	
R-squared	0.74		0.74		0.74		0.74		0.74		0.74	
Adj. R-squared	0.71		0.71		0.71		0.71		0.71		0.71	

APPENDIX D Data Validity

Table 1: Variance Inflation Factors (VIF)
This table presents the mean VIF and the highest VIF value of each regression model.

Model	Mean VIF	Highest VIF
1	2.48	8.02
2	2.47	8.01
3	2.50	8.04
4	2.51	8.06
5	2.49	8.03
6	2.49	8.02
7	2.48	8.02
8	2.47	8.01
9	2.47	8.01
10	2.47	8.01
11	2.47	8.01
12	2.48	8.03
13	2.44	7.77
14	2.44	7.76
15	2.39	7.70
16	2.38	7.69
17	2.41	7.66
18	2.41	7.65
19	2.46	7.77
20	2.47	7.78
21	2.41	7.70
22	2.42	7.71
23	2.43	7.66
24	2.44	7.66
25	2.45	7.76
26	2.45	7.77
27	2.40	7.70
28	2.40	7.70
29	2.42	7.66
30	2.42	7.66
31	2.44	7.75
32	2.43	7.75
33	2.39	7.69
34	2.38	7.69
35	2.42	7.65
36	2.41	7.65
37	2.43	7.75
38	2.44	7.75
39	2.38	7.69
40	2.38	7.69
41	2.40	7.65
42	2.41	7.65
43	2.43	7.75
44	2.44	7.76
45	2.38	7.69
46	2.39	7.69
47	2.41	7.65
48	2.42	7.65
49	2.51	8.09

50	2.51	8.08
51	2.53	8.12
52	2.55	8.14
53	2.52	8.09
54	2.52	8.10
55	2.52	8.08
56	2.51	8.08
57	2.51	8.08
58	2.51	8.08
59	2.51	8.08
60	2.53	8.11

Table 2, Panel A: Correlation Matrix

Panel A presents the correlation values between the variables (1)-(15) and the main independent variables consisting of all macroeconomic variables used in this thesis. All variables are defined in Table 2 in Appendix A.

Variables	Inflation	Interest Rate	Exchange Rate	GDP	GDP Growth Rate	Unemploymen t	Market Performance	Market Risk	Investor Sentiment	Policy Uncertainty	Geopolitical Risk	Terrorism Index
(1) Age	0.077	0.014	0.119	0.140	0.074	-0.091	0.004	-0.030	-0.029	0.033	0.041	0.084
(2) Tenure	-0.053	0.099	-0.199	-0.232	-0.122	0.092	-0.049	0.045	0.016	-0.088	-0.042	-0.196
(3) Ownership	0.018	0.193	-0.175	-0.194	-0.130	0.019	-0.105	0.068	-0.042	-0.102	-0.015	-0.209
(4) DualCEO	-0.061	-0.008	-0.134	-0.153	-0.073	0.100	-0.014	0.034	0.027	-0.033	-0.038	-0.114
(5) Gender	-0.012	0.013	-0.038	-0.040	-0.019	0.023	-0.003	0.012	0.005	-0.009	-0.015	-0.033
(6) Firm Size	0.056	-0.107	0.211	0.243	0.144	-0.089	0.074	-0.067	0.002	0.094	0.042	0.203
(7) Sales	0.051	-0.094	0.166	0.191	0.110	-0.071	0.053	-0.066	0.010	0.065	0.043	0.156
(8) Cash/Assets	-0.036	0.002	-0.093	-0.094	-0.016	0.077	-0.002	0.047	0.009	-0.001	-0.037	-0.074
(9) Capex/Assets	-0.010	0.044	-0.066	-0.083	-0.088	-0.008	-0.050	-0.038	0.026	-0.077	0.010	-0.064
(10) Leverage	0.064	-0.026	0.208	0.235	0.115	-0.126	0.029	-0.011	-0.063	0.089	0.041	0.189
(11) Tobin's Q	-0.016	0.012	0.054	0.039	0.074	-0.046	0.095	-0.111	0.087	-0.054	0.012	0.056
(12) ROE	0.042	-0.006	0.024	0.037	0.013	-0.027	-0.003	-0.034	0.019	-0.011	0.017	0.004
(13) ROA	0.043	0.009	-0.030	-0.027	-0.025	0.003	-0.025	-0.037	0.029	-0.039	0.024	-0.057
(14) RET	-0.165	-0.123	-0.042	-0.062	0.085	0.154	0.225	0.054	0.032	0.044	-0.088	0.011
(15) MB	0.027	0.043	0.121	0.127	0.062	-0.148	0.043	-0.120	0.058	-0.072	0.017	0.120

Table 2, Panel B: Correlation Matrix
Panel B presents the correlation values between the variables (1)-(15) and (1)-(7). All variables are defined in Table 2 in Appendix A.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Age	1.000						
(2) Tenure	0.308	1.000					
(3) Ownership	0.236	0.572	1.000				
(4) DualCEO	0.249	0.339	0.260	1.000			
(5) Gender	0.039	0.071	0.049	0.069	1.000		
(6) Firm Size	0.063	-0.207	-0.416	0.109	-0.009	1.000	
(7) Sales	0.070	-0.189	-0.367	0.125	-0.020	0.907	1.000
(8) Cash/Assets	-0.041	0.133	0.182	-0.066	-0.002	-0.375	-0.429
(9) Capex/Assets	-0.017	-0.006	0.008	0.017	-0.003	0.033	0.003
(10) Leverage	0.021	-0.180	-0.206	-0.015	-0.004	0.428	0.346
(11) Tobin's Q	-0.029	0.104	0.062	0.029	0.009	-0.211	-0.181
(12) ROE	0.028	0.001	-0.041	0.049	-0.011	0.133	0.180
(13) ROA	0.015	0.014	-0.031	0.064	-0.005	0.126	0.273
(14) RET	-0.028	-0.006	-0.006	-0.014	0.004	-0.051	-0.049
(15) MB	-0.039	0.004	-0.019	0.017	-0.008	-0.012	0.025

Table 2, Panel C: Correlation Matrix
Panel C presents the correlation values between the variables (8)-(15) and (8)-(15). All variables are defined in Table 2 in Appendix A.

Variables	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(8) Cash/Assets	1.000							
(9) Capex/Assets	-0.192	1.000						
(10) Leverage	-0.430	0.013	1.000					
(11) Tobin's Q	0.427	-0.048	-0.392	1.000				
(12) ROE	-0.087	0.019	0.013	0.134	1.000			
(13) ROA	-0.163	0.168	-0.069	0.282	0.398	1.000		
(14) RET	0.063	-0.056	0.005	0.115	-0.037	-0.035	1.000	
(15) MB	0.261	-0.060	0.043	0.738	0.168	0.231	0.074	1.000