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The Effect of CEO Gender, Age, and Salary On Firm Value

Brandon H. D'Ewart
Claremont McKenna College

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Brandon D'Ewart

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Professor Darren Filson

And

Dean Nicholas Warner

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Acknowledgements

Abstract

This paper investigates the academic conclusions on how CEO gender and salary affect firm value, while at the same time adding data on how CEO age affects firm value. Via an event study of S&P 500 CEO changes from 2000 to 2006 I confirm the current academic findings and discover that CEOs promoted during their 40s negatively influence firm value, while CEOs in older age brackets show a positive abnormal return on firm value. With this validation and addition to the existing data, firms and investors can more effectively assess proper candidates for the position of CEO and allocate resources accordingly.

I. Introduction

Chief Executive Officers are responsible for maximizing their firm's value. While this core function applies to all workers in a firm, the CEO ultimately is responsible for this central task of business, and reports directly to the board of the directors of their firm (Lin 2014). Due to CEOs bearing this ultimate accountability, they are commonly given broad authority within their companies and are charged with the overarching leadership, strategy, and direction of their firm. Furthermore CEOs are on average paid 331 times more than the national average production and nonsupervisory worker (AFL-CIO 2014). Knowing this, one would expect that the choice of who to select as CEO warrants a significant amount of research and a careful selection process. If this appointment occurs within a public company, markets will adjust the price of that company's stock to incorporate the aggregation of investor assessments of the CEOs ability to create value within their firm.

Given the importance of the CEO, it is worth investigating which characteristics of CEOs appear to impact the value CEOs create. The existing body of literature on

CEOs' effects on company value has shown that they do have the capacity to boost this value. Academics have investigated specific manager traits such as gender and whether they possess an MBA and identified what factors influence firm value most, (Bertrand and Schoar 2002). There have been no market-wide event studies conducted on CEO announcements due to researchers focusing on certain aspects of CEO turnover, such as announcements related to firings. These papers are not unified in their conclusions; with some indicating CEO announcements have no effects on stock returns while others find positive results (Denis,Denis and Sarin 1997, Worrell Davidson and Glasscock 1993). Furthermore, higher CEO salaries have been associated with underperforming creation of value within a firm, a conclusion that should have a large impact on how firms compensate CEOs. (Core Holthausen Larcker 1999).With this paper I hope to add literature that enables companies to select CEOs with traits most suited to providing value, and appropriately compensate them, as well as direct investors in their allocation of resources surrounding new CEOs.

In this paper I use an event study with a Carhart (1997) four-factor model of normal returns to examine abnormal returns of firms surrounding the announcement of new CEOs. The sample includes all 122 CEO changes within the S&P 500 from January 1st 2000 through December 31st 2006. This sample allows me to draw conclusions about large public firms across the economy, and while my conclusions are limited, they apply to companies where a significant amount of the investment in the United States' economy occurs. Studies before have predicted a diversity of stock reactions to executive announcements, yet none of them have done a broad, market-wide event study as I am undertaking in this analysis. The results of my event study

will allow me to draw conclusions about the real world implications of the current academic theory by Martin, Nishikawa, and Williams on CEO gender's effect on firm value, as well as Core, Holthausen, Larcker's conclusions on how salary interacts with value creation. An overwhelmingly negative display of abnormal returns combined with a lack of sensitivity to the results of CEO characteristics regressions would indicate investors are indifferent to whether a CEO has supposedly positive characteristics and instead believe that the shock of a new CEO taking over overshadows any benefits the individual may bring in the short term. Conversely, negative or positive returns with large amounts of variation would indicate that certain qualities about these CEOs caused investors to anticipate firm improvements. This result opens up the option to examine some of the basic CEO characteristics that have been researched in studies cited above; such as gender, and see how these factors played into the abnormal returns observed using the cross-sectional data provided by my event study.

My analysis points to CEO announcements in the S&P 500 resulting in a small but statistically significant drop in mean firm value, around .2%. Utilizing the firm-by-firm abnormal returns results, I validate the existing findings on CEO gender and salary. Gender is insignificant to abnormal returns, while higher salaries result in negative returns. Age results in negative abnormal returns for CEOs in their forties, and positive returns for those older than that. I conclude that this has to do with age being representative of experience, with markets assuming a certain level of experience is necessary to lead a company. My study points to this minimum experience level lying somewhere in one's fifties.

The next section contains a review of the existing literature surrounding how CEOs affect company value and CEO traits that impact firm performance. I then discuss my data set and its limitations in Section III. Sections IV and V present event study methodology and regression results. Finally I conclude my paper by addressing areas for improvement and further study.

II. Literature Review

Current literature looking into whether CEOs actually impact firm performance is divided, with scholars debating whether they act as mere figureheads or actual leaders that determine company strategy. A recent study by Mackey (2008) sums up the arguments and examines variance in firm performance based on CEO heterogeneity. Mackey concludes that CEOs impact corporate performance on a significant level, with corporate profits variance being affected up to 29.2 percent by CEO effects. Past research into the direct effect of CEOs on firm value has presented mixed results. Denis, Denis and Sarin (1997) in their research on 1,689 firms from the *Value Line Investment Survey* from 1984 find that CEO changes undergone due to duress exhibit positive abnormal stock returns, while unforced retirements do not exhibit economically significant results. Worrell Davidson and Glasscock (1993) in their study on executive appointments resulting from firings find that outsider appointments exhibit significant stock price reactions, while insider appointments have no significant results. Renee et al (2005) find positive correlation between decision making power of CEOs and stock price variability.

Bennedsen et al. (2007) choose to empirically test the impact a CEO has on their firm in a different manner. Their methodology for answering this question revolves around a sample of 6,753 firms in Denmark who had CEOs experience death or the death of a family member from 1994 to 2002. Their rationale is that if a CEO dies and is replaced, or a current CEO is hit with an extreme life shock like that of a family member's death, then firm performance will suffer if CEOs actually matter to firm performance. Their study resulted in the finding that the CEO and family deaths cause significant declines in firms. This manifests in Operating Return On Assets, a figure measuring EBIT divided by average total assets, dropping by 0.9 percent in the two years around the death. The study also noted that deaths of board members and their immediate families did not have any of the effects that the shocks on CEOs showed. This research demonstrates that shocks in the life of a key executive can result in nearly a one percent decrease in firm profitability holding all else constant, again pointing to the direct impact CEOs have on firms. These studies confirm that while not in all cases, CEOs have the capacity to affect their firm values. Knowing this the natural question arises, what qualities or characteristics of CEOs influence these value changes most?

One of the initial studies in this area was performed by Bertrand and Schoar (2002) who attempt to answer the very basic question of whether different managerial characteristics have an effect on firm value. In their paper they focus on testing two qualities of CEOs, their age and whether they have an MBA, and how those affect firm behavior in investment, financial, and organizational policy. Through their empirical study of 600 American firms and 500 managers, they conclude that age of CEOs is

positively correlated with lower risk business practices, and that CEOs with MBAs display higher corporate performance and returns on operating assets.

Along with age and education, CEO gender has been examined as a trait affecting firm returns by Martin, Nishikawa, and Williams (2009). Using a sample of 70 female CEO appointments between 1985 and 2007 matched with 70 male CEO appointments they run an event study on announcement dates. Their study finds that markets have no bias towards gender, as indicated by the positive abnormal returns for both male and female announcements. I believe it is important to note that though their results displayed positive returns for CEO announcements, their relatively small sample size across over 20 years makes it difficult to assume their results apply to all announcements. I seek to remedy this in my study by using all CEO announcements in the S&P 500 across 6 years, allowing me to draw conclusions about large firms.

Aside from basic characteristics, research has also examined manager characteristics pertaining to skillsets, CEO backgrounds, and physical attributes as well.

Kaplan, Klebanov, and Sorensen (2008) observe the characteristics of CEOs of private equity firms, paying particular attention to both the general ability of the managers, as well as team vs. execution skills, which were judged in a survey of thirty different CEO characteristics. To measure CEO success they classify it as when a CEO guides a company to a successful IPO or other sale while maintaining positive press pertaining to its operations. Overall, the analysis of the data led to two major conclusions. First the obvious one that CEOs with a higher overall rating for general ability are more successful than those with a lower ability score. Second and more

intriguing is that success is positively related to execution skills, while being overall unrelated to team-related skills. This suggests that skills related to execution should positively affect firm value, skills such as analytics and proactivity will affect firm value in a positive way.

Due to the difficulty of quantifying skills, further research has been directed to the observation of factors that may affect the execution skills of CEOs. Benmelech and Frydman (2014) examine the effect on firms of CEOs with military service. Using their sample of 1,106 executives with military service they conclude that CEOs with military backgrounds have a higher level of performance during times of distress in their industry. Empirically this means that CEOs from the military 70% of company decline that can be attributed to due industry wide effects. The authors theorize that military training and experience specifically target an individual's ability to function under pressure, leading to better decision making in stressful times. Again this relates directly back to the Kaplan et al study, relating the military experience of CEOs with an increased amount of execution skills that in the long run bolster firm value.

Continuing research into specific manager characteristics, Limbach and Sonnenburg (2014) examine whether fitness of CEOs leads to greater firm value. Using marathon completion within a year as an indicator of fitness, their panel of 9,500 firm-year observations indicates with significant results that fit CEOs do lead to higher firm value in a range of 4-10%. The rationale behind this vast increase in firm value runs along the same logic as military experience. The researchers note that running has been shown to relieve stress that can result from the rigors an executive's lifestyle as well as

boosting performance. This paper feeds back into the findings that execution skills of CEOs lead to greater firm value, and fit CEOs will execute in a superior manner than those who are unfit.

Custodio and Metzger (2013) investigate how CEOs of non-finance firms with past experience as a financial professional affect firm policy. In their work they define a financial professional as an executive who has worked in a finance related firm such as accounting, or banking, or worked in a finance related positon such as a CFO. Their findings indicate that these types of CEO act in ways benefit the firm on a financial basis such as adapting firm leverage to current market conditions, and overall benefitting shareholders.

When addressing the issue of CEO salary and how that may factor into firm value, Core, Holthausen, and Larcker (1999) discover that higher salaries are linked to companies that have larger problems with how they govern their firm. These problems with governance are linked to higher CEO salaries, while at the same time manifest in negative firm performance and returns.

Through my research I will contribute an empirical test to evaluate the conclusions of previous research on stock market reactions to CEO announcements. Furthermore once I reach a conclusion on how CEO announcements affect S&P 500 sized public companies, I will continue to test how CEO age and gender affect abnormal returns. This will validate the results found by Martin, Nishikawa, and Williams and Core, Holthausen, and Larcker by using a larger sample of firms, as well as adding a data on the way CEO age affects firm returns, which has not been studied.

III. Hypothesis Development

Based upon the original literature, I develop four hypotheses regarding the results of my tests. First regarding the abnormal returns related to CEO announcements, the existing literature has indicated a broad range of returns in past studies, and I believe my study, being broad and over a large time period, will have an abnormal returns close to zero. However I also believe that there will be significant variation in the abnormal returns created by CEO announcements, and that these will create the opportunity to test gender, age, and salary's effects on stock price.

Concerning the effect of gender on abnormal returns, I defer to the previous study by Martin, Nishikawa, and Williams, and predict that CEO gender should have no statistically significant effect upon firm return. I also acknowledge that my low amount of female CEO announcements will not allow me to make a strong conclusion either way.

I hypothesize for age's effect on abnormal returns that there will be a negative correlation between increasing age and declining abnormal returns. There has no research regarding this specific variable interaction that I am aware of, and I believed that older CEOs would be perceived as less capable of decisive action by markets, leading to lower estimations of their ability to make critical decisions for their companies, leading to less value.

The existing literature on CEO salary indicates that as CEOs are paid more, their effectiveness towards creating value decreases. However, I believe that there must be some level that this begins at, and predict that CEO salary will only begin to show

negative abnormal returns once it reaches a certain level, and once that level is reached it will display negative abnormal returns as salary increases.

IV. Data

My data set captures all announcements of CEO appointments in the Standard and Poor's (S&P) 500 index of companies from January 1st 2000 to December 31st 2006, a time period during which no company changed its CEO more than once. Firm membership in the S&P 500 is observed on January 1st 2000. Because of this the analysis that compares the abnormal return associated with hiring to CEO characteristics is cross sectional. This data originates primarily from 2 sources. To find all CEO changes in the 6 year period in the S&P 500, data was gathered from Compustat's Execucomp database which is comprised of executive compensation data from 1962 to the present day. Compustat data for all executives was downloaded from the database. This data was then sorted first by S&P 500 companies, and then whether or not a CEO change had taken place, with companies that did not elect new CEOs being eliminated from the dataset, narrowing my sample down from 2365 observations to 121. I then used the Center for Research in Security Prices database to obtain daily stock data for each company that was left. I also obtained daily Fama-French factor data for the companies using the Kenneth French's website database via Wharton Research Data Services. Additional data on CEO announcements was gathered from company website archives, SEC documents, and financial news publications. This left me with a data set containing 121 different CEO changes over a period of 6 years, with no companies having changed their CEO more than once. For my test on gender and

age's effects on abnormal returns, I use data downloaded from Execucomp. For complete data summary statistics see appendix tables 1,2 and 3.

My data set provides several advantages. First the use of the S&P 500 gives me a large and diverse sample of firms for my event study. Though the S&P 500 only encapsulates relatively large public firms, it does represent a significant portion of the overall economy, as well as having a large amount of daily historical data to work with. Furthermore because I am examining the market reaction to CEO appointments, the well-known and frequently traded companies on the S&P 500 are likely to display larger reactions in stock price, whereas less recognizable companies under less scrutiny may not show significant trading reactions to CEO announcements. The most significant disadvantage of my dataset lies in the announcement date binary variable. Though announcement dates were gathered from reliable sources, there is always the possibility that rumors and investor expectations about new CEOs could have been factored into stock prices before the "official" announcements of CEOs are released. Due to the uncertain nature of exactly when news reaches the public, official company press releases are used as the event dates for the study. A further disadvantage of the data is the lack of small market cap companies, which limits our conclusions to only large firms. Finally our sample has only 2 events where female CEOs were elected. This small sample size makes any conclusions about the effects of gender on abnormal returns very tentative.

Out of my data set several variables warrant more specific definition. Excess Return On Market is defined as a value-weight return on the NYSE, AMEX and

NASDAQ stocks, with the one-month treasury bill rate subtracted. The mean value for excess returns for companies analyzed is 7.92E-06%, with a standard deviation of 1%. Abnormal Returns for a firm are calculated in a 3 day window centered on CEO announcement dates. Abnormal returns in this event study are estimated on a per-firm basis and are the coefficient on the announcement date dummy variable. I use four Fama-French factors in my regression, the Small Minus Big, and High Minus Low variables the excess market return factor, as well as Carhart's momentum factor. Our Small Minus Big variable is the average return of three small portfolios, a small value, neutral, and growth, minus the average return on three big portfolios of the same type. The High Minus Low variable is the average return from a large value and small value portfolio minus the average return from two corresponding growth portfolios. The excess return on market factor is calculated by taking the firms expected market returns based on their market index, and then subtracting that from their actual returns on that day. Carhart's Momentum variable measures the tendency for a stock to follow its current price trend, whether it is increasing or decreasing in value. It is calculated using the average return of two previous high return portfolios subtracted from the average of two previous low return portfolios. This variable is important to have because stock momentum can explain stock price movement around announcement dates, and should be accounted for when running the event study. Momentum has a mean of .0002 with a standard deviation of .0098. My CEO salary variable is the salary of the CEO for the fiscal year they were appointed in, with an average of 750 thousand dollars. The above and below average salary variables encompass all salaries above and below the average. I also employ a dummy variable in my study with a value of 1 for CEO announcement

dates. I am able to do this due to none of the companies changing CEOs more than once during the 6 year period I drawing my data from.

V. Empirical Method

In order to investigate CEO announcement effects on firm value, I conduct an event study using a full Fama-French Factor Regression model. Seen below is the basic form of my regression:

$$R_{it} = \alpha_i + \beta_i Rm_{it} \times + \gamma_{i1} SMB_t + \gamma_{i2} HML_t + \gamma_{i3} UMD_t + \beta 2 \ D_i + \varepsilon_{it}$$

Where R_{it} represents expected excess returns on stock i at time t. This variable is calculated by subtracting holding period returns for a stock from the risk free rate of return, given by one month treasury bills. α_i represents a firms expected return if the market return rate is zero. Rm_{it} is the excess return on the market at time t, and factors in the systematic risk β of each firm. The next 2 variables represent Fama-French factors for time t in the S&P 500. $\gamma_{i1} SMB_t$ represents our Small minus Big Returns factor, and $\gamma_{i2} HML_t$ represents the High Minus Low factor. $\gamma_{i3} UMD_t$ represents the Carhart Momentum variable, and D_i represents the CEO announcement date dummy variable. Finally, ε_{it} represents the unexplained error in my regression.

Event studies are regressions designed to estimate the effect of announcements and news on firms, specifically via changes in their stock value. This is accomplished by regressing out dependent variable D on the independent variables included in our regression such as age, gender, and salary. The coefficient on D for each firm

represents the daily abnormal returns on that firm's stock during the event window. To increase the predictive power of my regression, I include both Fama-French and Carhart factors. Fama-French factors are ideal for event studies due to how they capture average stock returns much more effectively than other estimation models, using measures of portfolio size and book-to-market equity (Fama and French 1992), while Carhart's Momentum factor helps explain trends in stock prices.

The results from my initial regression can be seen in table 4. These results are the averages of all firm specific coefficients on each variable, letting us see the overall results of the sample. In this table we observe that the event dummy variable which represents announcement dates has a negative value of .2% that is statistically significant at the 5% level, indicating that in the S&P 500, CEO announcements affect stock returns, and therefore firm value, in a small but negative way on average. However, due to the mean value coefficient being so close to zero and having a comparatively large standard deviation, the potential for positive abnormal returns is high. The 50/69 split between positive and negative abnormal returns confirms that there is still a large amount of variability in these announcements, as seen in table 2.

For the remaining regressions in my paper, I created a second data set where the coefficient on each firm's dummy variable is paired with traits of the CEO being announced on that date. In this paper I use gender, CEO age, and initial salary as characteristics to be attached to each announcement.

After obtaining the abnormal returns resulting from CEO announcements, I regress CEO age and gender on abnormal returns using this general form:

$$AR = a_i + m_i + B_1Y_i + B_2S_i + \varepsilon_i$$

Where AR_i is abnormal returns for firm i, a_i is a firm specific intercept, m_i is a binary

variable that equals 1 when a CEO is female, Y_i is CEO age and B_1 is the coefficient on

CEO age, and B_2S_i is CEO beginning salary. With this regression I test the existing

conclusions on how the gender and age of CEOs affects firm value. To do this multiple

regressions are run building on the base model. The regression results from my base

model can be seen in table 5. The main purpose of these regressions to observe the

nature of each traits interaction with firm value. To test the relative importance a vast

sample of CEO traits would need to be gathered, which is beyond the capacity of my

study. As seen in the coefficients of the regression, CEO age and gender have very little

effect on firm value, explaining a small percentage of the abnormal returns. These

results confirm the findings of Martins Nishikawa and Williams (date), that male and

female CEOs have no noticeable differences in their respective market reactions, with

an observable change of -.1% in abnormal returns being economically negligible. An

interesting thought is that there could be gender discrimination in the search for CEOs,

but once a female becomes CEO the market is gender blind. I must restate that due to a

lack of female CEOs being announced, confidence in my results is very low.

To test the effects of age, first a regression with CEO age and a variable of CEO

age squared was run, with results in table 6. CEO age demonstrated a positive

correlation overall, while age squared resulted in an incredibly low negative coefficient.

Due to the economically insignificant size of the squared age coefficient we can

conclude that age does not follow an exponential curve. To further investigate the effect

of CEO age, the variable was split into 3 brackets broken down into dummy variables encompassing ages 40-49, 50-59, and 60-69. The results from these regressions are seen in table 7. CEOs who lie within the 40s bracket exhibit a negative coefficient on their variable, while CEOs in their 50s and 60s result in positive coefficients. I believe these results stem from market beliefs in CEO abilities and their relation to age. Negative coefficients on CEOs in their 40s may result from investors interpreting age as accumulated experience, relating to the findings of Kaplan, Klebanov, and Sorensen. If markets believe that the accumulation and development of execution skills discussed in Kaplan, Klebanov, and Sorensen's paper is insufficient in CEOs in their 40s the negative coefficients is logical. Following this logic the positive coefficients for CEOs in their 50s and 60s lead to the conclusion that there exists a level of experience, measured via age, that markets believe CEOs need to have a positive impact on firm returns.

Similar to the way I tested the effect of age, I broke salary into two categories, above and below the mean of 750,000. I then regress both variables on abnormal returns. The results from these regressions are found in table 8. As predicted by Core, Holthausen, and Larcker, above average salaries possess negative coefficients when I regress my dependent variable upon my independent variable salary, while below average salaries are associated with positive abnormal returns. To confirm the robustness of my results and eliminate the potential that abnormal returns could have been influenced by other factors, I regress each salary variable on only positive and only negative returns, with results in table 9 and 10. Three out of the four tests confirm the prior results, with negative abnormal returns showing a positive coefficient for

above average salaries and a negative one for above average salaries. On the other hand both salary variables are negative when regressed on positive abnormal returns. I believe this occurs because once positive abnormal returns are occurring the only way to affect them via salary is to decrease the salary, while negative abnormal returns can be dampened by decreasing salary but worsened by increasing it. I believe an economically sound way to utilize this trend is the established practice of linking CEO compensation to stock options. This not only reduces CEO salaries, but also provides incentive to increase firm value (Hamid 1995)

The results of the regressions from my study are consistent with data trends established in existing literature. Characteristics that affect the execution abilities of CEOs like older age brackets are associated with positive abnormal returns mirroring past studies on traits like age, military experience, and fitness. On the other hand qualities unrelated to execution ability like gender are largely irrelevant. Our results also corroborate the conclusion of Martins Nishikawa and Williams that markets appear to be gender blind when predicting CEO success, and those of Core, Holthausen, and Larcker that higher salaries lead to reductions in firm value.

VI. Conclusion

Chief Executive Officers are entrusted with the strategic direction of their respective companies, and ultimately bear responsibility to company equity holders for the success or failure they create. They are also compensated accordingly, receiving over 300 times the pay of the average production/non-supervisory worker in the United

States. Current literature has examined CEO characteristics and the effect they have on

firm value. With this type of data, both company shareholders and prospective investors

make superior decisions when evaluating potential CEOs. Previous studies have

examined narrow sets of data while I focus on a broad data set to derive more

explanatory power. Consequently my study attempts to validate the current conclusions

on how CEO gender affects firm value, and add the effects of CEO age among large

public companies to the existing body of literature.

With a data set made up of all CEO changes within the S&P 500 between January

2000 and December 2006 I conduct a Fama-French Factor event study, examining the

abnormal stock returns from firms during CEO announcements, and use that data to test

the effect of age and gender on those abnormal returns. The results from my first

regression indicate that CEO announcements on average result in negative firm returns,

with a standard deviation allowing for large negative and positive swings. Increasing

the event window of my study validated the robustness of my results.

Using cross-sectional regressions on the abnormal returns data from the event

study I confirmed the findings of existing literature that CEO gender has an

economically insignificant effect on firm value. This underlines the encouraging fact

that markets appear to be gender blind when evaluating a CEO's potential to create

value. I believe that this stems from markets realizing that past experience and

execution skills are the drivers of value creation. The results on CEO age's effect on

firm return support this theory with the youngest bracket of CEO ages resulting in

negative abnormal returns, while older brackets lead to positive returns. Previous

literature points to execution skills of CEOs being the only relevant characteristics that create firm value, and I believe age to be a measure of accumulated experience. Therefore a higher age should, holding all else constant, result in a higher firm return due to increased execution skills.

The results of my study should assist both investors and firms in their decision making around CEOs. In regards to firms during their searches for CEOs, they should make sure to select CEOs with large amounts of experience, while also disregarding any non-execution related characteristics when eliminating candidates. Basing decision-making along these lines will help maximize firm value, and justify the enormous responsibility and compensation given to these individuals. From and investor perspective, evaluation of current and potential CEOs for companies along the same lines allows optimized investment decisions.

I believe further research should be directed into evaluation of a broad panel of characteristics related to execution ability such as past education, past work experience, industry specific knowledge, and performance in times of economic downturns. A broad sample of data would allow the ranking of characteristics by impact on firm value rather than simply the general effect each variable has on abnormal returns as demonstrated in my study. Furthermore including firm characteristics such as industry, size, market capitalization, and others would allow observation of how CEO characteristics interact with different types of firm. Determining the ranking of importance in these characteristics as well as what matches best with each kind of firm

would increase the selection efficiency of CEOs, while at the same time maximizing

firm value to an even greater degree.

VII. Appendix

Appendix Table 1
Summary Statistics for First Regression Variables

Variable	Mean	Std. Dev.	Min	Max
Price Ask	39.56754	29.46874	-14.475	553.86
Shares Outstanding	474676.9	895043.1	0	6899752
Rreturns Without Dividends	0.07%	2.74%	-47.50%	89.47%
Excess Return On Market	0.00%	1.16%	-6.72%	5.43%
Small Minus Big	0.02%	0.63%	-4.62%	2.96%
High Minus Low	0.05%	0.66%	-4.86%	3.36%
Risk Free Rate (1 Month T-Bills)	0.01%	0.01%	0.00%	0.03%
Momentum	0.03%	0.98%	-7.24%	5.13%
Holding Period Returns	0.07%	2.73%	-47.50%	89.47%

p

Appendix Table 2
Summary Statistics for Second Regression Variables

Variable	;	Mean	Std. Dev.	Min	Max
Abnormal Returns		-0.26%	1.82%	-6.07%	12.74%
Positive Abnormal Returns		0.88%	1.79%	0.02%	12.74%
Negative Abnormal Returns		-1.08%	1.35%	-6.07%	0.00%
CEO Salary (Thousands)		749.18	565.59	56.67	5613.20
Below Average Salary (Thousands)		512.70	193.09	56.67	742.31
Above Average Salary (Thousands)		1043.46	721.58	750.00	5613.20

Appendix Table 3
Gender Variable Summary Statistics

Variable	Observations	Frequency
Female	2	1.64%
Male	117	98.36%

Table 4
Initial Event Study Regression Results

Variable	Coefficient
Excess Return On Market (%)	1.056054***
	(0.006143)
Small Minus Big (%)	0.196245***
	(0.010004)
High Minus Low (%)	0.4721649***
	(0.0114347)

Momentum (%)	-0.1469383***
	(0.0061614)
Event Dummy (%)	-0.0026151**
	(0.0013227)

Variables with a significance of p<.01 are marked with a triple asterisk ***, ** for p<.05, and * for p<.1

Standard Deviations are reported in parentheses

Table 5

Regression of CEO Age and Gender On Abnormal Returns

Variable	Coefficient
CEO Age***	0.0005242***
	(0.0003147)
Male	-0.0090602
	(0.0129376)

Variables with a significance of p<.01 are marked with a triple asterisk ***, ** for p<.05, and * for p<.1

Standard Deviations are reported in parentheses

Table 6

Regression of CEO Age and CEO Age Squared On Abnormal Returns

Variable	Coefficient
CEO Age	0.0059541
	(0.0051708)
CEO Age Squared	-0.0000492
	(0.0000468)

Variables with a significance of p<.01 are marked with a triple asterisk ***, ** for p<.05, and * for p<.1

Table 7

Regression of CEO Age Brackets On Abnormal Returns

Variable	Coefficient
40-49 CEOs	-0.0063166
	(0.0047629)
50-59 CEOs	0.0031217
	(0.0034507)
60-69 CEOs	0.0002189
	(0.0039585)

Variables with a significance of p<.01 are marked with a triple asterisk ***, ** for p<.05, and * for p<.1

Table 8

Regression of CEO Salary Categories on Abnormal Returns

Variable	Coefficient
Below Average Salary	5.14e-06
	(9.33e-06)
Above Average Salary	-6.44e-07
	(2.78e-06)

Variables with a significance of p<.01 are marked with a triple asterisk ***, ** for p<.05, and * for p<.1

Table 9

Regression of CEO Salary Categories on Positive Abnormal Returns

Variable	Coefficient
Below Average Salary	-4.36e-07
	(7.09e-06)

Above Average Salary	-2.53e-06
	(8.05e-06)

Variables with a significance of p<.01 are marked with a triple asterisk ***, ** for p<.05, and * for p<.1

Standard Deviations are reported in parentheses

Table 10

Regression of CEO Salary Categories on Negative Abnormal Returns

Variable	Coefficient
Below Average Salary	-2.63e-06
	(0.0000108)
Above Average Salary	7.60e-07
	(2.88e-06)

Variables with a significance of p<.01 are marked with a triple asterisk ***, ** for p<.05, and * for p<.1

Standard Deviations are reported in parentheses

VIII. References

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