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RESEARCH NOTES AND COMMENTARIES

THE HARDER THEY FALL, THE FASTER THEY RISE: APPROACH AND AVOIDANCE FOCUS IN NARCISSISTIC CEOS

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Drawing on theoretical underpinnings of approach-avoidance motivation and CEO narcissism, we provide a framework examining stronger approach focus (motivation towards desirable outcomes) and weaker avoidance focus (motivation away from undesirable outcomes) in narcissistic CEOs using a quasi-natural experimental setting—the economic crisis beginning in 2007. Because highly narcissistic CEOs possess lower avoidance motivation in the precrisis period, their firms face greater declines in the onset of the crisis. However, their greater tendency towards approach motivation enables narcissistic CEOs to increase firm performance in the postcrisis period. While narcissistic CEOs are less likely to protect against potential shocks, they are adept at helping firms recover from such shocks. Using a sample of 392 CEOs representing 2,352 CEO firm-years, we find support for the proposed framework.

INTRODUCTION

Declines in firm performance during economic recessions demonstrate the complex interplay among external economic conditions, internal firm characteristics, and ensuing strategic responses. Sharp drops in business activity create challenges for most firms; however, some firms are more negatively affected than others by sudden economic downturns, and some firms are better able to turn around performance in the face of an economic crisis (Carreira and Silva, 2010; Pearce and Michael, 2006). Following substantial literature supporting top executives' impact on firm outcomes (for a review, refer to Carpenter, Geletkanycz, and Sanders, 2004; Certo *et al.*, 2006), a firm's leader likely plays a significant role in how well a firm is positioned to withstand a sudden economic downturn as well as its recovery following a period of economic decline.

Narcissism has been an executive characteristic of perennial interest over the last three decades. Following earlier studies by Kets de Vries and Miller (1985, 1986), recent work has focused on its effects on executive decision making and risk taking (e.g., Amernic and Craig, 2010; Chatterjee and Hambrick, 2007, 2011; Li and Tang, 2010; Resick *et al.*, 2009; Wales, Patel, and Lumpkin, in press).

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While much of the work on executive narcissism has focused on its "dark side," narcissism may also have some benefits for firms (Judge, Piccolo, and Kosalka, 2009), and the effects of narcissistic traits may depend in part on the context (Campbell and Campbell, 2009). Narcissists are strongly motivated by approach motivation and weakly motivated by avoidance motivation (Campbell, 2001; Foster, Misra, and Reidy, 2009). Approach motivation occurs when "behavior is instigated or directed by a positive or desirable event or possibility" (Elliot, 1999: 170), whereas avoidance motivation directs behavior towards limiting the occurrence of or the effects of negative events. This pattern of motivation likely influences where CEOs focus their attention and the type of strategic choices they advocate. Research on narcissism in CEOs has largely focused on tendencies related to approach motivation, such as advocating bold plans, including large acquisitions, expansions, and risky strategic initiatives, and strategic dynamism, or rapid changes in strategic initiatives (Chatterjee and Hambrick, 2007, 2011).

However, the implications of narcissistic executives' weak avoidance motivation for firms are less understood. Narcissistic CEOs are less likely to attend to environmental information with potential negative consequences for the firm. Less concerned by potential threats, exploration initiatives by narcissistic CEOs could crowd out less risky exploitation initiatives. The tendency of narcissistic CEOs to pursue risky strategies, along with their limited interest in hedging against potential threats, may leave firms vulnerable when general economic fortunes change suddenly. Interestingly, their approach motivation increases willingness to take action following a period of economic distress, with positive performance implications. Thus, both the stronger approach motivation and the weaker avoidance motivation among narcissists may help explain the bright and dark side of narcissistic behavior.

This research contributes to the growing work on CEO narcissism (e.g., Chatterjee and Hambrick, 2007, 2011; Resick *et al.*, 2009) by examining the role of external economic conditions in how executive narcissism affects performance. We build on previous literature that proposes that certain CEO characteristics may be beneficial in some contexts, but not in others (Finkelstein, Hambrick, and Cannella, 2008), and demonstrate the potential for recent social psychological research regarding narcissism and approach/avoidance motivation (e.g., Foster and Trimm, 2008) to shed light on the effects of CEO narcissism.

THEORY AND HYPOTHESES

Narcissism is a multidimensional, multifaceted, and multicontextual concept that is sometimes identified as a personality disorder in psychiatry, but is examined as a personality characteristic that varies across individuals in much of the social psychology and organizational behavior literature (Campbell *et al.*, 2011). Narcissists possess an extreme need for self-enhancement, which manifests in grandiose self-promotion, unrealistic optimism, and self-entitlement (Tamborski, Brown, and Chowning, 2012). Narcissism differs from other similar characteristics, such as hubris, which describes an exaggerated self-confidence induced by power, and overconfidence, which describes a tendency to probabilistically overestimate one's knowledge and abilities (Campbell, Goodie, and Foster, 2004; Galasso and Simcoe, 2011). According to Kets de Vries and Miller (1985), narcissism influences key leadership activities, including environmental scanning, decision making, and relations with subordinates. To support grandiose self-perceptions and to garner external attention, narcissistic leaders tend to advocate grand organizational plans (Lubit, 2002). Chatterjee and Hambrick (2007) found that such actions influence performance volatility but not average performance compared to firms with less narcissistic CEOs.

Narcissism, CEOs, and economic crises

According to the agency model of narcissism, narcissists are approach-oriented; that is, they actively seek rewarding opportunities in their external environments (Finkel *et al.*, 2006) but focus less on avoidance behaviors that mitigate possibilities of negative outcomes (Foster *et al.*, 2009). Driven by their high-approach motivation and low-avoidance motivation, narcissists demonstrate a "myopic focus on reward" (Lakey *et al.*, 2008). Their inattention to the possibility of great losses and willingness to accept a wide variance in possible outcomes (Campbell *et al.*, 2004) likely increases risky managerial decisions (Sanders and Hambrick, 2007). Conversely, less narcissistic firm

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managers are less risk seeking than narcissistic CEOs (Lewellen, 2006) and are more likely focused on reducing variance in outcomes and avoiding a potential decrease in returns. A recent study tracked the hypothetical investments of participants during the stock market fall of 2008 and found that narcissism was related to riskier choices and greater losses during the crash (Foster *et al.*, 2009). Similarly, the high-risk, high-return activities preferred by narcissistic CEOs (Chatterjee and Hambrick, 2007) likely suffer when general economic conditions decline.

Narcissists are also less likely to make decisions, such as hedging firm investments or monitoring internal and external environments for economic weakness, that help attenuate the negative impact of economic decline on performance (Pearce and Michael, 2006). The low levels of avoidance motivation of narcissistic leaders decrease their tendency to attend to and plan for potential future threats in the environment or to be a careful steward of organizational resources (Kets de Vries and Miller, 1985). Narcissism has also been closely linked to "savior complex," (Post, 1986), where narcissists may increase risky investment outlays and engage in fewer risk-reducing investments, thereby allowing them to orchestrate recovery in case of organizational decline. In sum, firms headed by more narcissistic CEOs are likely to have a riskier pattern of investments and are less likely to plan for economic declines. Thus, we propose:

Hypothesis 1 (H1): CEO narcissism leads to a greater decline in performance at the onset of crises.

Narcissism and firm recovery

In the recovery period following an economic recession, the approach orientation of narcissistic CEOs and their corresponding willingness to seek bold initiatives present strategic advantages for the firm.[1] CEOs play an important role in initiating deliberate strategic and tactical adjustments (Greiner and Bhambri, 1989). When firms face significant performance losses, future performance may depend on the willingness of the CEO to advocate substantial organizational change (Chen and Hambrick, 2012).

Firms that tend to be successful following an economic recession undertake retrenchment strategies, such as cost cutting, and strategic repositioning, investing in innovation and marketing (Latham and Braun, 2011). Narcissistic leaders likely advocate both bold retrenchment and bold repositioning moves. Given their focus on their own personal image (Kets de Vries and Miller, 1985), they are less concerned about the effects of retrenchment on current employees and engage in bold cost-cutting measures, such as asset sales and layoffs, to increase liquidity necessary to make new investments. Furthermore, they are also more willing to invest in riskier activities with a wider range of possible outcomes, such as investments in R&D. Making riskier strategic choices likely pays off when times are improving because the positive outcomes in the possible range of outcomes are more likely to be attained. This can be contrasted with the consequences in a downturn when negative outcomes are more likely to be realized (as was found in the narcissism and stock market study by Foster *et al.*, 2009, in which risky investments suffered at the onset of the economic crisis). Following an economic recession, taking on these types of risks strengthens long-term competitive position (Ghemawat, 1993). Risk is positively associated with returns in high growth environments (Figenbaum and Thomas, 1986), and aggressive investments in marketing and innovation during recessions and recovery periods have positive implications for market share and profitability (Roberts, 2003). Furthermore, because narcissistic leaders are often highly charismatic (Deluga, 1997), they invigorate their organizations following difficult economic times and convince other top managers to pursue aggressive changes. Past research demonstrates the positive relationship between CEO narcissism and strategic dynamism, the extent of change in an organization's strategy (Chatterjee and Hambrick, 2007).

Individuals with higher avoidance motivation (i.e., less narcissistic CEOs) have stronger negative reactions to negative events, creating difficulties moving past such events (Derryberry and Reed, 1994). In addition to their willingness to actively pursue new opportunities, narcissistic CEOs are less encumbered by avoidance motivation following a crisis period than less narcissistic CEOs. Following a difficult economic period,

[1] The survival of the firm and the availability of some organizational slack following the crisis is an important boundary condition to our arguments.

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managers with high avoidance motivation are excessively cautious and avoid large investments that would increase the likelihood of firm recovery but also increase firm risk. For narcissists, past poor performance from economic recession does not dampen expectations for above-average future performance (Campbell *et al.*, 2004), and in the uncertain context following a downturn, their low sensitivity to potential losses increases the likelihood of risk taking. Because they believe that they can manipulate the external environment, narcissistic leaders can be forces for change (Rosenthal and Pittinsky, 2006). In sum, CEO narcissism increases the likelihood of strategic change following an economic crisis, thus increasing the potential for improved returns during the postcrisis[2] period. Thus, we propose:

Hypothesis 2 (H2): CEO narcissism increases performance in the postcrisis period.

DATA AND METHODOLOGY

Based on recent studies (e.g., Campello, Graham, and Harvey, 2010; Carreira and Silva, 2010), we identify July 1, 2007, as the beginning of the recent economic crisis. We include manufacturing firms (SIC codes from 20 to 39) with (1) market capitalization of more than $50 million as of the end of the fiscal quarter on June 30, 2006, (2) financial information available for all the 8 quarters before and 12 quarters after the crisis from COMPUSTAT, (3) stock market volume and price information available for at least 100 days out of 252 trading days from the Center for Research in Security Prices (CRSP) database; and (4) asset or sales growth less than 100% in any of the two calendar years prior to the crisis. To ensure that the CEO had enough time to have a strategic impact on the firm, we required that CEOs were to be with the firm at least 8 quarters (two years) prior to start of the crisis (from June 2005 quarter to the end of June 2007 quarter) and to continue to be with the firm 12 quarters (three years) following the crisis (from the beginning of June 2007 quarter to the end of June 2010 quarter). A five-year window does not necessarily bias our estimates as mean CEO tenure in publicly traded firms was 6.8 years in 2007.[3] Based on these cut-offs, our final sample consists of 392 CEOs. We winsorize all variables at 1st and 99th percentile and adjust all financial data to year 2000 dollars.

Dependent variables

Immediately after a crisis, markets are volatile and highly sensitive to negative news from the firm. As the crisis unfolds, firms disclose news on sales declines and changes in inventories and asset values. Due to high market sensitivity, "noisy" information leads to significant undervaluation in the short term after the crisis. Internal accounting information is also less reliable in the immediate postcrisis period due to the likelihood of increased earnings management during that period. Therefore, based on several recent studies on postfinancial crises (e.g., Fahlenbrach and Stulz, 2011), to test Hypothesis 1 the outcome measure is one-year buy-hold return (BHAR)[4] from the start date of crisis (from start of July 2007 to end of June 2008 fiscal quarters). After the initial crisis, firms must recover from the initial shock by undertaking a series of strategic actions for the long run to cumulatively affect firm performance over time. Drawing from the efficient market hypothesis, unsystematic returns result from the effects of strategic actions at a point in time, while also incorporating the effects of all prior strategic actions; therefore, cumulative effects of CEO actions on yearly unsystematic returns[5] (8 quarters prior to start of crises and 12 quarters after start of crises, or from the start of

[2] The postcrisis period refers to the three-year time period following the start of the economic crisis.

[3] Source: http://www.forbes.com/2008/03/07/executive-ceo-tenure-lead-manage-cx_mk_0307turnover.html

[4] $BHAR_{iT} = \prod_{t=1}^{T}(1 + AR_{it}) - 1$ where T is the total trading days during a year after the crisis period, and AR is the abnormal return from the market model: $r_{it} = \alpha_i + \beta_i r_{mt} + \epsilon_{it}$ where, r_{it} is the return of the stock, i, on day t, r_{mt} is the return of the market portfolio (S&P 1500) on day t, α_i is the intercept of the relationship of stock i, β_i is the slope of the relationship for stock i, and ϵ_{it} is the error term for stock i on day 0. $\beta_i r_{mt}$ is the return on stock i on day t that is a result of market-wide movements, and ϵ_{it} captures the unexplained part of return that explains impact of firm specific events on day t. The abnormal return for stock i on day t from market model is $AR_{it} = r_{it} - \widehat{\alpha}_i + \widehat{\beta}_l r_{mt}$ where r_{it} is the actual return on stock i on day t.

[5] Using daily stock returns from CRSP, $r_{i,t-1} = \beta_0 + \beta_1 r_{industry,t-1} + \epsilon_{i,t-1}$ where $r_{i,t-1}$ is the firm-specific daily return and $r_{industry,t-1}$ is industry median daily return during $(t-1)$, based on stock prices for at least 100 days of 252 trading days in each calendar year. Except for leap years, 365 days minus 104 days during the weekends minus bank holidays leads to approximately 252 trading

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June 2005 quarter to end of June 2010 quarter) should be assessed over time to test Hypothesis 2.

CEO narcissism

As CEOs of large established firms are less likely to respond to psychometrically valid narcissism scales, recent work has used yearly annual reports, financial statements, CEO interviews, and press releases to operationalize proxies for CEO narcissism. Replicating the measure of narcissism in Chatterjee and Hambrick (2007), we use five indicators: (1) prominence of the CEO photograph in the annual report, (2) prominence of the CEO in press releases, (3) use of the first-person pronoun in CEO interviews, (4) ratio of CEO cash compensation to the second highest paid executive in firm, and (5) ratio of CEO bonus compensation to the second highest paid executive in firm. To limit effects of contemporaneous performance feedback effects on narcissistic behavior, we compile information on these five items from 2006.

First, for photograph prominence in the annual report, based on Chatterjee and Hambrick (2007), we rate annual reports as follows: (1) four points if CEO's picture with him or her alone occupies more than half a page, (2) three points if CEO's picture with him or her alone occupies less than half a page, (3) two points if CEO was photographed with one or more executives, (4) one point if no picture was available. For each firm, we draw on 2006 annual reports from the EDGAR database. Two teams each consisting of one professor and one graduate assistant at a large midwestern university in the United States coded 392 randomly allocated annual reports. The interrater reliability kappa (κ) was 0.96. Second, drawing from the Factiva database, we identify 1,879 press releases from these firms that were distributed through Associated Press. The ratio of the number of times the CEO's name is used to the total number of words in the press releases is the measure of prominence of CEO in press releases. Third, based on 72 digital transcripts[6] of CEO interviews in 2006 in LexisNexis and Wall Street Transcript, we take the ratio of first-person pronouns (I, me, mine, my, myself) to the total number of pronouns (we, you, our, ours, ourselves plus the first-person pronouns). Finally, for the ratio of CEO cash compensation and ratio of CEO bonus compensation, we use the information reported in ExecuComp during 2006. The CFA (confirmatory factor analysis) indicated adequate fit (worst fit of narcissism measure across firms: $\chi^2 = 13.092$, $df = 7$; CFI (comparative fit index) = 0.96; TLI (Tucker Lewis index) = 0.95; RMSEA (root mean square error of approximation) = 0.070) and acceptable internal consistency (lowest Cronbach's $\alpha = 0.75$). The final measure is a standardized mean of all the five indicators.

Additional validity tests for narcissism measure

In addition to replicating the narcissism measure from Chatterjee and Hambrick (2007), we further validated narcissism scores using (1) eight stock analysts in the manufacturing sector at a stock brokerage firm in a large midwestern city, and (2) eight clinical psychology researchers. We asked four teams of two analysts to each rate ten randomly chosen CEOs in the industry sector of their specialty (interrater reliability = 0.76; correlation with narcissism measure used in the main analysis = 0.74, $p < 0.001$; two-tailed), and asked four teams of two clinical psychology researchers to each rate eighteen digital interview transcripts (interrater reliability = 0.77; correlation with narcissism measure used in the main analysis = 0.70, $p < 0.001$; two-tailed). Both groups rated CEOs on a scale of 1 (*not narcissistic at all*) to 7 (*highly narcissistic*). To provide an understanding of the narcissism construct to the stock analysts, we provided a definition of narcissism and the list of scale items from the NPI-16 (shorter version of narcissism scale).[7] (Ames, Rose, and Anderson, 2006).

Controls

Increasing CEO *age* and *tenure* lead to more avoidance-focused investment strategies. Both

days. Systematic risk component is the standard deviation of $\left(\widehat{\beta}_0 + \widehat{\beta}_1 r_{industry,t-1}\right)$; unsystematic, or idiosyncratic risk, is the standard deviation of residual return, $\epsilon_{i,t-1}$. Systematic return is the predicted value of $\left(\widehat{\beta}_0 + \widehat{\beta}_1 r_{industry,t-1}\right)$, and residual return, or unsystematic return, is $\epsilon_{i,t-1}$.

[6] As not all CEOs were interviewed during this period, eliminating this indicator from the overall measure of narcissism did not affect the magnitude, direction, and significance of our estimates.

[7] NPI-16, a shorter version of the 40-item (NPI-40) narcissism scale, is a 16-item scale proposed and validated by Ames and colleagues (2006). The scale items include paired statements that require a forced choice between a narcissistic response (= 1) and a non-narcissistic response (= 0).

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CEO duality and *equity ownership* could increase CEO power to engage in aggressive strategic investments or self-serving strategic initiatives. *Absorbed* (ratio of selling, general, and administrative expenses to sales), *unabsorbed* (ratio of current assets to current liabilities), and *potential* (inverse of the ratio of debt to equity) slack increase resources available for undertaking strategic actions. Firms with low *Altman's Z* (Altman, 1968) are less likely to engage in risk-seeking investments. To control for difficulties in developing and implementing rapid strategic changes, we control for *firm size* as a natural logarithm of firm assets. As future growth prospects and availability of cash flows enhance performance during crises, we control for *free cash flows. Debt ratio* further lowers available resources during crises.

Changes in performance in the postcrisis period may not necessarily be driven by CEOs' narcissistic tendencies but could be explained by regression to the mean—if a variable is at the extremes at time 1, it will tend to be closer to the mean at time 2. Firms with below-average performance and firms with above-average performance would have a natural tendency to move towards average performance. To control for a firm's tendencies to move towards average performance, we control for performance levels before the crisis. Specifically, we control for average unsystematic risk and unsystematic return over three years prior to beginning of the crisis (for testing Hypothesis 1) and lagged at one year (for testing Hypothesis 2).

Both *delta* (sensitivity to stock price) or *vega* (sensitivity to option price) could affect firm performance by increasing the CEO's risk aversion or risk seeking, respectively, during crises (Core and Guay, 2001). Firms with higher *corporate social responsibility* (z-scores across Community, Diversity, Employee Relations, Environment, and Product/Customer categories in the KLD database) and *reputation* ($=1$, if a firm is present in World's Most Admired Companies) are perceived to be reliable in the postcrisis period and, therefore, are less likely to realize a decline in performance and more likely to bounce back. A firm's strategic orientation could also affect the extent of decline and the ability to rebound after economic crises. Based on Yamakawa and colleagues (2011), *cost leadership* is the mean of the ratio of cost of goods sold to total sales, ratio of total assets to total sales, and net capital expenditure divided by net sales. *Product differentiation* is the mean of two indicators—the ratio of R&D expenditures to net sales and the ratio of advertising expenditures to net sales. Finally, we control for two-digit industry dummies (SIC 39 reference category). Table 1 includes variable descriptive statistics and correlations.

Endogeneity and self-selection

Based on Chatterjee and Hambrick (2007), CEO narcissism and firm performance are endogenous, where firm performance driven by narcissism could provide feedback to the narcissistic CEO to increase strategic outlays and make risky bets. To control for such endogeneity, we use four instruments—unsystematic return, unsystematic risk, firm age, and firm sales measured one year before the current CEO was hired. The Hausman F-test in Table 2 indicates validity of instruments.

Furthermore, as our sample selection criteria requires that CEO tenure should be five years or longer (coded as 1, 0 otherwise), it is likely that CEOs staying with the firm for five years or longer could have self-selected into such firms. Based on Heckman's two-stage self-selection model (Heckman, 1990), in the first step, we use firm age, firm size, industry-adjusted ROA, CEO salary, CEO bonus, CEO stock option exercise value (based on option valuation approach in Core and Guay, 2001), and four-digit SIC codes (3999 as the reference category) in a probit regression to predict CEO tenure greater than or equal to five years. Next, the predicted inverse Mill's ratio derived from the first step in the probit regression is used as a self-selection control in the main regression.

RESULTS

For testing Hypothesis 1, we use two-stage least squares/ordinary least squares (2SLS OLS) regression (Table 2). For testing Hypothesis 2, the likelihood ratio (LR) test statistic (24.042, $p < 0.001$) and the Wooldridge-type diagnostic test statistic (14.182, cut-off $= 6.728$) revealed that both heteroskedasticity and autocorrelation appear in the panel; therefore, AR(1) (first order autoregressive) structure is present and neither fixed nor random effects are valid. Therefore, we use 2SLS dynamic panel Arellano Bond regression (Table 2). For both 2SLS OLS and dynamic panel specification, we lag all control variables by one year. Table 1

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Table 1. Mean, SDs, and correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mean			53.137	0.528	0.009	6.535	0.489	2.454	0.414	3.568	16.486	9.703	0.363	337,654	304,738	0.039	0.287	0.326	0.487	6.317	−0.008	0.032
SD			7.148	0.113	0.022	1.604	1.878	2.486	2.281	3.006	6.991	7.218	0.254	1, 218,658	518,082	2.902		0.404	0.252	5.647	0.038	0.594
1. CEO age	52.137	7.148	1	0.015	0.049	0.139	0.035	0.058	0.038	0.052	0.093	0.039	0.017	0.088	0.172	0.101	0.173	0.130	0.145	0.050	0.016	0.058
2. CEO duality	0.528	0.113	0.014	1	0.077	0.033	0.068	0.025	0.034	0.025	0.046	0.083	0.074	0.093	0.164	0.167	0.144	0.106	0.087	0.033	0.077	0.135
3. CEO equity ownership (%)	0.009	0.023	0.047	0.076	1	0.099	0.078	0.006	0.010	0.023	0.089	0.088	−0.062	0.149	0.189	0.158	0.113	0.162	0.097	0.142	0.055	0.363
4. CEO tenure	5.535	1.604	0.138	0.032	0.097	1	0.035	0.023	0.081	0.048	0.006	0.077	0.009	0.125	0.122	0.141	0.080	0.174	0.113	0.055	0.049	0.127
5. Absorbed slack	0.595	1.777	0.034	0.066	0.076	0.036	1	0.395	0.279	0.076	0.013	0.177	0.044	0.088	0.115	0.147	0.103	0.162	0.151	−0.145	0.083	−0.189
6. Unabsorbed slack	2.531	2.537	0.057	0.022	0.005	0.022	0.388	1	0.263	0.229	0.270	0.253	−0.130	0.168	0.120	0.122	0.182	0.144	0.159	−0.268	0.293	−0.246
7. Potential slack	0.460	2.329	0.036	0.033	0.009	0.080	0.270	0.252	1	0.257	0.225	0.262	0.151	0.182	0.141	0.118	0.185	0.119	0.107	−0.272	0.125	−0.138
8. Distance from bankruptcy	3.858	2.085	0.049	0.024	0.022	0.047	0.071	0.223	0.253	1	0.271	0.143	0.105	0.180	0.192	0.191	0.188	0.119	0.085	−0.152	0.149	0.176
9. Size	17.633	6.977	0.091	0.045	0.087	0.005	0.014	0.275	0.222	0.266	1	0.390	0.255	0.114	0.172	0.085	0.062	0.109	0.088	0.219	0.126	0.125
10. ln (free cash flow)	10.648	7.111	0.035	0.082	0.076	0.078	0.174	0.262	0.266	0.128	0.384	1	0.141	0.178	0.181	0.087	0.159	0.123	0.106	−0.243	0.212	0.207
11. Debt ratio	0.397	0.282	0.011	0.071	−0.063	0.013	0.047	−0.134	0.156	0.105	0.253	0.137	1	0.162	−0.085	0.108	0.093	0.101	0.103	−0.232	−0.169	0.163
12. Delta	459,359	1,562,254	0.082	0.092	0.147	0.127	0.082	0.161	0.176	0.165	0.111	0.182	0.145	1	0.319	0.026	0.037	0.173	−0.126	0.030	−0.182	0.176
13. Vega	256,547	462,567	0.170	0.164	0.178	0.125	0.108	0.109	0.136	0.173	0.167	0.195	−0.089	0.313	1	0.022	0.017	0.002	0.144	0.163	0.207	0.158
14. z-score KLD	0.045	2.634	0.105	0.169	0.159	0.140	0.138	0.107	0.116	0.194	0.083	0.085	0.113	0.025	0.030	1	0.213	0.032	0.133	0.019	0.033	0.147
15. Firm reputation	0.273	—	0.177	0.144	0.114	0.083	0.094	0.177	0.185	0.182	0.071	0.163	0.081	0.033	0.019	0.211	1	0.017	0.132	−0.123	0.049	0.139
16. Cost leadership	0.325	0.412	0.132	0.117	0.163	0.175	0.157	0.138	0.124	0.108	0.108	0.109	0.109	0.178	0.003	0.036	0.012	1	−0.488	−0.158	−0.137	−0.121
17. Product differentiation	0.483	0.256	0.149	0.093	0.096	0.114	0.148	0.176	0.086	0.077	0.085	0.115	0.100	−0.120	0.128	0.171	0.129	−0.485	1	0.113	0.160	0.179
18. Unsystematic risk three years before crises/t − 1	5.023	3.215	0.051	0.030	0.139	0.053	−0.163	−0.385	−0.308	−0.190	0.213	−0.242	−0.195	0.035	0.131	0.033	−0.111	−0.163	0.105	0.528[a]	0.417	0.271
19. Unsystematic return$_{\text{three years before crises/t}-1}$	0.006	0.044	0.014	0.072	0.072	0.043	0.079	0.363	0.133	0.153	0.132	0.180	−0.168	−0.134	0.142	0.031	0.046	−0.102	0.155	0.504	0.633[a]	0.268
20. CEO narcissism	0.032	0.594	0.058	0.135	0.362	0.127	−0.181	−0.235	−0.130	0.177	0.122	0.203	0.162	0.174	0.150	0.149	0.140	−0.123	0.179	0.263	0.277	1
21. One-year BHAR	−0.081	0.140	−0.017	−0.176	0.026	0.008	0.035	0.207	0.050	0.103	−0.225	0.293	0.071	0.107	−0.188	0.038	0.133	0.176	−0.138	−0.303	0.557	−0.165

One year postcrisis—mean, standard deviation, and correlations below diagonal (all correlations at or above —0.11— are significant at 0.05 or below (two-tailed); all correlations at or above —0.15— are significant at 0.01 or below (two-tailed)); correlations for three-year precrisis mean of unsystematic return and unsystematic risk are reported for correlations below the diagonal.
Three years postcrisis—mean, standard deviation, and correlations above diagonal (all correlations at or above —0.07— are significant at 0.05 or below (two-tailed); all correlations at or above —0.11— are significant at 0.01 or below (two-tailed)); correlations for one-year lagged unsystematic return and unsystematic risk are reported for correlations above the diagonal.
[a] Indicates correlation between mean of unsystematic risk/return three years before crisis and yearly (t − 1) unsystematic risk/return after crisis.

Table 2. Results

	Hypothesis 1—2SLS OLS regression DV = One-year buy-hold return		Hypothesis 2—2SLS dynamic panel Arellano Bond regression DV = Unsystematic return$_t$	
	Controls	Direct effects	Direct effects	Moderation effects
CEO narcissism (H1)		−0.059*	0.062*	0.057*
		(0.026)	(0.026)	(0.025)
Postcrisis (= 1)			−0.150**	−0.148*
			(0.046)	(0.067)
CEO Narcissism × Postcrisis (= 1)				0.063*
				(0.030)
Controls				
CEO age	−0.030	−0.024	0.005	0.004
	(0.039)	(0.042)	(0.003)	(0.003)
CEO duality	−0.101*	−0.101	0.021	0.015
	(0.050)	(0.052)	(0.020)	(0.022)
CEO equity ownership	0.022	0.010	0.014	0.012
	(0.038)	(0.039)	(0.017)	(0.012)
CEO tenure	0.013	0.012	0.025	0.022
	(0.015)	(0.027)	(0.021)	(0.023)
Absorbed slack$_{t-1}$	0.013	0.030	0.022	0.020
	(0.025)	(0.028)	(0.015)	(0.012)
Unabsorbed slack$_{t-1}$	0.193**	0.180*	0.127*	0.123*
	(0.071)	(0.082)	(0.058)	(0.052)
Potential slack$_{t-1}$	0.030	0.030	0.005	0.005
	(0.029)	(0.024)	(0.005)	(0.005)
Distance from bankruptcy$_{t-1}$	0.083	0.072	0.015	0.020
	(0.082)	(0.080)	(0.048)	(0.056)
Size (ln[Assets]$_{t-1}$)	−0.153*	−0.094	0.077	0.065
	(0.065)	(0.069)	(0.060)	(0.062)
ln (Free cash flow$_{t-1}$)	0.150*	0.144	0.085***	0.083***
	(0.074)	(0.076)	(0.022)	(0.025)
Debt ratio$_{t-1}$	0.032	0.028	−0.117**	−0.105*
	(0.076)	(0.083)	(0.043)	(0.045)
Unsystematic risk$_{\text{mean three years before crises/t}-1}$	−0.153***	−0.216***	0.052**	0.056***
	(0.044)	(0.048)	(0.016)	(0.017)
Unsystematic return$_{\text{mean three years before crises/t}-1}$	0.162**	0.165***	0.070***	0.079***
	(0.053)	(0.049)	(0.018)	(0.020)
Delta$_{t-1}$	0.037**	0.030*	−0.037**	−0.063**
	(0.014)	(0.013)	(0.013)	(0.024)
Vega$_{t-1}$	−0.068*	−0.041*	0.078**	0.050*
	(0.027)	(0.019)	(0.024)	(0.022)
z −score KLD$_{t-1}$	0.015	0.016	0.016	0.017
	(0.032)	(0.027)	(0.022)	(0.025)
Firm reputation$_{t-1}$	0.018*	0.011	0.017	0.012
	(0.008)	(0.009)	(0.065)	(0.063)
Cost leadership$_{t-1}$	0.026*	0.018	−0.066*	−0.031
	(0.011)	(0.010)	(0.031)	(0.033)
Product differentiation$_{t-1}$	−0.087*	−0.088*	0.062	0.067*
	(0.037)	(0.040)	(0.032)	(0.029)

Table 2. Continued

	Hypothesis 1—2SLS OLS regression DV = One-year buy-hold return		Hypothesis 2—2SLS dynamic panel Arellano Bond regression DV = Unsystematic return$_t$	
	Controls	Direct effects	Direct effects	Moderation effects
Self-selection control (inverse Mill's ratio)	−0.192*** (0.052)	−0.177* (0.073)	−0.082* (0.038)	−0.076* (0.031)
Industry dummies (reference SIC code: 39)	Included	Included	Included	Included
Intercept	−0.050*** (0.012)	−0.045*** (0.013)	−0.076*** (0.021)	−0.062** (0.019)
Adjusted R^2	0.483	0.526		
Δ Adjusted R^2		0.043(1)***		
Chi-square			355.058	359.340
Δ Chi-square				4.282(1)*
Hausman F-test	23.084***	17.652***	23.054***	19.672***

For controls of unsystematic risk and unsystematic return, we use the three-year means for testing Hypothesis 1, and their lagged measures for testing Hypothesis 2. Figures in parentheses are standard errors.
$^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

lists mean, standard deviation, and correlations for 2SLS OLS (correlations below the diagonal; highest VIF (variance inflation factor = 4.655) and dynamic panel specification (correlations above the diagonal; highest VIF = 3.802), respectively. As shown in Table 2, supporting Hypothesis 1, CEO narcissism is negatively related to one-year BHAR (H1: $\beta = -0.059$, $p < 0.05$; Cohen's $f^2 = 0.09$).[8] Furthermore, as shown in Table 2, supporting Hypothesis 2, CEO narcissism increases unsystematic return in the postcrisis period (H2: $\beta = 0.063$, $p < 0.05$; Cramer's V, $\phi_c = 0.07$).[9,10] The effect sizes indicate small effects of CEO narcissism (Campbell *et al.*, 2004; Galasso and Simcoe, 2011).

Post hoc analysis[11]

To further test robustness of findings, we use nearest neighbor matching algorithm in propensity score-matching technique (Stata 12 package *psmatch2*). We use three-year precrisis average market capitalization, firm size (natural log of assets), two-digit SIC code, CEO sex, age, and tenure (Malmendier and Tate, 2005) as matching variables. From the current sample, we identified 84 CEOs with narcissism scores in the upper quartile and code them as 1, and code CEOs from the matched sample as 0. We find that firms with narcissistic CEOs had lower one-year BHAR (Δ mean = −0.09%, $p = 0.01$), but higher postcrisis three-year average unsystematic return (Δ mean = 0.13%, $p = 0.00$). Second, stock option incentives related to *vega* exacerbate low avoidance focus by increasing the negative effect on one-year BHAR ($\beta = -0.037$, $p < 0.05$), but promote approach focus and enhance the positive effect on postcrisis returns ($\beta = 0.013$, $p < 0.05$). Statistically nonsignificant interaction of narcissism with delta (one-year BHAR: $\beta = 0.004$, $p > 0.10$; unsystematic return: $\beta = 0.002$, $p > 0.10$) further indicated

[8] Effects of narcissism on industry-adjusted 252-day stock return and 4-quarter change in return on sales and net profit were also supported.

[9] To limit performance feedback effects on narcissistic behavior, we used proxies for measuring narcissism in the year 2006. The 2006 narcissism measure correlates significantly with measures in 2007–2010. Hypotheses were also supported using mean narcissism over this time period.

[10] Literature on executive overconfidence has also examined the effects of executive overconfidence on strategic actions. While overconfident individuals assign inflated subjective probability on *outcomes* (Galasso and Simcoe, 2011), narcissists tend to have unjustified estimates of their *abilities* to enhance "positivity of the self (specifically, to achieve status and esteem)" (Campbell *et al.*, 2004). We classify a CEO as overconfident if one holds ≥ 100% in the money stock options for three or more years during five years prior to crises (= 1, 0 otherwise; $N = 76$) (Campbell and colleagues, 2011). Results showed that compared to narcissistic CEOs, who exhibit lower avoidance focus in the precrisis phase and greater approach focus in the postcrisis phase, overconfident CEOs exhibit lower avoidance focus in the precrisis phase, and *lower* approach focus in the postcrisis phase.

[11] The results of the post hoc analysis are available from the authors.

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that narcissistic CEOs are less likely to respond to stock incentives, but are more sensitive to option-based incentives. Third, to find indirect support for high approach and low avoidance focus among narcissistic CEOs in the postcrisis period, we adapt the measure of strategic dynamism (mean of standardized scores of absolute changes from t − 1 to t in R&D intensity, capital intensity, advertising intensity, debt ratio, and net change in number of SIC codes) from Chatterjee and Hambrick (2007). Using the fixed effects panel data regression, CEO narcissism in the postcrisis period is positively related to changes in strategic investments ($\beta = 0.075$, $p < 0.05$).

Finally, the estimates could be biased by narcissistic CEOs who were fired after the crisis, and thus not included in the analyses.[12] We identified 313 CEO terminations in news releases from Factiva using search terms [CEO] and [retired, or fired, or resigned, or terminated]. As Factiva consists of news releases from a universe of firms, to compare differences in effects on postcrisis performance between narcissistic CEOs who continued versus narcissistic CEOs who were terminated, we use the same four filters that were used in the sample selection for the main analysis. Based on these selection criteria, we identified 72 CEOs who were terminated between July 1, 2007, and June 30, 2009.[13] Two coders, one of the authors and a graduate assistant, read the news releases to code whether the CEO was fired (= 1) and did not leave voluntarily or retire from the position (0 otherwise). The interrater agreement was 0.84. The differences in coding were resolved by a joint meeting. This led to a sample of 33 CEOs who were fired, and 12 CEOs who were classified as retired, 19 who voluntarily resigned, and, for 8 CEO terminations, the reason for termination was not clear in the news releases. Next, we coded the level of narcissism using the five indicators used earlier to measure CEO narcissism. Similar to the test for Hypothesis 1, with the level of decline in performance as the dependent variable (BHAR), the effect of narcissism of terminated CEOs on performance decline one year after the crises ($\beta = -0.037$, $p < 0.05$) was not significantly different from the main estimates (z-difference = 0.716, $p > 0.10$).

DISCUSSION AND CONCLUSION

We answer recent calls to apply approach and avoidance motivation to narcissism (Elliot and Thrash, 2002) by integrating these motivation types into our understanding of narcissism and CEO decision making. While previous work has primarily focused on narcissistic behaviors related to approach motivation, such as seeking bold initiatives and strategic change (Chatterjee and Hambrick, 2007, 2011), we hypothesized that both approach and avoidance motivations have implications for firm outcomes. Firms under narcissistic CEOs experience performance declines (at the onset of the crisis period) and performance gains (in the postcrisis period) that differ significantly from those under less narcissistic CEOs. By examining effects of CEO narcissism under an exogenous shock, we more clearly identify the impact of weak avoidance and strong approach motivations with limited concerns for endogeneity.

This study relates to recent work proposing an integration of regulatory focus theory into upper echelons theory (Chiaburu, 2010). Regulatory focus theory builds on the literature on approach and avoidance motivations and describes how individuals self-regulate in their pursuit of aspirational and prevention goals, respectively (Higgins, 1997). Regulatory focus and approach-avoidance motivations are distinct but related, where regulatory focus addresses the strategies individuals use to pursue aspirational goals, such as risk-seeking strategies, or prevention goals, such as risk-reducing strategies (Elliot and Thrash, 2010). Regulatory focus has been shown to link a number of personality traits to work outcomes (Lanaj, Chang, and Johnson, 2012); however, little is known about how narcissism relates to these processes.

Drawing on the pay for performance literature, the post hoc findings indicate that option payoffs lead narcissistic CEOs to undertake even greater risk, while stock incentives do not have a significant effect on motivating narcissistic CEOs. This suggests that due to the limited downside in option payoffs, narcissistic CEOs are further fueled to neglect an avoidance focus before the crisis and engage in an approach focus after the

[12] We thank an anonymous reviewer for recommending this robustness test.

[13] We use a two-year postcrisis observation period, as the CEOs may not be fired immediately after the crisis, but longer time frames would also confound the effects of the new CEO with the actions of the previous CEO.

crisis. However, linear payoffs from stock rewards do not affect the strategic behavior of narcissistic CEOs. Furthermore, extending Sanders and Hambrick (2007), who find that option payoffs lead to "swinging at the fences" and tend to lead to larger losses than gains, the current framework provides an additional explanation contingent on change in performance and embanking against potential performance decline. A potential explanation for moderation effects of option pay could be capability cues given by boards of directors or compensation committees (Chatterjee and Hambrick, 2011), which could further encourage narcissistic CEOs to take more risk.

Limitations and future research directions

First, to derive robust inferences that control for endogeneity in CEOs' strategic behavior driven by narcissism, we used the economic crisis beginning in 2007 as our exogenous event. The economic crisis resulted in a 50% decline in the Dow Jones Industrial Average over 17 months (comparable to a 54.7% fall during the Great Depression). On the positive side, this once-in-a-generation crisis helps to robustly test the avoidance and approach motivation of narcissistic CEOs in the pre- and postcrisis periods. However, on the negative side, the effects of avoidance and approach motivations could vary based on the intensity and nature of the crisis across sectors.

While a longer presence with the firm is necessary in the pre- and post-crisis phases to increase effects of CEOs' strategic actions, it is possible that firms where CEOs were fired before the crisis would have lower postcrisis losses and firms where CEOs were fired after the crisis may not have significant improvements in performance. While the current study suggests that exogenous economic shocks may influence self-regulation on the part of narcissistic CEOs, we call on future studies to assess strategic behaviors under performance feedback conditions as described by the literature on the behavioral theory of the firm.

Furthermore, we do not explore the level of resource depletion or exhaustion before and after the crisis. Although we control for slack in cross-sectional and dynamic panel regressions, and test for the effects of narcissistic CEOs who were fired after the crisis, it is plausible that aggressive investments by narcissistic CEOs could deplete resources beyond slack and lead to fewer resources and dilapidated capabilities available for investments in the postcrisis period. Thus, an important boundary condition for our findings is that the effect of narcissistic CEOs on organizational resources and capabilities in the precrisis period is not directly measured in the current study. Finally, while we focus on CEO narcissism, it is possible that other members of the upper echelons could promote or constrain the exhibition, reinforcement, and manifestation of CEO narcissistic behavior.

In closing, CEO narcissism has positive and negative effects on performance. Driven to enhance self-image, narcissistic CEOs lead firms that are more fragile and less able to withstand external shocks. However, having a narcissistic CEO also increases the chances of survival in the postcrisis phase, as such CEOs will identify and pursue strategic options necessary to enhance performance. While narcissistic CEOs driven by their quest for self-aggrandizement fall harder in face of economic crises, they also rise faster to reclaim their self-image in the postcrisis period.

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