AN EXAMINATION OF NARCISSITIC AND NON-NARCISSISTIC CEO'S FINANCIAL REPORTING BEHAVIOR DURING TIMES OF MARKET EUPHORIA AND CRASHES

By

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ABSTRACT: The United States markets are in a cyclical pattern of experiencing market highs (euphoria) and lows (crashes) and financial statement reporting during these times has a large impact on investors and the economy. This research examines how CEO narcissism affects financial reporting behavior, through aggressive financial reporting and real earnings management, in times of both euphoria and crashes, looking specifically at the dot com and housing bubbles and their subsequent crashes. Because narcissists perceive heightened benefits and have aggressive reactions to feeling questioned, it is expected that narcissistic CEOs will amplify their financial reporting aggressiveness and real earnings management in times of both market euphoria and crashes. Aggressive financial reporting and real earnings management are measured using abnormal accruals and abnormal operating cash flows, respectively. The results indicate that while CEO narcissism is positively associated with real earnings management, it is not significantly associated with aggressive financial reporting. The results show that narcissistic CEOs reduce real earnings management during crash years, and independent of narcissism, financial reporting aggressiveness is lower in crash years while real earnings management is higher in euphoria years. This research adds to the accounting and managerial reporting behavior literature and can be used by investors, regulators, and auditors to attempt to mitigate the risk associated with a volatile market.

1. INTRODUCTION

The state of the economy strongly influences the people who rely on it, including investors and businesses. One party that is affected greatly is Chief Executive Officers (CEOs) as they must adjust to the market demands and understand how to help their firms remain stable in an ever-changing market. Since there is significant interaction between CEOs and the market, this research examines how certain behavioral traits of CEOs, specifically narcissism, affect their financial reporting behavior (measured through financial reporting aggressiveness and real earnings management) in times of market euphoria and crashes.

Market euphoria (also referred to as a bull market) is when share prices are rising and buying is encouraged in the market. The dot com bubble's market euphoria phase began in 1995 and remained until 2000 (Callahan et al. 2003). The euphoria was largely a result of investors overconfidence in internet startups as many believed the firms would become profitable. Many investors and venture capitalists were carefree in their approach to investing because they feared missing the opportunity to invest in the ever-growing internet (Hayes 2019). Years later, in 2006 and 2007 (Cheng et al. 2014), the market found itself in another state of euphoria with the housing bubble. This euphoria was also influenced by investor overconfidence as many believed housing prices would continue to rise (Kenton 2019). While prices did continue to rise for a short time, mortgages became more available to more people, including those could not afford them.

Market crashes (also referred to as a bear market) are times when the market sees rapid and often unanticipated drops in stock prices. The dot com crash happened from

2001 to 2002 (Callahan et al. 2003) when many firms, including Dell and Cisco, placed sell orders on their stock (Hayes 2019). These sell orders resulted in investors panic selling their stock and the subsequent drop of stock prices.

The housing crash was a longer process, spanning from 2007 to 2010 (Cheng et al. 2014). This crash began when investors and home-owners began to realize that a large portion of the market was relying on subprime mortgages and home values could decrease (Kenton 2019). In early 2008, many banks began to see late payments and defaults on mortgages in significant amounts which caused some to collapse (Author 2019). The crash also affected firms that had heavy subprime portfolios and had insured the mortgages that were seeing defaults.

For the past 90 years, the United States economy has experienced a regular, cyclical pattern of market euphoria and crashes (First Trust Advisors). The swings in the market are drastic, sudden, and severely influence the economy as a whole which in turn affects both investors and the general public. Investors rely on the financial reports firms produce and if this information is unreliable, it can exacerbate market volatility. For this reason it is important to understand CEO financial reporting behavior and determine whether narcissistic CEOs are more likely to report more aggressively or participate in real earnings management during market euphoria and crashes.

Development of the hypotheses is based primarily on psychological research about narcissistic behavior and applying that information to predict expected narcissistic CEO behavior during market euphoria and crashes. Foster et al. (2009), found that narcissists take more risks than people who are not narcissistic because they appreciate the risk accompanied with risky behavior and are fueled by their heightened

perceptions of benefits stemming from the risky behavior. Due to their heightened perceptions of benefits, they may engage in problematic behavior with the expectation they will receive these additional benefits.

Another key theory about narcissism relates to narcissistic rage, which is a narcissists', "need for revenge, for righting a wrong, for undoing a hurt by whatever means, and a deeply anchored compulsion in the pursuit of all these aims" (Zlatan et al. 2015). It has been observed that when narcissistic individuals are questioned, they respond with retaliation in addition to shame and depression. Ultimately, narcissistic rage stems from narcissists feeling doubted, resulting in a loss in their self-esteem and acting out through aggressive behavior, which could manifest as financial reporting aggressiveness or real earnings management.

Using archival data, this research uses previously established measures of narcissism and reporting behavior to examine two hypotheses. Narcissism is measured using a proxy defined by NarcScore. Financial reporting aggressiveness is measured using abnormal accruals and real earnings management is measured using abnormal operating cash flows (defined by AbAccruals and AbCFO, respectively).

This research contributes to multiple fields. First, it contributes to academic accounting research. Past research has shown that firms with narcissistic CEOs have higher financial performance measures (Olsen et al. 2014) and that auditors behavior changed during market euphoria (specifically the dot com bubble) (Leone et al. 2013). This research combines variables from both, looking at how narcissism affects financial reporting behavior in the context of market euphoria and crashes. This combination of

variables has not been researched before, so it adds to knowledge on the relationship between narcissistic CEOs, financial reporting behavior, and the state of the market.

This research also provides insight for investors, regulators, and auditors. First, it is important that investors are able to rely on the financial statements of firms in which they are investing. If firms with narcissistic CEOs have more aggressive financial reporting and real earnings management, it is beneficial for investors to know and understand how better to interpret the data, so they can make better decisions. This is especially important in times of market euphoria and crashes when the market is so volatile as making more informed decisions could help investors increase their profit and also mitigate their risk and/or loss.

Second, regulators are able to use this information to make more informed decisions. For example, the SEC can use the data to better oversee public firms. In times of market euphoria, many people are investing in public firms because they see stock prices rising and want to take advantage of the opportunity. It is important that the SEC know which firms could be reporting more aggressive financials or participating in real earnings management, so they can watch them more scrupulously. This could help mitigate the risk associated with the euphoria and crashes in the markets because the SEC would know which firms are at more risk to mislead investors.

Finally, this research also benefits auditors because when developing audit plans, they have to determine the inherent risk of a firm. Inherent risk includes management behavior as more controlling management can increase the risk of material misstatement. When inherent risk is higher, auditors should perform more work to provide reasonable assurance that there are no material misstatements whether due to

error or fraud. This research can help auditors understand what firms are more likely to report aggressively, and similar to the SEC, they can help mitigate risk during the euphoria and crashes by expanding the scope of audits on firms that are more likely to report aggressively or participate in real earnings management.

2. PRIOR LITERATURE AND HYPOTHESIS DEVELOPMENT

This research focuses on the financial reporting behavior of firms with narcissistic and non-narcissistic CEOs during times of market euphoria and crashes. There are a number of prior research papers that pertain to the analysis and theory in this research. Olsen et al. (2014) find that narcissistic CEOs report higher financial performance measures, including EPS and share price, and are more likely to participate in real and operational earnings management. This research indicates that narcissistic personality characteristics of top executives affect financial reporting behavior.

Another relevant paper is Leone et al. (2013), which examines how auditors' behaviors change in times of market euphoria. Using the dot com bubble as their period of market euphoria (focusing on 1996 through 200), Leone et al. (2013) find that there is a sharp decrease in the number of going concern opinions rendered for Internet IPO registrants during this time. This suggests that as technology and internet firms were dominating the NADSAQ, auditors were less likely to see them as having a threat of bankruptcy. Along with this, the research shows an increase in going concern opinions for non-internet IPO registrants at that time. This is important to note because it emphasizes the idea that during this time of market euphoria there was strong confidence in internet firms, even though it was misguided as many of the firms did fail.

Various psychological theories are used to hypothesize how financial reporting behavior will change with the manipulation of the narcissistic and market state variables. As mentioned above, narcissists are inherently more likely to take risks than people who are not narcissists (Foster et al. 2009). While narcissists understand the risk associated with risky behavior, they participate more because of their heightened perceptions of benefits. When narcissists are measuring the risk of the behavior, they perceive more benefits from the outcome than non-narcissists.

In times of market euphoria many people take risks, whether it be investing in certain firms based on a growing industry like investors did in the dot com bubble or backing mortgages with higher likelihood of default like in the housing bubble. Since the general public is taking additional risks during these times in hopes of profiting, it is expected that narcissistic CEOs, who are already more likely to take risks, are also doing so. In market euphoria, financial reporting aggressiveness and real earnings management become more appealing to CEOs, especially narcissistic ones, as they perceive more benefits from higher levels of aggressive financial reporting and real earnings management.

As the market euphoria continues, narcissistic CEOs may see the increasing stock prices as a direct result of their actions, even though it is likely attributable to the market, and thus increase their aggressive financial reporting and real earnings management. These theories combined lead to Hypothesis 1 as follows:

Hypothesis 1: Firms that have narcissistic CEOs will have higher financial reporting aggressiveness and real earnings management during times of market euphoria than firms with non-narcissistic CEOs.

In times of market crashes, the general public often reacts impulsively and tries to mitigate their risk and losses, as seen by the panic selling of stock in the dot com crash and the defaults on mortgages and reduced availability of mortgages in the housing crash. While the public tends to act in a risk averse manner when the market moves from euphoria to crash state, psychological research suggests that narcissistic CEOs will maintain their financial reporting aggressiveness from the euphoria years. One potential reason for this is narcissistic rage, which occurs when narcissists feel questioned, doubted, or wronged in some way (Zlatan et al. 2009). When the market begins to crash, and stock prices fall, it is likely that CEOs will feel as though their decisions are questioned by the board and possibly the public and feel a desire to retaliate by proving their decisions were not faulty. This will cause the narcissistic CEOs to maintain their current reporting methods instead of attempting to mitigate the firm's risks and losses as non-narcissistic CEOs would. These theories combined lead to Hypothesis 2 as follows:

Hypothesis 2: Firms that have narcissistic CEOs will have higher financial reporting aggressiveness and real earnings management during times of market crashes than firms with non-narcissistic CEOs.

3. RESEARCH DESIGN

This research examines the association between CEO narcissism and their financial reporting behavior in times of market euphoria and crashes. Financial reporting behavior is measured using two dependent variables, financial reporting aggressiveness and real earnings management.

3.1 Models

Two models are used in this research, one with the dependent variable of financial reporting aggressiveness and the other real earnings management. These models were also each run twice, once combining the euphoria and crash years in one dummy variable "Year" and one separating the euphoria years (defined by EuphoriaYear) and crash years (defined by CrashYear) to measure the relationship separately. While it is hypothesized that narcissistic CEOs will display similar levels of financial reporting aggressiveness and real earnings management in both euphoria and crash years, it is possible one of the relationships is more significant and therefore it is important to differentiate between the two types of years. Both models include interactive terms between NarcScore and Year (two interactive variables in the models where the years are separated). The coefficients on these variables measure the amplification of financial reporting aggressiveness or real earnings management for more narcissistic CEOs in euphoria and crash years compared to non-euphoria and non-crash years. The regression models are shown below.

The first model estimates the impact of CEO narcissism in euphoria and crash years on financial reporting aggressiveness. The second model estimates the impact of CEO narcissism in euphoria and crash years on real earnings management. Both models show the euphoria and crash years separated. All variables are measured for executive *I,* firm *j,* in year *t.*

(1) $$AbAccruals = \beta_0 + \beta_1 NarcScore_{ijt} + \beta_2 EuphoriaYear_{ijt} + \beta_3 CrashYear_{ijt} + \beta_4 NarcScore * Euphoria_{ijt} + \beta_5 NarcScore * Crash_{ijt} + \beta_6 Age_{ijt} + \beta_7 Gender_{ijt} +$$

$$\beta_8 Tenure_{ijt} + \beta_9 Performance_{ijt} + \beta_{10} Size_{ijt} + \beta_{11} mktvalue_{ijt} + \beta_{12} btm_{ijt} + \beta_{13} dte_{ijt} + e_{ijt}$$

(2) $$AbCFO = \beta_0 + \beta_1 NarcScore_{ijt} + \beta_2 EuphoriaYear_{ijt} + \beta_3 CrashYear_{ijt} + \beta_4 NarcScore * Euphoria_{ijt} + \beta_5 NarcScore * Crash_{ijt} + \beta_6 Age_{ijt} + \beta_7 Gender_{ijt} + \beta_8 Tenure_{ijt} + \beta_9 Performance_{ijt} + \beta_{10} Size_{ijt} + \beta_{11} mktvalue_{ijt} + \beta_{12} btm_{ijt} + \beta_{13} dte_{ijt} + e_{ijt}$$

3.2 Financial Reporting Aggressiveness Measure

The dependent variable AbAccruals in model (1) is a proxy measure for financial reporting aggressiveness. AbAccruals is defined as discretionary accruals estimated from the modified Jones (1991) model, as modified by Dechow et al. (1995) and Kothari et al. (2005). $TA_{it} = \beta_0 + \beta_1 1/AT_{it-1} + \beta_2(\Delta REV_{it} - \Delta AR_{it}) + \beta_3 PPE_{it} + \beta_4 ROA_{it-1} + \varepsilon_{it}$

In this model, TA is total accruals calculated as the difference between income before extraordinary items and operating cash flows and AT is total assets. The change in revenue and change in accounts receivable are defined by ΔREV and ΔAR, respectively. PPE measures gross property, plant and equipment, and ROA is income before extraordinary items. All variables are scaled by beginning assets.

3.3 Real Earnings Management Measure

The dependent variable AbCFO in model (2) is a proxy measure for real earnings management developed by Roychowdhury (2006). AbCFO is measured as the residual from the following model multiplied by negative one. CFO is operating cash flows scaled by beginning assets. All other variables are as defined previously in the financial reporting aggressiveness model. $CFO_{it} = \beta_0 + \beta_1 1/AT_{it-1} + \beta_2 REV_{it} + \beta_3 \Delta REV_{it} + \varepsilon_{it}$

3.4 Narcissism Measure

In this research, using the Narcissistic Personality Inventory, or NPI, would be ideal (Raskin and Terry 1988). However, the NPI measure requires CEOs to fill out surveys and the resources weren't available for this to be a possible measure. Instead, this model used a proxy, defined as NarcScore, employed by prior studies (Olsen et al. 2014) and defined as follows in (Olsen and Stekleberg 2016).

NarcScore is a composite index based on both the CEO's relative cash and non-cash pay and the prominence of the CEO's photograph in the firm's annual report. Relative cash and noncash pay are defined as the ratio of the CEO's salary and bonus to that of the second highest paid executive in the firm and the ratio of the CEO's total compensation, less cash compensation, to that of the second highest paid executive in the firm, respectively. Both relative pay measures are averaged over the CEO's second and third years of tenure. O'Reilly et al. (2014) documents that narcissistic CEOs receive greater direct compensation and show greater disparities in pay compared to other top managers at the CEO's firm, which supports the use of the relative pay measures.

The prominence of the CEO's photograph in the firm's annual report is an important component to the NarcScore as narcissists have high senses of self-importance, strong desires for recognition, and seek personal glory. Following prior research, these traits are captured using both the size and prominence of the photograph, also averaged over

the second and third years of the CEO's tenure, rated on a scale from (1) to (5) as noted below:

(1) The annual report does not contain a photograph of the CEO

(2) The CEO was photographed with other executives.

(3) The CEO was photographed alone, and the photograph occupies less than half of a page.

(4) The CEO was photographed alone, and the photograph occupies at least half of a page, and the photograph shares the page with text.

(5) The CEO was photographed alone, and the photograph occupies the entire page.

This measure of CEO narcissism has been used in multiple prior studies. For a more detailed discussion of how NarcScore is measured, the reader should review Chatterjee and Hambrick (2011, 2007) and Olsen et al. (2014).

3.5 Euphoria and Crash Measure

Euphoria and crash years are measured together or separately depending on the model. In the first model listed above, all euphoria and crash years are defined by Year and the dummy variable is set to 1 if the year is a euphoria or crash, and 0 if it is not. In the second model, where the years are separated to differentiate the relationships, euphoria years are defined by EuphoriaYear and set to 1 while crash years are defined by CrashYear and set to 1. Following the first model, if the year is not a euphoria or crash, both dummy variables are set to 0.

The dot com euphoria and crash years are defined as follows: euphoria range 1995-2000, crash range 2001-2002 (Callahan et al. 2003). The housing euphoria and crash years are defined as follows: euphoria range 2004-2006, crash range 2007-2010 (Cheng et al. 2014).

3.6 Control Variables

CEO and firm-level characteristics are controlled for. The CEO characteristics controlled for are as follows: CEO's Age (defined by Age); the CEO's Gender using an indicator variable that is set equal to 1 if the CEO is male and 0 if the CEO is female (defined by Gender); how many years the CEO has spent in office (defined by Tenure).

Additionally, the following firm-level controls are used to better isolate the association between narcissism and abnormal accruals. Firm performance is controlled using the pretax return on assets (Performance). Firm size is controlled using the natural logarithm of total assets (Size). The natural logarithm of the market value of equity is controlled (mktvalue). Firm growth opportunities are controlled using the book value of equity scaled by the market value of equity (btm). Finally, firm leverage is controlled using the debt to equity ratio, short-term plus long-term debt scaled by common equity (dte).

3.7 Data and Sample Selection

The data sample matched information from the CEO narcissism data set (Olsen 2019) to Compustat. The original narcissism dataset included narcissism scores for 1,201 unique CEOs across 6,502 firm years. No industries were excluded from the original narcissism dataset After matching the narcissism dataset to Compustat, the final

sample for which all necessary variables for model estimation were available includes 1,201 unique CEOs across 4,725 firm years.

4. RESULTS

4.1 Descriptive Statistics & Correlation Matrix

Descriptive statistics for the sample are presented in Table 1. The mean value of NarcScore is 0.05. It has an interquartile range of -0.18 to 0.69 indicating the sample set includes a wide range of Narcissism scores. The average CEO age is 54 and the sample set skews predominantly male. Average CEO tenure is 6.7 years.

Table 2 shows the correlation matrix for model variables. A significant positive correlation exists between NarcScore and AbCFO (real earnings management). The matrix also shows that crash year and abnormal accruals are negatively correlated, while euphoria year and real earnings management are positively correlated. It is important to note that many of the control variables had significant and expected correlations with other variables which is why they were controlled for.

4.2 Financial Reporting Aggressiveness

Table 3 shows the regression results for the model with AbAccruals as the dependent variable and the euphoria and crash years combined as a single dummy variable. The results show a significant negative relationship between AbAccruals and year indicating that in euphoria and crash years abnormal accruals are lower.

Table 4 shows the regression results of the model with AbAccruals as the dependent variable, but euphoria and crash years modeled as separate variables. In this

regression, it can be seen that only crash year is associated with financial reporting aggressiveness. Specifically, in crash years, financial reporting aggressiveness decreases. There is no significant relationship however between euphoria years and financial reporting aggressiveness. One possible reason for the negative relationship between crash years and financial reporting aggressiveness is that when the market is low and many firms are performing poorly, management may attempt to bury additional expenses and losses in an already bad year. Since the year is already bad, management may make additional and larger negative discretionary accruals to avoid their negative affect in the near future.

Neither regression shows a significant relationship between AbAccruals and NarcScore or the interactive terms. This could happen for multiple reasons. One reason could be that CEOs do not have as much influence over AbAccruals as they do other aspects of reporting. This would mean the CEOs, while narcissistic, do not have enough influence over accruals to find the relationship significant.

4.3 Real Earnings Management

Table 5 shows the regression results of the model with AbCFO as the dependent variable. The results show significant positive relationships between NarcScore and AbCFO and also between Year and AbCFO. This suggests that as CEO narcissism increases, real earnings management increases. Furthermore, real earnings management increases in the euphoria and crash years, meaning the state of the market has an effect on the level of abnormal operating cash flows.

Table 6 shows the results of the regression with euphoria and crash years modeled as separate variables. The coefficient on NarcScore remains positive and significant, but the regression shows that while there is a positive, significant relationship between EuphoriaYear and AbCFO, the relationship between CrashYear and AbCFO is not significant. This suggests the relationship between AbCFO and Year in table 5 was due to the strong euphoria year effect and during times of market euphoria there are significantly higher levels of real earnings management.

Finally, table 6 shows there is a weakly significant negative relationship between AbCFO and the interactive term NarcScore*Crash. This suggests that narcissistic CEOs participate in less real earnings management during years of market crashes than they do during non-euphoria or crash years. One possible reason for this relationship could be that the effects of the market cause everyone, narcissists and non-narcissists, to act a similar way and reduce real earnings management to mitigate current and future losses related to the crash. Another reason could be that after market crashes, regulators begin investigating how the crash occurred and firms are part of these investigations. Real earnings management may decrease because narcissistic CEOs believe there is greater potential to be caught by regulators.

5. CONCLUSION

5.1 Summary and Contributions

This research focuses on how CEO narcissism affects financial reporting behavior during times of market euphoria and crashes. The study period is 1995 through 2014 with euphoria years defined as 1995-2000 and 2004-2006 and crash years defined as

2001-2002 and 2007-2010. The results obtained are important because investors and the general public are affected by the market volatility that accompanies market euphoria and crashes. It is also important because market euphoria and crashes are regularly occurring events in the United States and having a better understanding of how the market state can affect individual firm financial reporting behavior could hopefully mitigate the risks associated with them in the future.

Although the results of this study do not support the initial hypotheses, the regressions still provide valuable information about relationships between financial reporting behavior, narcissism, and the market state. Four main relationships are found: aggressive financial reporting as measured by discretionary accruals decreases in crash years, real earnings management as measured by abnormal operating cash flows increases in euphoria years, real earnings management increases as CEO narcissism increases, and narcissistic CEOs utilize less real earnings management in crash years.

These results are important and contribute to the accounting literature as they show that the state of the market affects both financial reporting aggressiveness and real earnings management. The results also show that the state of the market affects the way narcissistic CEOs participate in real earnings management.

This research can also aid investors, regulators, and auditors. First, investors can use this research to make better investment decisions during times of market euphoria and crashes. Knowing when real earnings management is increased (euphoria years) and financial reporting aggressiveness is lesser (crash years) can help investors get a more holistic view of the market and help them better understand how the market state affects firm's financial reporting. Overall, this information could potentially help investors

mitigate the risk associated with investing during volatile times such as market euphoria and crashes.

Second, regulators can benefit from this research as organizations like the SEC can use it to better understand how the market state affects firm's financial reporting behavior. Regulators can use the results to justify additional scrutiny in euphoria years as firm's are more likely to be involved in real earnings management during these times. If regulators have this additional scrutiny, they could also help mitigate the risks for investors and potentially reduce the large impact of a market crash.

Finally, this research benefits auditors because they can use the information to better develop inherent risk scores for firms when creating their audit plans. Auditors can use these results to understand that in euphoria years real earnings management is more prominent, and the inherent risk associated with firms may be higher. This is important because if the inherent risk is higher, auditors should perform additional testing to provide reasonable assurance the financials are free of material misstatement. Conversely, during market crashes, auditors can use this information to understand that inherent risk is lower since narcissists report less earnings management and overall financial reporting aggressiveness decreases. Knowing this, auditors can better determine the inherent risk and potentially perform less testing to provide their final opinion.

5.2 Limitations

There are limitations to this research. The main limitation is that the use of archival data restricts the ability to make causal inferences about the relationship between narcissistic

CEOs and performance measures. Another limitation is the use of NarcScore as the measure of CEO narcissism. Because this measure is based on photos and relative pay measures, it may not fully capture narcissistic personality traits.

5.3 Future Opportunities

This research creates opportunities for future research. One area of expansion would be examining the same model of aggressive financial reporting with CFO narcissism instead of CEO narcissism. CFOs may have more influence over this reporting measure, and it would be interesting to understand if CFO narcissism amplifies aggressive financial reporting during market euphoria and crashes.

Second, this research could expand to find the reasoning behind narcissistic CEOs reduced real earnings management during crash years. It was expected that narcissistic CEOs would act the same way across euphoria and crash years so the motivation for the differentiation would add to accounting literature.

Finally, more research into the state of the market would be a strong avenue of expansion for this paper. Since the market euphoria and crashes have significant relationships with both AbAccruals and AbCFO, it would be useful to understand whether other discretionary measures, such as R&D investments, are significantly affected during these times.

Table 1

Descriptive Statistics

	N	Mean	Std. Dev.
AbAccruals	4725	-0.295163	0.4875834
REM	4725	-0.0781253	0.6062420
NarcScore	4725	0.0496419	1.2496314
Year	4725	0.6457143	0.4783469
EuphoriaYear	4725	0.2281481	0.4196830
CrashYear	4725	0.4175561	0.4932100
Age	4725	54.2389418	6.2452901
Gender	4725	0.9707937	0.1684023
Tenure	4725	6.6946032	2.5226456
Performance	4725	0.0775397	0.1230524
Size	4725	7.9388800	1.5518510
mktvalue	4725	7.9236512	1.6228582
btm	4725	0.365151	5.1688357
dte	4725	0.7577955	12.7889419

This panel presents descriptive, summary statistics for the variables of interest for the sample of 1,201 unique CEOs. N is the number of observations and Std. Dev. is the standard deviation. Variable definitions are discussed in the Research Design section of this paper.

Table 2

Pearson Correlation Matrix

		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1	AbAccruals													
2	REM	-.00												
3	NarcScore	-.01	.04*											
4	Year	-.04*	.04*	-.01										
5	EuphoriaYear	.02	.04*	.02	.40*									
6	CrashYear	-.05*	-.00	-.02	.63*	-.46*								
7	Age	.01	.04*	.03*	-.01	-.01	.00							
8	Gender	.01	.04	.01	-.02	-.01	-.01	.07*						
9	Tenure	-.02	-.01	-.03*	.01	-.07*	.06*	.27*	-.04*					
10	Performance	.06*	-.06	-.02	-.06*	.09*	-.14*	-.00	.04*	.04*				
11	Size	.02	-.04	.19*	.02	.00	.02	.16*	.07*	.03*	.09*			
12	mktvalue	.01	-.11	.13*	-.02	.06*	-.07*	.09*	.08*	.03*	.36*	.87*		
13	btm	-.02	.00	-.01	-.00	.01	-.01	.02	-.01	.02	-.00	-.02	.05*	
14	dte	.00	.01	.02	-.01	.00	-.01	-.01	-.06*	-.01	-.03*	.02	-.02	.00

This panel presents Pearson correlations between the variables of interest for the sample of 1,201 unique CEOs. * denotes significance at $p < 0.10$. Variable definitions are discussed in the research design section of this paper.

Table 3

Abnormal Accruals & Narcissism: Euphoria & Crash Years Combined

	Parameter Estimate	t Value	Pr > |t|
Intercept (AbAccruals)	-.05108	-.65	.5141
NarcScore	-.00173	-.18	.8584
Year	-.03710**	-2.50	.0125
NarcScore*Euphoria*Crash	-.00552	-.46	.6429
Age	.00007829	.07	.9482
Gender	.03173	.75	.4536
Tenure	-.00471	-1.62	.1063
Performance	.36283***	5.16	<.0001
Size	.04413***	4.10	<.0001
mktvalue	-.04238***	-3.93	<.0001
btm	-.00090905	-.65	.5125
dte	-.00005208	-.09	.9253

This table presents the results of the regression testing the effects of CEO Narcissism on financial reporting aggressiveness (Abnormal Accruals). Coefficients marked with a ***, **, or * are significant at the $p < 0.01$, $p < 0.05$, and $p < 0.10$ level respectively. Variable definitions are discussed in the research design of this paper.

Table 4

Abnormal Accruals & Narcissism: Euphoria & Crash Years Separated

	Parameter Estimate	t Value	Pr > |t|
Intercept (AbAccruals)	-.05092	-.65	.5152
NarcScore	-.00181	-.19	.8518
EuphoriaYear	-.00714	-.37	.7078
CrashYear	-.05446***	-3.34	.0009
NarcScore*Euphoria	.00061911	.04	.9669
NarcScore*Crash	-.01011	-.77	.4396
Age	-.00000271	-.00	.9982
Gender	.03300	.78	.4356
Tenure	-.00408	-1.39	.1634
Performance	.35423***	5.03	<.0001
Size	.04713***	4.36	<.0001
mktvalue	-.04542***	-4.19	<.0001
btm	-.00089528	-.65	.5187
dte	-.00006365	-.11	.9088

This table presents the results of the regression testing the effects of CEO Narcissism on financial reporting aggressiveness (Abnormal Accruals). Euphoria and crash years are separated as different dummy variables and this separation leads to two interactive variables in this regression. Coefficients marked with a ***, **, or * are significant at the $p < 0.01$, $p < 0.05$, and $p < 0.10$ level respectively. Variable definitions are discussed in the research design of this paper.

Table 5

Real Earnings Management & Narcissism: Euphoria & Crash Years Combined

	Parameter Estimate	t Value	Pr > |t|
Intercept (REM)	-.15012	-1.56	.1186
NarcScore	.02762**	2.32	.0205
Year	.04206**	2.31	.0211
NarcScore*Euphoria*Crash	-.01161	-.79	.4272
Age	.00334**	2.26	.0240
Gender	.16056***	3.09	.0020
Tenure	-.00505	-1.41	.1589
Performance	.18924**	2.19	.0285
Size	.09276***	7.02	<.0001
mktvalue	-.12767***	-9.63	<.0001
btm	.00312*	1.83	.0677
dte	.00005650	.08	.9340

This table presents the results of the regression testing the effects of CEO Narcissism on real earnings management (Abnormal Operating Cash Flows). Coefficients marked with a ***, **, or * are significant at the $p < 0.01$, $p < 0.05$, and $p < 0.10$ level respectively. Variable definitions are discussed in the research design of this paper.

Table 6

Real Earnings Management & Narcissism: Euphoria & Crash Years Separated

	Parameter Estimate	t Value	Pr > |t|
Intercept (REM)	-.15110	-.1.57	.1157
NarcScore	.02746**	2.31	.0210
EuphoriaYear	.09257***	3.96	<.0001
CrashYear	.01232	.62	.5386
NarcScore*Euphoria	.01158	.63	.5275
NarcScore*Crash	-.02712*	-1.69	.0912
Age	.00320**	2.17	.0302
Gender	.16320***	3.14	.0017
Tenure	-.00393	-1.09	.2737
Performance	.17619**	2.04	.0413
Size	.09830***	7.41	<.0001
mktvalue	-.13323***	-10.01	<.0001
btm	.00313	1.84	.0661
dte	.00005981	.09	.9301

This table presents the results of the regression testing the effects of CEO Narcissism on real earnings management (Abnormal Operating Cash Flows). Euphoria and crash years are separated as different dummy variables and this separation leads to two interactive variables in this regression. Coefficients marked with a ***, **, or * are significant at the $p < 0.01$, $p < 0.05$, and $p < 0.10$ level respectively. Variable definitions are discussed in the research design of this paper.

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