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**CEO Narcissism, Corporate Inertia, and  
Securities Analysts' Stock Recommendations**

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# **CEO Narcissism, Corporate Inertia, and Securities Analysts' Stock Recommendations**

## **ABSTRACT:**

The narcissism of chief executive officers (CEOs) is attracting much research interest because of its potential effects on the strategic decisions, financial performance, and competitive standing of firms. This article addresses a significant gap in the literature by analyzing the effect of CEO narcissism on security analysts' stock recommendations (ASR). As financial-market intermediaries between firms and investors, analysts are an important corporate-governance actor, whose stock recommendations are consequential for the market value of a firm. Drawing on the idea of observers' implicit leadership theories, we argue that greater CEO narcissism will predict lower ASR because narcissistic CEOs' penchant for risk taking will lead analysts to categorize them as ineffective leaders. We argue further that signals of corporate inertia conveyed by the age, size, and reputation of firms will positively moderate the CEO narcissism – ASR relationship, because analysts will expect inertia to be offset by narcissistic CEOs' risk taking, a dynamic likely to improve firm performance. U.S. panel data provides support for the theorized CEO narcissism – ASR relationship and indicates significant moderation effects of the reputation and size of firms. The article discusses the study's contributions and implications for research and practice.

## **Keywords:**

CEO personality; upper echelons; corporate reputation; securities analysts; market value.

## INTRODUCTION

The impact of chief executive officers (CEOs) on corporate outcomes is a major area of inquiry in the strategy literature (Hambrick and Mason, 1984; Quigley et al., 2021). In this regard, CEO personalities, socio-demographic backgrounds, values, and work experiences have become important focal points of research (Miller and Xu, 2020; Reyes et al., 2020; Troy, et al., 2011; Walls et al., 2021). One particularly intriguing CEO attribute that is drawing attention is the narcissistic personality trait (Campbell et al., 2004; O'Reilly et al, 2018; Rovelli and Curnis, 2021; Zhang et al., 2017). The influence of CEO narcissism on corporate fortunes, however, has proven hard to pin down. While many studies indicate that CEO narcissism is likely to have a negative impact on firm performance, some studies suggest otherwise (cf. Gerstner et al., 2013; Olsen et al., 2014; Reina et al., 2014; Wales et al., 2013). This article advances the literature by studying for the first time how CEO narcissism affects security analysts' stock recommendations (ASR). In this respect, the article speaks to a growing interest in understanding how CEO narcissism relates to the conduct and expectations of important external parties, such as, competitors and investors (Gupta and Misangyi, 2018; Petrenko et al., 2016).

Securities analysts are an important category of external corporate governance actors who can influence the market value of firms (Westphal and Clement, 2008; Wiersema and Zhang, 2011). Depending on their forecasts about the future performance of a firm, they may provide positive, neutral, or negative investment advice concerning the firm's stock (Brauer and Wiersema, 2018). As analysts cannot access and analyze all the necessary information to determine the expected performance of a firm, they base their assessments on conspicuous signals conveyed by the leadership and other key attributes of the firms they follow (Kavadis et al., 2022). Because CEO narcissism is a conspicuous trait that company insiders and outsiders react to (Chatterjee and

Hambrick, 2007; Gerstner et al., 2013), we draw on research into observers' implicit leadership theories (ILT) (Offerman et al. 1994, Epitropaki and Martin, 2005) to hypothesize its likely effect on securities analysts' performance assessments. We build new theory arguing that because a narcissistic personality is associated with much risk-taking (Gerstner et al., 2013; Judd et al., 2017), analysts' ILT will induce the mental categorization of narcissistic CEOs as ineffective leaders having the potential to jeopardize the performance of the firms they lead. The ILT cognitive mechanism leads us to predict a negative relationship between CEO narcissism and ASR.

However, we further argue that the relationship between CEO narcissism and ASR may not always be negative. In particular, we suggest that signals of corporate inertia will moderate the relationship positively, attenuating CEO narcissism's negative effect on ASR. We theorize this contingent effect by drawing on work in the corporate governance field, which maintains that some risk-taking is vital for improving the innovativeness, financial performance, and economic value of a firm (Kurzahls et al., 2020; Shi and Hoskisson, 2021). Because the narcissistic CEO's disposition to take more risk should counteract corporate inertia, i.e., the inclination towards the preservation of status quo (see e.g., Gilbert, 2005), we predict more positive ASR when narcissistic CEOs are at the helm of firms prone to inertia. In this regard, we hypothesize that since the age, size, and reputation of a firm are variables that signal corporate inertia (Li et al., 2020; Parker et al., 2019), analysts' assessments of a firm led by a narcissistic CEO will be more positive when the firm is older, larger, and has an established reputation. Panel data from companies on the Standard & Poor (S&P) 100 list provides support for the predicted negative effect of CEO narcissism on ASR and for the moderating influence of firm's reputation. Though, to our surprise, we did not find the age of firms to have a moderating effect on the CEO narcissism – ASR relationship, and we found the size of firms to amplify this relationship rather than to diminish it.

The study contributes to the literature on narcissism in the executive suite (Chatterjee and Hambrick, 2011; Gupta et al., 2019). CEOs are the face of their firms (Busenbark et al., 2016) – how external observers view their personality can have big consequences for a firm (Vergne et al., 2018). We advance the existing literature by theorizing and testing the effect of CEO narcissism on the performance expectations of securities analysts, a key external audience. By showing that CEO narcissism results in less buoyant ASR, the article sheds light on the effect this personality trait in CEOs can have on the market value of a firm. In doing so, it speaks to an emerging body of research which maintains that the financial economic theory’s postulate of a positive relationship between stock risk and returns depends on the observed personality of a firm’s CEO (Harrison et al., 2020). Furthermore, by showing that a firm’s reputation and size matter for CEO narcissism’s impact on ASR, the article enriches a nascent line of work calling for greater attention to the context when examining CEO narcissism (Chatterjee and Pollock, 2017; Reina et al., 2014). We discuss the study’s contributions more fully in the concluding section, noting here that the overall picture emerging from our research is that of CEO narcissism being detrimental for companies. If negative ASR can depress a company’s stock price (Womack, 1996) and leader narcissism has become more commonplace (Rosenthal and Pittinsky, 2006) due to increase in narcissism in society (Twenge and Campbell, 2003), our work underlines the need for further attention to understanding and managing CEO narcissism. The task seems especially urgent now, at a time of great expectations regarding the role well-led companies and institutions can play in tackling the grand challenges society faces in a post COVID-19 world.

## **THEORY AND HYPOTHESES**

### **Background Literature**

The upper-echelons literature draws on personality and social psychology research (Emmons, 1987; Raskin and Terry, 1988) to conceptualize and measure narcissism. As a personality trait, non-pathological CEO narcissism is shaped by the dynamic interaction of cognitive, affective, and motivational components (Chatterjee and Hambrick, 2007; Morf and Rhodewalt, 2001). Research has identified many intrapersonal and interpersonal behavioral-level attributes linked to these components, including overconfidence in one's abilities and qualities, actions focused on being noted and admired, and a continuous search for external self-affirmation (Campbell et al., 2004; Judge et al., 2006; Petrenko et al., 2016; Zhu and Chen, 2015). Considering these attributes, several studies report evidence for a detrimental effect of CEO narcissism on strategic decisions and outcomes (Chatterjee and Hambrick, 2011; Ham et al., 2018; O'Reilly et al., 2018; Rijssenbilt and Commandeur, 2013). At the same time, however, there are also studies that report a possible upside to narcissistic CEOs because of their willingness to engage in novel endeavors (Gerstner et al., 2013; Wales et al., 2013). In the light of the mixed empirical findings, recent meta-analyses suggest that the effect of CEO narcissism on the overall performance of a firm is likely to depend on situational contingencies (Cragun et al., 2020; Kraft, 2022).

Notably, risk-taking (Aabo et al., 2023; Buyl et al., 2019; Campbell et al., 2004; Patel and Cooper, 2014) has been a consistent theme across both the studies reporting negative effects and the studies reporting positive effects of CEO narcissism. The propensity of narcissistic leaders to take more risk than others may be attributed to overconfidence in one's capabilities as well as thirst for attention and adulation (Chatterjee and Hambrick, 2011; Wales et al., 2013). In line with the idea that narcissistic CEOs prefer high-risk, high-reward actions, a study of CEOs in the computer

industry shows that CEO narcissism engendered extreme and fluctuating shareholder returns and returns on assets (Chatterjee and Hambrick, 2007). This as well as other studies suggest that narcissistic CEOs' risk-taking may result in poor strategic decisions, for example, in the form of overinvestments in R&D and M&A expenditures (Ham et al., 2018). Several studies also indicate that narcissistic CEO's risk inclination can increase misconduct, fraud, and company decline by fostering a more permissive rules-free climate and less stringent internal controls (Johnson et al., 2013; Judd et al., 2017; O'Reilly et al., 2018; Rijssenbilt and Commandeur, 2013). At the same time some studies hint that risk-taking by narcissistic CEOs may benefit a company by counteracting inertia and stimulating change and renewal (Gerstner et al., 2013; Wales et al., 2013).

In the context of risk-taking, corporate governance literature emphasizes the critical role of effectively managing risk by monitoring and overseeing executive leaders (Shi and Hoskisson, 2021; Wiseman and Gomez-Mejia, 1998). As undue risk-taking can harm a firm's market value because of performance fluctuations brought about by poor strategic decisions and practices, the board of directors has a fiduciary duty to reign it in (Lewellyn and Muller-Kahle, 2012; Solomon, 2021). Studies indicate that, in addition to corporate boards as internal governance mechanisms, external governance actors like the media, activist investors, and securities analysts can also play a significant role in influencing executives' propensity for taking risky strategic actions (DesJardine et al., 2022; Shi et al., 2017). Securities analysts are a particularly important class of governance actors – the performance expectations they set through their forecasts about corporate earnings have been noted to have profound influence on the strategic decisions of companies as well as their stock-market valuations (Bascle and Jung, 2023; Gentry and Shen, 2013). While it is evident that CEO demographic characteristics and personality traits affect corporate risk-taking (Benischke et al., 2019; Troy et al., 2011, it remains to be examined what effect CEO narcissism



has on the performance forecasts of securities analysts, and hence their “buy”, “hold”, or “sell” stock recommendations.

Securities analysts function as crucial information intermediaries between a company and its current and potential shareholders (Wiersema and Zhang, 2011; Brauer and Wiersema, 2018). Their primary role involves disseminating information to investors, which they gather from diverse sources to generate regular forecasts, typically on a quarterly basis, regarding a firm's future earnings and long-term growth prospects (Brauer and Wiersema, 2018; Womack, 1996). Due to bounded rationality, securities analysts base their assessments and projections on market signals and social cues (Beunza and Garud, 2007; Brauer and Wiersema, 2018). Consistent with the principle of signaling theory that observable situational characteristics convey economically valuable information to market participants (Spence, 2002), research shows that securities analysts take into account CEO-related attributes such as work experience and charisma when evaluating a firm's performance (Fanelli et al., 2009; Kavadis et al., 2022). Given that CEO narcissism is a prominent personality trait, and narcissistic CEOs often seek media attention (Chatterjee and Pollack, 2017), securities analysts can be expected to take notice of CEO narcissism and consider its potential impact when crafting performance forecasts. This consideration is crucial because securities analysts rely on the accuracy of their forecasts for their career success (Beunza and Garud, 2007).

### **CEO Narcissism and Securities Analysts' Stock Recommendations (ASR)**

Through the cognitive mechanism of implicit leadership theories (ILT), the observation of CEO narcissism can affect how securities analysts assess a company's performance. ILT prompts observers to categorize the observed as either effective or ineffective leaders based on their mental framework of what constitutes ideal leadership qualities (Den Hartog et al., 1999; Lord and Maher,

1991). In this recognition-based categorization process, leaders' effectiveness is presumed from their visible qualities and behaviors (Lord and Maher, 1991; Gupta and Misangyi, 2018). For example, research has shown that securities analysts tend to give more positive stock recommendations to firms led by CEOs with charismatic visions, because leaders' charisma is associated with perceptions of organizational effectiveness (Fanelli et al., 2009). In contrast, because narcissism is typically categorized as an unfavorable personality trait that portends ineffective leadership, Gupta and Misangyi (2018) argue and demonstrate that competitors are less likely to emulate the practices of companies led by narcissistic CEOs due to this negative perception. Building on this, considering the common perception of narcissism as a trait linked to self-serving risk-taking, it is probable that securities analysts will categorize CEOs with higher levels of narcissism as less effective leaders when assessing their influence on a company's fortunes. Thus, all else being equal, one can expect CEO narcissism to predict performance forecasts and stock recommendations that tend to be more negative.

To provide accurate performance forecasts, securities analysts must consider whether a CEO is risk averse or risk seeking, because of the potential effects this can have on returns to investors. Because a narcissistic CEO's excessive risk-taking can harm a firm's competitive position, financial results, and investor returns, securities analysts can be expected to lower their performance expectations. Given their expertise in the industries and the companies they cover, securities analysts are aware of the potential drawbacks of narcissistic risk-taking. For instance, it can direct the allocation of resources to strategies that satisfy a narcissistic CEO's need for being in the spotlight but do not serve investors well. To illustrate, narcissistic risk-taking may foster excessive focus on attention-grabbing corporate diversification and large-value M&As, while neglecting essential R&D investments that enhance long-term company performance (Ham et al.,

2018; Oesterle et al., 2016). Excessively risky, suboptimal strategic decisions are especially likely because narcissistic CEOs tend to disregard objective feedback and board advice (Chatterjee and Hambrick, 2011; Zhu and Chen, 2015). As these risky decisions can result in performance extremes and variations, which investors dislike, securities analysts are likely to be cautious when forecasting performance. Moreover, narcissistic risk-taking can create an environment where risk assessment, management, and mitigation receive less attention within the company. This can lead to reduced corporate transparency and an increased risk of misconduct and fraud (O'Reilly et al., 2018; Rijsenbilt and Commandeur, 2013). Consequently, these factors should lower the performance expectations and stock recommendations of securities analysts.

Furthermore, when a CEO is more narcissistic, the risk of inadequate capability to manage and lead people should also incline securities analysts to be less optimistic about a company's future performance. Narcissistic traits are viewed negatively by those who interact with narcissistic individuals (Campbell et al., 2005; Morf and Rhodewalt, 2001). For example, because narcissism is associated with characteristics like arrogance, overconfidence, and manipulation, research shows that shareholders of acquiring companies respond less positively to takeover announcements when the target CEO is more narcissistic (Aktas et al., 2016). Given the expectation that CEO narcissism implies a leader who is less empathetic and possesses weaker interpersonal skills compared to others (see also Martin et al., 2016), it would be logical for securities analysts to have reservations about the CEO's capacity to effectively motivate and manage various internal and external stakeholders. This, again, should mean more cautious performance estimates and stock recommendations. While it is to be expected that the projections and recommendations of different securities analysts will vary to some extent, the above discussion implies that all other things being equal, the average recommendation of the set of securities

analysts following a firm will be lower when CEO narcissism is higher, and it will be higher when CEO narcissism is lower. To test this, we propose the following hypothesis:

**Hypothesis 1 (H1).** *Ceteris paribus, CEO narcissism negatively impacts the stock recommendations of securities analysts.*

### **Moderating Influence of Corporate Inertia**

While we can expect securities analysts to be cautious about the impact of a narcissistic CEO on performance, there are contexts in which CEO narcissism could give securities analysts cause for optimism rather than pessimism. One such setting is the presence of corporate inertia. Firms characterized by inertia maintain the status quo in relation to important strategic dimensions such as R&D, technology adoption, and product-market profile (Hannan and Freeman, 1984; Kelly and Amburgey, 1991). They take less risk than others, prefer local search, and eschew ground-breaking experimentation and innovation (Gilbert, 2005; Tripsas 2009). In the management and organization literature, inertia is attributed to various factors, prominent among these being its age and size (Hannan and Freeman, 1984; Le Mens et al., 2015) and the established identity and reputation of the firm (Hannan et al., 2006; Parker et al., 2019). Inertia is a problem from the perspective of shareholders and potential investors because without strategic change and innovation necessary for sustained long-term performance a firm's economic value and returns on investment diminish (Ford et al., 2010; Hill and Davis, 2017). Securities analysts, who are knowledgeable about the dynamics of the industries they cover, are well-equipped to anticipate how inertia will affect a firm as it competes for market share and revenue. They are likely to factor this understanding into their performance forecasts. We expect that the information that a firm's age, size, and reputation carry about potential inertia will modify securities analysts' assessment of the impact of CEO narcissism on the firm's performance.

A substantial body of literature discusses how inertia tends to increase with a firm's age and size. Older firms become more inert over time due to their growing complexity and the entrenched nature of their cultures, routines, and procedures, which resist change (Autio et al., 2000; Le Mens, et al., 2015). In larger companies, the reliance on bureaucratic rules, centralization, and formalization is more pronounced than in smaller firms (Child, 1972; Thompson, 1967). While these organizational practices can enhance efficiency by setting clear norms for decision-making, they can also foster inertia by discouraging innovative thinking and managerial initiative. As for reputation, this factor is tied to the firm's past successes, reflecting its resource allocations to specific technologies, products, and markets (Fombrun, 1996). It can lead to path-dependencies and inertia by creating complacency and reluctance among managers to abandon current investments in resources and competencies in favor of uncertain new ventures (cf. Parker et al., 2019; Mishina et al., 2012). Furthermore, to a company's stakeholders, reputation embodies the company's identity (Brown et al., 2006; Gray and Balmer, 1998). Changes in a company's business model, investment patterns, technologies, products, and markets have the potential to violate customers, employees, investors, and other constituents' expectations that are linked to the firm's identity. As this can result in loss of legitimacy for the firm, the fear of damaging a firm's reputation often constrains change (Hsu and Hannan, 2005; Parker et al., 2019).

CEO narcissism can counter corporate inertia. Galvanized by their desire for attention and applause, narcissistic CEOs are more likely than their peers to challenge the status quo and make attempts to change it. Given the importance they attach to themselves and their self-serving wants, they should also be less constrained than others by organizational culture and routines that become embedded as a firm ages and by size-related issues of structural rules and processes. As such, for firms affected by inertia, narcissistic CEOs can prove effective at reconfiguring the firm's assets

and competencies to pursue new opportunities. Besides satisfying a narcissistic CEO's craving for the limelight, the pursuit of new opportunities is also important for strategic change (Helfat et al., 2007; Lovallo et al., 2020). Our theoretical argument is supported by empirical evidence showing that narcissistic CEOs are aggressive in directing their firms towards investments in discontinuous technologies (Gerstner et al., 2013). Furthermore, given their appetite for risk, narcissistic CEOs should be less concerned about resource allocations that result in loss of legitimacy due to deviation from reputation-based path-dependencies. The constraints of stakeholder expectations on changes in strategies and business model (Hsu and Hannan, 2005; Noda and Bower, 1996) should thus matter less when the CEO is more narcissistic. Furthermore, even if a firm has strong internal governance that can curb the pursuit of overly risky ventures, a narcissistic CEO's drive and brash style can promote change by compelling other executives and board directors to debate the status quo, explore compromises and make investments. Considering the arguments above, it would make sense for securities analysts to surmise that CEO narcissism will counter corporate inertia. Therefore, when a firm is older, larger, and has a stronger reputation, securities analysts can be expected to be more positive about the effect of CEO narcissism on the firm's future performance. The stock recommendations of the securities analysts should accordingly be higher, as reflected in the following hypotheses:

**Hypothesis 2A (H2A).** *The age of a firm positively moderates the negative effect of CEO narcissism on securities analysts' stock recommendations.*

**Hypothesis 2B (H2B).** *The size of a firm positively moderates the negative effect of CEO narcissism on securities analysts' stock recommendations.*

**Hypothesis 2C (H2C).** *The reputation of a firm positively moderates the negative effect of CEO narcissism on securities analysts' stock recommendations.*

## METHODS, ANALYSIS, AND RESULTS

### Sample and Data Sources

For hypotheses testing, we focused on U.S. publicly listed firms on the Standard and Poor (S&P) 100 index between 2003 and 2013. The choice of sample was guided by the pragmatic consideration of availability of data for the study's variables. S&P 100 firms tend to be the largest and most established companies in the broader S&P 500 index. As such, they are likely to be covered by more analysts, allowing one to measure ASR based on the mean of a larger set of ASR, which should make the measurement less sensitive to extreme scores by a few analysts. Moreover, S&P 100 firms are more likely to be included in the *Fortune* magazine's ranking of "*Most Admired Companies*", which we use for operationalizing a firm's reputation (Boivie et al., 2016; Fombrun and Shanley, 1990) as explained below. We identified 147 firms that were on the S&P 100 index between 2003 and 2013.

Next, we identified CEOs of the 147 firms for whom data was available for the first three years of tenure to allow measurement of CEO narcissism as described below. This resulted in a set of 91 CEOs at 72 S&P 100 firms. For these CEOs and firms, we consulted different data sources for measuring the study's variables. For CEO variables, we consulted the annual reports of companies and the BoardEx and ExecuComp databases. For ASR and analysts-related variables, we obtained the data from Institutional Brokers' Estimate System (I/B/E/S) database. For firm-level variables, the data came from the Compustat and Thomson Reuters databases. As complete data was not available for all CEOs and firms, we excluded cases with missing data. This led to a final dataset of 75 CEOs at 66 S&P 100 firms and 327 firm-year observations for which all necessary data was available. To test whether the cases that were dropped due to missing data

differed significantly in terms of CEO narcissism from those in the final dataset, we conducted a Kolmogorov-Smirnov (K-S) two-sample test, which did not indicate a significant difference.

## **Measures of Variables**

### ***Dependent variable***

*Analysts' stock recommendations (ASR)*. Following earlier studies (Ioannou and Serafeim, 2015; Luo et al., 2015), we used ASR data available via the I/B/E/S database. I/B/E/S assembles data on all ASR published by analysts covering a specific firm in a particular year, and records ASR on a five-point scale ranging from 1 (*strong buy* recommendation) to 5 (*sell* recommendation). We used the mean recommendation of all analysts covering a given firm in a focal year as the dependent variable for our study. To simplify the interpretation of results, we reverse coded the mean recommendations, such that, a higher score implies a more favorable or positive recommendation to buy and a lower score a more unfavorable or negative recommendation to sell (Wiersema and Zhang, 2011).

### ***Independent and moderator variables***

*CEO narcissism*. To measure this variable, we adopted the most widely used method (Cragun, et al., 2020) developed and validated initially by Chatterjee and Hambrick (2007, 2011). It centers on using multiple unobtrusive indicators of a CEO's narcissistic tendencies that are under the CEO's control and reflect one or more aspects of the narcissistic personality, such as, arrogance, entitlement and self-absorption (Chatterjee and Hambrick, 2007): (i) the prominence of CEO's photograph in a company's annual report on a four-point scale, where 4 = single-person photo taking up half a page or more, 3 = single- person photo on less than half a page, 2 = photo of CEO and fellow executives together, 1 = no CEO photo; (ii) CEO's use of first-person singular pronouns



(I, me, mine, my, myself,) divided by the sum of those pronouns plus all first-person plural pronouns (we, us, our, ours, ourselves) in letters to shareholders; (iii) CEO's cash compensation (salary and bonus) divided by that of the company's second-highest paid executive; (iv) CEO's non-cash compensation (deferred income, stock grants, and stock options) divided by that of the company's second-highest-paid executive. To build the CEO narcissism index, we calculated the simple mean of the standardized values of the indicators for the second and third years of each CEO's tenure; we left out the first year of CEO's tenure because of potential particularities associated with companies' succession context (Chatterjee and Hambrick, 2007). The two-year measurement focus reflects the view that CEO narcissism is a relatively stable personality trait. The higher the index value, the more narcissistic the CEO.

*Firm age and firm size.* The age of firms was captured as the log of years from the founding of a company until the focal observation year. The size of firms was measured as the log of the number of full-time employees. The measure significantly correlates with other measures of firm size in our dataset, namely total revenues and total value of assets.

*Firm reputation.* To operationalize this variable, we used *Fortune* magazine's "Most Admired Companies" survey rankings. This is the most used measure of corporate reputation in management research (Boivie et al., 2016; Love et al., 2017). Fortune assembles the rankings yearly by asking thousands of industry experts, including executives and board directors, to rate the largest companies in their industry on the following eight attributes using a 0 to 10 scale: asset use, employee development, financial stability, innovativeness, investment management, product quality, management quality, and social responsibility. Fortune arrives at a firm's reputation score for a focal year  $t$  by averaging the scores on the eight items and publishes these scores in February or March of year  $t + 1$ . Firms that did not make it to the ranking in year  $t$  were assigned a value of

0 for that year (Boivie et al., 2016). The measure has been established to be reliable and valid (Fombrun and Shanley, 1990). We used year  $t$  scores of corporate reputation for the analysis of ASR in year  $t + 1$ .

### ***Control variables***

We controlled for a host of variables at the CEO, firm, and industry level that research suggests as being possibly relevant. At the CEO level, we controlled for: *CEO age* and *CEO tenure*, which proxy for CEO's experience and credibility (Zhang and Wiersema, 2009) and may explain CEOs' behaviors (Chatterjee and Hambrick, 2011); *CEO gender* (1 = male, 0 = female) because investor reactions to female CEOs can be more negative than for their male CEO peers (Lee and James, 2007); *CEO education* (1 = less than high school, 5 = post graduate degree) as a proxy for CEO credibility and status (Li and Tang, 2010); and CEO power as captured by *CEO duality* (1 = CEO serves as chairperson of board of directors), *CEO as COO/President* (1 = someone other than CEO responsible for managing firm's operations), *CEO as founder* (1 = founder), and *CEO stock ownership* (measured as percentage of shares held by CEO) (Bosboom et al., 2019; Krause et al., 2016; Schulz and Wiersema, 2018).

At the level of the firm, we controlled for variables connected to performance and access to resources because they may potentially affect analysts' evaluations: prior-year performance in terms of *return on assets* (ROA) as well as *total shareholder returns* (calculated as change in share price plus *dividends per share*, divided by start-of-year share price); *R&D intensity*, measured as R&D expenditure divided by sales (Nadkarni and Narayanan, 2007); *firm's leverage*, measured as debt to total assets (Luo et al., 2015); *institutional ownership* of stock, measured as the percentage of firm's shares owned by institutions such as pension funds, mutual funds, and insurance companies (Oehmichen et al., 2021); *Beta* of the firm's stock, measured as the variability of the

firm's stock in comparison to the variability in the overall stock market; *P/E ratio*, captured as the ratio of the company's market price to the company's earnings and *market uncertainty*, measured as the mean standard deviation of monthly stock price in a focal year (Luo et al., 2015). Furthermore, we included an *industry* dummy variable (at the SIC 2-digit level) to control for industries. Moreover, we controlled for *analyst forecast error*, measured as the difference between the analysts' median consensus forecasts before the earnings announcements and the firm's actual earnings per share scaled by stock prices, and for *analyst coverage*, measured as the number of analysts covering a firm (Luo et al., 2015). Lastly, we included time dummies in our analysis to account for differences produced by economic cycles.<sup>1</sup>

## Data Analysis

Consistent with earlier studies of CEO narcissism (Chatterjee and Hambrick, 2007; Petrenko et al., 2016), we used the method of generalized estimating equations (GEE) for data analysis ("xtgee" command in STATA 14.2). GEE is suited for longitudinal data containing non-independent repeated observations of firms over time, as in our study. The observations can be handled through the specification of the correlation structure of error terms (Liang and Zeger, 1986). In this case, the covariance of error terms was specified to be autoregressive of order 1 (AR1) as the outcomes of adjacent periods are likely to be correlated most strongly with one another (Sidhu et al., 2020). As a safeguard against a misspecification of the error structure, we used robust variance estimators (Chatterjee and Hambrick, 2011). Model estimations were based on a Gaussian (normal) distribution and an identity link function. Furthermore, we incorporated a 1-year lag in the analysis by using the prior-period values of the predictor variables. To facilitate

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<sup>1</sup> We included a dummy variable to capture the pre- and post-financial crisis periods (2008 - 2010) to ascertain if our results were, in part, driven by those years. The coefficient was not significant (not reported in Table 2).

interpretation of the magnitude of the effects, we used standardized values. We also examined the variance inflation factors (VIFs) to assess multicollinearity, which were well below the recommended threshold level of 10 (Neter et al., 1996).

Furthermore, as it is conceivable that narcissistic CEOs may be drawn to specific firms and/or there may be contexts that lead CEOs to be more narcissistic, we corrected for possible endogeneity following the example of Chatterjee and Hambrick (2007, 2011). Specifically, we first regressed CEO narcissism (measured in years  $t + 1$  and  $t + 2$ , as explained earlier) on a set of antecedent and contemporaneous variables measured in year  $t - 1$  (the year prior to the CEO's start). The antecedent variables captured the CEO's entry conditions: firm's revenues (i.e., log of total sales), firm's age, ROA, ROA change from  $t$  to  $t + 1$ , and calendar year (Chatterjee and Hambrick, 2007). The contemporaneous variables measured in the year in which a CEO started included: CEO duality, CEO stock ownership, CEO insider/outsider (hired from outside the firm) dummy, CEO founder dummy, CEO age, and SIC 2-digit industry dummies. While the overall model was significant (R square = 0.08;  $p < 0.05$ ), CEO stock ownership was the only variable that predicted CEO narcissism significantly. We used the regression coefficient for CEO stock ownership to generate predicted narcissism scores for each CEO and included this variable as endogeneity control in our models. As a robustness check, we also examined whether the exclusion of the endogeneity correction would affect the findings. Both sets of results were essentially similar but those without the correction imply an estimation with more degrees of freedom. The results we report here are without the correction.

## **Results**

The descriptive statistics and bivariate correlations are presented in Table 1. The table shows that CEO narcissism and a firm's age, size, and reputation have minimal to no correlation with one

another or to the control variables, suggesting that the independent and moderator variables are not impacted by other CEO-level and firm-level variables in the dataset. Table 2 presents GEE results for the effects of CEO narcissism and a firm's age, size, and reputation on analysts' investment recommendations (ASR). Model 1 in Table 2 includes only the control variables; Model 2 adds CEO narcissism, our independent variable, and the moderator variables (age, size, and reputation) to the control variables in the analysis; Model 3 – 5 adds the individual interaction term separately for each of the hypothesized moderation effects; Model 6 represents the full Model with all variables and hypothesized moderation effects.

Model 1 results indicate that *total shareholder returns* ( $\beta = 0.274, p = 0.002$ ) predict higher ASR, as suggested by prior research. We also interestingly observe a negative effect of *dividends per share* on ASR ( $\beta = -0.292, p = 0.000$ ), plausibly because analysts consider higher dividends as indication of lower investment in a firm's future. As expected, *analyst forecast error* has a negative relationship with ASR, i.e., lower error in the analysts' forecasts predicts ASR. Turning to Model 2, for Hypothesis 1 we argued that CEO narcissism will have a negative impact on ASR ( $\beta = -0.200, p = 0.01$ ). Our findings support Hypothesis 1. This finding indicates that firms led by more narcissistic CEOs are likely to have lower analysts' ratings. This negative relationship also holds in Model 6 ( $\beta = -0.185, p = 0.05$ ). The effect size implies that a unit increase in CEO narcissism results in a 0.2 unit decrease in ASR.

>>>> INSERT TABLE 1 AND TABLE 2 ABOUT HERE <<<<<

Model 3 – 6 test the moderation hypotheses. Hypothesis 2a predicted firm age would weaken the relationship between ASR and CEO narcissism. However, Model 3 shows that the

interaction term for CEO narcissism and firm age is not statistically significant ( $\beta = 0.037, p = 0.675$ ), thus we fail to show support for Hypothesis 2a. Hypothesis 2b proposed that firm size would weaken the relationship between ASR and CEO narcissism. Yet, the findings are opposite to Hypothesis 2b. Specifically, Model 3 shows the interaction term of CEO narcissism and firm size is negative and significant ( $\beta = -0.120, p = 0.079$ ). This result remains consistent in Model 6 as well ( $\beta = -0.149, p = 0.031$ ). This means that when led by narcissistic CEOs, larger firms will have lower stock assessments. In terms of effect size, as firm size increases by 10% the negative influence of CEO narcissism results in a decrease of ASR by 1.49 points (on a 5-point scale). Figure 1 provides an illustration of the moderation effect. As CEO narcissism increases, the slope of the relationship between CEO narcissism and ASR is steeper for larger firms. Hypothesis 2c theorized that firm reputation would weaken the negative relationship between ASR and CEO narcissism. Model 5 reveals that the interaction term of CEO narcissism and reputation is positive and significant ( $\beta = 0.083, p = 0.0239$ ) providing support for the hypothesis. This relationship continues to be observed in Model 6 ( $\beta = 0.089, p = 0.016$ ). The effect size indicates that the negative effect of CEO narcissism decreases by 8.9% as firm reputation increases by 1 point. Figure 2 shows that the slope of CEO narcissism – ASR is steeper for more reputable firms.

**>>>> INSERT FIGURE 1 AND FIGURE 2 ABOUT HERE <<<<<**

## **DISCUSSION**

There is much academic and public interest in understanding the effect of CEO narcissism on the conduct of firms, competitive dynamics, and performance outcomes. In this context, research has also started to examine how CEO narcissism influences the actions of actors external to a company,

such as competitors (Gupta and Misangyi, 2018) and investors (Aktas et al., 2016). One crucial group of external actors for companies is securities analysts, who provide investors performance forecasts and recommendations regarding the attractiveness of investing in company stock. Indeed, securities analysts' stock recommendations (ASR) can affect a company's market performance by influencing the price people are willing to pay for the company's shares (Bascle and Jung, 2023). Against this backdrop, our study sought to close a significant gap in the literature by theorizing and testing the relationship between CEO narcissism and ASR, and exploring whether this relationship is affected by corporate inertia. The analysis of data from S&P 100 firms indicates that CEO narcissism has a negative effect on ASR, which is less when the firm has a more established reputation but more when the firm is larger.

From a corporate strategy and governance perspective, both too little risk-taking by CEOs and too much of it are not optimal as they can harm a firm's profitability and economic value (Shi and Hoskisson, 2021; Wiseman and Gomez-Mejia, 1998). Because narcissistic CEOs are inclined to take excessive risk, we posited that the mental categorization of narcissistic CEOs as less effectual leaders will result in securities analysts issuing weaker stock recommendations. We found empirical confirmation for this, which was robust to different estimation approaches and model specifications. This finding establishes that, overall, securities analysts do not consider CEO narcissism to be of value to a company. As the average assessment of the analysts covering a company affects its market performance (Brauer and Wiersema, 2018), our finding adds weight to earlier research showing that CEO narcissism is generally damaging to a company (Ham et al., 2018; O'Reilly et al., 2018). The finding also provides evidence that external parties whose decisions impact the competitive actions and reactions in an industry exhibit pessimism about the focal firm CEO's narcissism (cf. Gupta and Misangyi, 2018). If, as suggested by our study,

securities analysts' performance expectations are lower for a firm with a narcissistic CEO, this should put the firm under even greater earnings pressure to meet analyst projections to avoid a drop in its stock market valuation (cf. Bascle and Jung, 2023).

We also posited that securities analysts will announce less pessimistic stock recommendations (ASR) when firms that appear to be more prone to corporate inertia are led by a narcissistic CEO. In this regard, we indeed found that ASR were more positive when narcissistic-CEO firms had a stronger reputation. This corroborates the idea that the inertia signaled by an established reputation and identity guides securities analysts to be hopeful that a narcissistic CEO's brash leadership style and inclination towards risk-taking will serve to improve the firm's performance by stimulating change and innovation. Contrary to our expectation, we found that ASR were more negative when narcissistic-CEO led firms were of a larger size. This finding reveals that securities analysts are in fact concerned more about CEO narcissism's ill effect when a firm is bigger. It is plausible that securities analysts believe that the structural properties of larger firms, viz. greater reliance on bureaucratic rules and procedures for coordination and control (Aiken and Hage, 1971; Thompson, 1967), will clash with narcissistic leadership to foster greater resistance to change (cf. Hannan and Freeman, 1984). We noted further that the age of firms did not appear to matter for the relationship between CEO narcissism and ASR. Although inertia-inducing procedures and routines increase with age (Le Mens et al., 2015; Stinchcombe, 1965), our study suggests that securities analysts do not attach significance to the age of a firm and base their performance assessments only on the expected interplay of CEO narcissism and the firm's reputation and size.

The study advances our understanding of the impact of CEO narcissism on actors and parties external to a company. Outside audiences matter because they can affect the legitimacy and wellbeing of a company by either providing or withholding their support (Lounsbury and Glynn,



2001). Securities analysts matter particularly because they shape investors' expectations, thus impacting a company's market value (Bascle and Jung, 2023; Zuckerman, 1999). By studying and showing that securities analysts' expectations about a firm's performance are influenced negatively by CEO narcissism, this research brings to light the adverse effect of CEO narcissism on the legitimacy of a company in financial markets. In this respect, the research extends and enriches the CEO narcissism literature, which has so far focused primarily on intra-firm and firm level consequences of CEO narcissism (see Gupta and Misangyi, 2018 as the one exception) (Rijsenbilt and Commandeur, 2013; Zhu and Chen, 2015). Furthermore, in contrast to past research which shows that CEO narcissism and internal corporate governance jointly influence risk-taking (Buyl et al., 2019), the current research provides new insight into how CEO narcissism affects external corporate governance in the form of ASR. In doing so, it unveils the importance of analyzing both internal and external governance mechanisms when studying CEO risk-taking, particularly in the context of narcissistic CEOs, to develop a fuller understanding of the implications for a firm's strategy and performance.

The study also contributes to a social-constructionist stream of work that emphasizes a context specific assessment of the personalities of those in the C-suite (Chatterjee and Pollock, 2017; Graffin et al., 2008). In this regard, the study indicates that securities analysts appear to form their expectations about the influence of CEO narcissism taking into account the context of firm's reputation and size, factors that carry information about potential corporate inertia. This finding speaks to the call to explore not *if* but *under what conditions* CEO narcissism is advantageous or disadvantageous (Chatterjee and Pollock, 2017). To the extent that narcissistic conduct and its effects are not independent of the surrounding circumstances, the study points to the possibility that the mixed results of earlier research may reflect a lack of attention to contextual particularities

(cf. Reina et al., 2014). Furthermore, the study is the first to suggest that securities analysts' observation of the narcissistic personality trait in CEOs can have implications for the market perceptions of firm risk and shareholder returns. This is an important addition to the literature as "the market may view even similar firms or similar strategic actions differently depending on its perceptions of the CEO, and these perceptions are directly associated with a firm's ability to create value (Harrison et al., 2020: 1167)". By showing specifically that CEO narcissism informs market actors' perceptions about the future value of a firm, the study sets the stage for the examination of how this personality trait compares with others in affecting value creation in financial markets.

Our research also has practical contributions and implications. It reinforces the caveat about CEO narcissism being a personality trait that has downsides to it. Its negative influence on ASR revealed by our study underlines the importance of being mindful when boards select, monitor, and reward the chief executive (cf. Quigley et al., 2020). To the extent narcissistic CEOs lack self-awareness and are unable to regulate their narcissistic behaviors, the onus is on boards to be attentive to CEO narcissism and exercise the necessary oversight to shield the firm from its harmful consequences. Inasmuch as lower ASR reflect the categorization of narcissistic CEOs as inept leaders, this study complements other emerging prescriptions regarding the managing of external expectations (Bascle and Jung, 2023) by pointing to the importance of reassuring analysts about the narcissism of a CEO. In this regard, the board can weigh impression-management activities that present an image of the CEO that builds confidence. Conference calls with analysts offer an especially handy opportunity (e.g., Roelofson, 2010) to guide analysts' expectations by addressing their concerns regarding CEO's personality and behaviors. The board could, for example, reduce CEO's board responsibilities and CEO's engagement in public relations activities to alleviate the negative external impact of CEO narcissism (see also, Cragun et al., 2020).

## **Research Limitations and Opportunities**

As with any other academic work, our study's limitations offer opportunities for further research. For example, our sample was drawn from the S&P 100 population. As such, future studies can examine whether our findings also hold for samples drawn from other populations, including family firms and small and medium-sized enterprises. Another notable aspect of our study is the use of indirect indicators to measure CEO narcissism. Although this approach is well established in the literature (Chatterjee and Hambrick, 2007; Steinberg et al., 2022) and it allowed the variable's operationalization for a longitudinal panel study, it is desirable to substantiate our results using other measurement approaches. As a possibility, future research could consider validating and extending our work using the Narcissistic Personality Inventory (Raskin and Terry, 1988) in a cross-sectional research design centering on obtaining data directly from CEOs. On a different note, our focus in this study was on examining the effect of CEO narcissism on the average stock recommendation of different analysts covering a company. As analysts are heterogeneous in terms of experience and reputation (Stickel, 1992), it would also be useful to investigate whether and how CEO narcissism's impact differs across analysts. Inasmuch as analysts with higher reputation are more influential (Bonner et al., 2007), it would be of value to know how their recommendations are affected by CEO narcissism. Furthermore, for a more comprehensive understanding, scholars could also study whether there are other mechanisms besides the ILT mechanism we drew upon (e.g., Gupta and Misangyi, 2018) that connect CEO narcissism to ASR, and examine their relevance and consequences.

Additionally, this study opens other important and interesting avenues of research. Because CEO narcissism shapes the performance assessments of securities analysts, it would be useful to understand what steps boards and companies take to channel and manage analyst expectations (cf.

Hayward and Fitza, 2017). On a related note, because companies are very mindful of performance feedback based on analyst expectations (Bascle and Jung, 2023), research that examines the intertemporal relationship between CEO narcissism and ASR could provide valuable insights. Furthermore, it would facilitate the building of more refined theory to explore whether securities analysts distinguish between humble and non-humble narcissistic CEOs (e.g., Zhang et al., 2017) and with what consequences for ASR. Researchers can moreover go beyond our focus on securities analysts to study how CEO narcissism affects the conduct of other corporate governance actors and how boards deal with it. Researchers may also wish to study the combined effects of CEO narcissism and other variables such as conservatism-liberalism (e.g., Gupta et al., 2019). Another exciting opportunity to probe is whether CEO narcissism is a factor in the growing inclination of CEOs to engage in sociopolitical activism (Appels, 2023), and the implications of this for the performance and governance of firms. Overall, one important message to come from our study is that opportunities abound for scholars wishing to expand our understanding of CEO narcissism's implications for companies. In the best tradition of science as a cumulative knowledge-building endeavor, we hope that our study will inspire many others on the topic.

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**TABLE 1** Descriptive statistics and bivariate correlations

Variable	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10
1. ASR	3.763	0.294	2.818	4.440	1.000									
2. CEO narcissism	0.058	0.312	-0.796	0.760	-0.128	1.000								
3. Firm reputation	5.369	3.049	0	8.54	0.141	0.168	1.000							
4. Firm size	4.442	1.083	1.364	7.696	0.113	0.126	0.266	1.000						
5. Firm age	4.148	0.803	1.792	5.421	-0.139	0.251	0.032	0.118	1.000					
6. CEO age	58.145	4.312	46	69	0.027	0.029	0.157	0.056	0.028	1.000				
7. CEO tenure	4.953	2.666	2	17	0.054	0.049	0.170	0.058	-0.051	0.225	1.000			
8. CEO gender	0.944	0.230	0	1	-0.001	-0.085	-0.063	-0.066	-0.025	0.151	0.111	1.000		
9. CEO education	3.124	1.078	1	5	0.005	0.182	-0.121	-0.241	0.060	0.051	-0.166	-0.032	1.000	
10. CEO duality	0.767	0.423	0	1	-0.035	0.128	0.161	-0.120	0.043	-0.056	0.092	-0.134	0.135	1.000
11. COO/President position	0.236	0.425	0	1	0.033	-0.168	0.015	0.011	-0.093	0.149	0.065	-0.016	-0.135	-0.039
12. Founder dummy	0.035	0.185	0	1	0.067	0.072	0.137	0.098	-0.182	0.060	0.567	0.047	-0.200	0.106
13. CEO stock ownership	0.426	2.309	0	20.731	0.068	-0.136	0.110	0.002	-0.198	-0.148	0.565	0.041	-0.168	0.085
14. Return on assets	0.072	0.056	-0.070	0.327	0.181	-0.098	0.150	-0.010	-0.003	0.137	-0.032	-0.034	-0.152	-0.066
15. Total shareholder returns	0.096	0.264	-0.655	1.606	0.199	-0.067	-0.026	-0.111	-0.089	-0.022	-0.003	-0.094	0.017	-0.094
16. Dividends per share	1.173	1.571	0.000	27.030	-0.107	-0.017	0.138	-0.006	0.073	0.129	-0.099	-0.006	0.018	0.045
17. R & D intensity	0.031	0.053	0.000	0.322	0.048	0.022	-0.103	-0.102	0.086	0.070	0.054	-0.070	0.173	0.022
18. Firm leverage	0.198	0.107	0.015	0.583	-0.066	0.017	-0.107	-0.151	0.097	0.079	-0.101	-0.120	0.125	-0.121
19. Institutional ownership	0.665	0.121	0.289	1.246	0.178	0.058	-0.060	-0.178	-0.025	-0.056	0.083	0.036	0.030	0.063
20. Beta	1.002	0.423	0.232	2.898	-0.223	-0.039	-0.120	-0.126	-0.092	-0.079	-0.039	0.033	-0.004	0.012
21. P/E Ratio	7.420	183.1	-2920	668	-0.030	0.084	0.020	0.084	0.072	0.063	-0.123	0.002	0.036	0.028
22. Market uncertainty	4.797	4.468	0.395	44.63	-0.002	-0.095	0.043	-0.050	-0.177	-0.019	0.235	0.065	-0.125	0.105
23. Analysts' forecast error	0.004	0.045	-0.316	0.613	-0.183	-0.025	-0.090	-0.039	-0.023	0.013	-0.089	0.013	-0.072	0.030
24. Analyst coverage	2.971	0.339	1.540	3.848	0.004	0.011	0.229	0.340	-0.016	0.125	0.243	0.154	-0.122	0.031

**TABLE 1 (continue)**

Variable	11	12	13	14	15	16	17	18	19	20	21	22	23	24
11. COO/President position	1.000													
12. Founder dummy	-0.107	1.000												
13. CEO stock ownership	-0.087	0.824	1.000											
14. Return on assets	-0.026	-0.081	-0.086	1.000										
15. Stock returns	-0.097	0.042	0.093	0.089	1.000									
16. Dividends per share	0.003	-0.108	-0.103	0.032	0.042	1.000								
17. R & D intensity	-0.163	-0.042	0.013	0.215	-0.059	-0.081	1.000							
18. Firm leverage	0.152	-0.239	-0.208	-0.116	0.143	0.071	-0.160	1.000						
19. Institutional ownership	0.080	0.073	0.037	-0.083	-0.008	-0.076	-0.025	-0.022	1.000					
20. Beta	0.074	0.058	0.037	-0.415	0.033	-0.111	-0.166	-0.107	0.172	1.000				
21. P/E ratio	-0.013	-0.162	-0.277	0.054	-0.024	0.027	-0.005	0.047	-0.012	0.001	1.000			
22. Market uncertainty	-0.045	0.336	0.435	0.001	-0.105	0.093	0.008	-0.151	0.271	0.202	-0.099	1.000		
23. Analysts' forecast error	0.030	-0.008	-0.009	-0.087	0.025	0.002	-0.061	-0.089	-0.097	0.215	0.008	0.017	1.000	
24. Analyst coverage	0.042	0.152	0.211	0.022	-0.101	-0.051	0.133	-0.361	-0.157	-0.030	-0.079	0.017	-0.063	1.000

$N = 327$

All correlations above  $|0.107|$  are significant at 0.05 level or below (two-tailed). All correlations above  $|0.1406|$  are significant at 0.01 level or below (two-tailed).

**TABLE 2.** GEE results for Analysts Stock Recommendations (ASR)

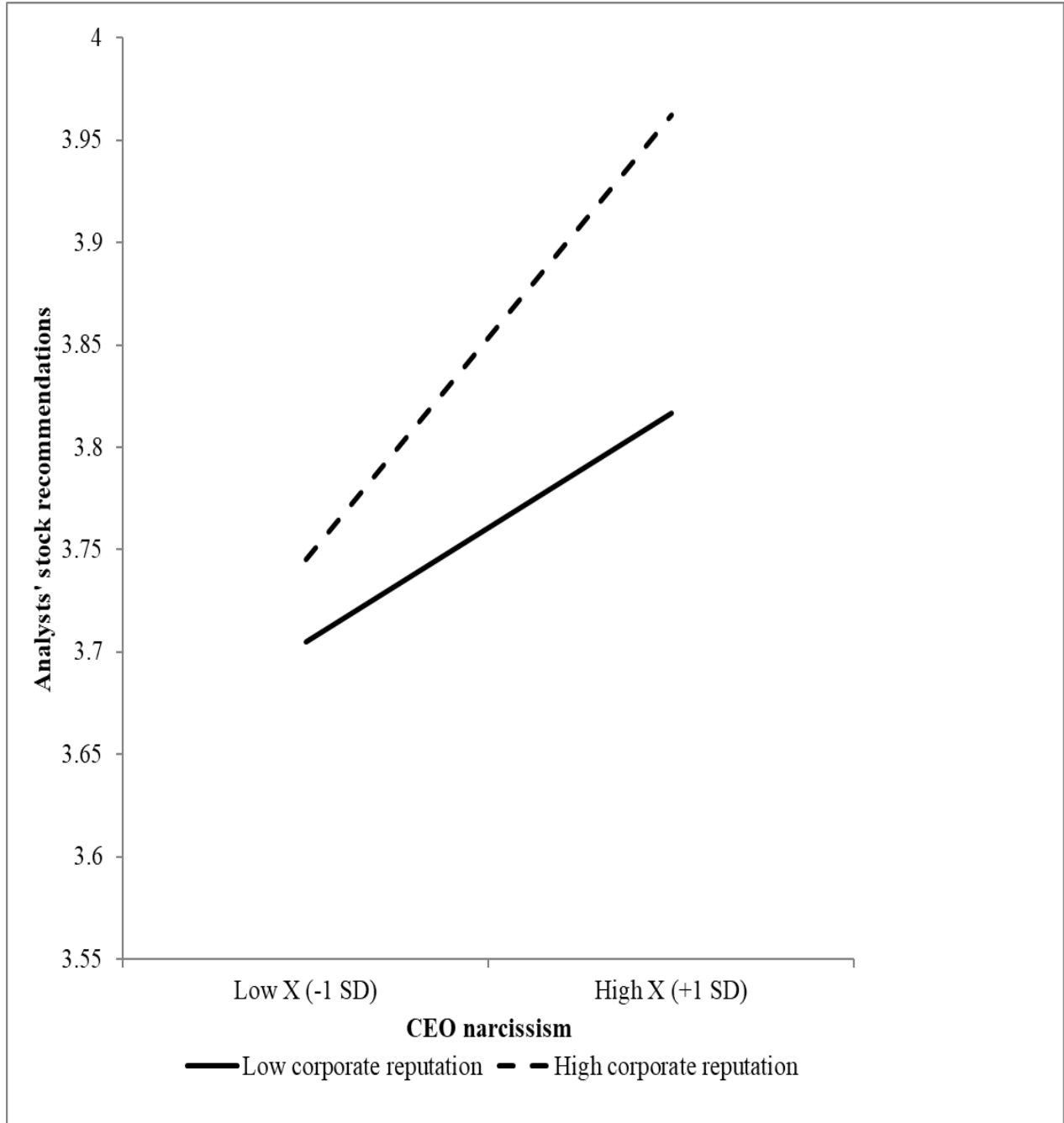
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	0.662 (0.345)	0.963 (0.181)	1.063 (0.141)	0.857 (0.236)	0.956 (0.179)	0.933 (0.192)
CEO age	-0.020 (0.831)	-0.035 (0.692)	-0.037 (0.685)	-0.039 (0.655)	-0.035 (0.687)	-0.043 (0.638)
CEO tenure	-0.071 (0.491)	-0.096 (0.320)	-0.095 (0.330)	-0.104 (0.279)	-0.096 (0.322)	-0.103 (0.281)
CEO gender	-0.007 (0.988)	0.149 (0.730)	0.150 (0.719)	0.197 (0.655)	0.148 (0.730)	0.208 (0.625)
CEO education	0.071 (0.505)	0.186 <sup>+</sup> (0.061)	0.195 <sup>+</sup> (0.051)	0.192 <sup>+</sup> (0.055)	0.183 <sup>+</sup> (0.066)	0.201 <sup>*</sup> (0.048)
CEO duality	-0.113 (0.432)	-0.027 (0.833)	0.010 (0.941)	-0.003 (0.985)	-0.030 (0.820)	0.040 (0.769)
COO or President	-0.151 (0.250)	-0.171 (0.207)	-0.181 (0.192)	-0.162 (0.226)	-0.165 (0.236)	-0.165 (0.241)
Founder dummy	-1.128 (0.244)	-1.812 <sup>+</sup> (0.062)	-1.756 <sup>+</sup> (0.075)	-1.707 <sup>+</sup> (0.088)	-1.939 <sup>+</sup> (0.051)	-1.744 <sup>+</sup> (0.088)
CEO stock ownership	0.098 (0.157)	0.095 (0.135)	0.099 (0.121)	0.111 <sup>+</sup> (0.084)	0.094 (0.139)	0.118 <sup>+</sup> (0.073)
Return on assets	0.138 (0.149)	0.131 (0.164)	0.117 (0.215)	0.137 (0.148)	0.130 (0.168)	0.120 (0.197)
Total shareholder returns	0.274 <sup>**</sup> (0.002)	0.261 <sup>**</sup> (0.002)	0.278 <sup>***</sup> (0.001)	0.264 <sup>**</sup> (0.002)	0.262 <sup>**</sup> (0.002)	0.282 <sup>***</sup> (0.001)
Dividend per share	-0.292 <sup>***</sup> (0.000)	-0.301 <sup>***</sup> (0.000)	-0.311 <sup>***</sup> (0.000)	-0.297 <sup>***</sup> (0.000)	-0.301 <sup>***</sup> (0.000)	-0.307 <sup>***</sup> (0.000)
R&D intensity	0.071 (0.680)	0.082 (0.588)	0.065 (0.661)	0.088 (0.557)	0.084 (0.577)	0.073 (0.614)
Firm leverage	-0.154 <sup>+</sup> (0.057)	-0.113 (0.166)	-0.112 (0.166)	-0.115 (0.154)	-0.114 (0.164)	-0.116 (0.147)
Institutional stock ownership	0.157 <sup>+</sup> (0.085)	0.170 <sup>*</sup> (0.049)	0.158 <sup>+</sup> (0.074)	0.182 <sup>*</sup> (0.043)	0.165 <sup>+</sup> (0.061)	0.168 <sup>+</sup> (0.071)
Beta	-0.090 (0.242)	-0.091 (0.247)	-0.090 (0.254)	-0.091 (0.245)	-0.090 (0.251)	-0.091 (0.256)
P/E Ratio	-0.009 (0.394)	-0.016 (0.287)	-0.018 (0.298)	-0.016 (0.283)	-0.017 (0.286)	-0.018 (0.293)
Market uncertainty	0.033 (0.588)	0.022 (0.707)	0.026 (0.650)	0.021 (0.722)	0.022 (0.699)	0.026 (0.656)
Analyst forecast error	-0.117 <sup>***</sup> (0.000)	-0.105 <sup>***</sup> (0.000)	-0.104 <sup>***</sup> (0.000)	-0.103 <sup>***</sup> (0.000)	-0.105 <sup>***</sup> (0.000)	-0.101 <sup>***</sup> (0.000)
Analyst coverage	-0.121 (0.352)	-0.169 (0.174)	-0.160 (0.194)	-0.164 (0.183)	-0.172 (0.169)	-0.156 (0.200)

**TABLE 2 (Continued)**

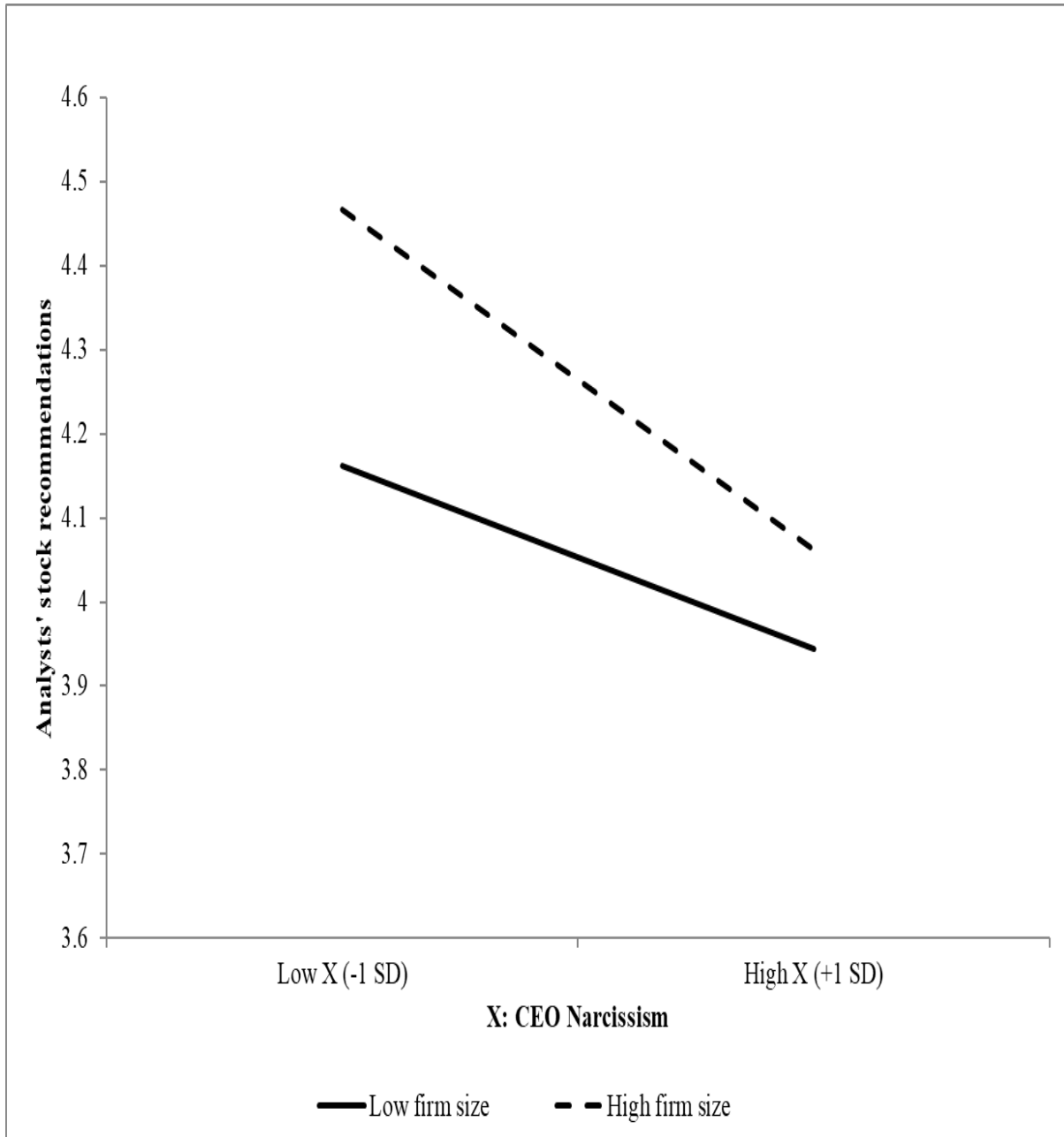
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SIC (2 digits)	included	included	included	included	included	included
Year dummies	included	included	included	included	included	included
CEO narcissism		-0.200**	-0.191*	-0.194*	-0.201**	-0.185*
		(0.010)	(0.020)	(0.015)	(0.009)	(0.026)
Firm age		-0.077	-0.071	-0.056	-0.074	-0.042
		(0.259)	(0.300)	(0.413)	(0.284)	(0.547)
Firm size		0.386***	0.375***	0.368***	0.385***	0.352***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Firm reputation		0.129*	0.153**	0.133*	0.130*	0.160**
		(0.018)	(0.003)	(0.015)	(0.017)	(0.002)
Firm age * CEO narcissism			0.037			0.034
			(0.675)			(0.709)
Firm size * CEO narcissism				-0.120 <sup>+</sup>		-0.149*
				(0.079)		(0.031)
Firm reputation * CEO narcissism					0.083*	0.089*
					(0.023)	(0.016)
Observations	327	327	327	327	327	327
Number of CEO	75	75	75	75	75	75

Note: *p*-values are in parentheses. Year and industry (SIC 2 digits) dummies were included but not shown. <sup>+</sup>*p*<0.1 ; \**p*<0.05; \*\**p*<0.01; \*\*\**p*<0.001

**FIGURE 1** Effect of CEO narcissism and firm reputation on ASR



**FIGURE 2** Effect of CEO narcissism and firm size on ASR





## **Author Biographies**

**Karynne L. Turner** is an Assistant Professor of Strategic Management and Leadership in the Jones College of Business at Middle Tennessee State University, United States. Her research focuses on the interplay between leadership characteristics and various stakeholders of the firm, and the relationship between organizational practices, knowledge management, and firm capabilities. She is particularly interested in the connection between management perceptions, assessments of the firm, and employee innovative behaviors; and how organizational structure as the conduit for the flow of diverse knowledge types, ultimately influences the development of the firm's distinct capabilities such as quality, innovation, and efficiency. Her researched has been published in such journals as the *Academy of Management Review*, *European Management Journal*, and the *Strategic Management Journal*. She is a practicing consultant, who is the principal of a boutique Strategy Consulting firm. She holds a PhD in Strategic Management from the University of Pittsburgh.

**Feray Adigüzel** is a senior lecturer in Marketing at Nottingham Business School, Nottingham Trent University, United Kingdom. Before joining to Nottingham Business School, she worked at VU University in Amsterdam, Erasmus University in Rotterdam, and LUISS in Rome. Feray's research interest covers marketing research methodology, socially responsible marketing, cross cultural marketing, and strategic marketing management. Her main research interest is the application of statistical and econometric methods to further the understanding of consumer and firm behavior, and to improve marketing and management decision making. She has published in journals such as *Journal of Marketing Research*, *International Journal of Research in Marketing (IJRM)*, *Journal of Business Research*, *Journal of Economic Psychology* etc. The paper that she collaborated with Michalek, J., Ebbes, P., Feinberg, R.E. & Papalambros, P. was received 2011 IJRM Best paper award.

**Jatinder S. Sidhu** is Professor of Strategic Management and Organization at the Leeds University Business School, University of Leeds, United Kingdom. Much of his current research centers on the influence CEOs, top management teams, and boards of directors have on the financial performance of firms and firms' commitment to sustainability and other social goals. He is particularly drawn to studying the impact of corporate leaders' gender, personalities and values on strategy and innovation in organizations. At a more micro level, his research examines how identity and identification shape organizational decisions, routines, and outcomes. His research has appeared in a range of journals including, *Industrial and Corporate Change*, *Journal of Management*, *Journal of Management Studies*, *Journal of Product Innovation Management*, *Long Range Planning*, *Organization Science*, and *Organization Studies*. He serves on the Scientific Council of the European Academy of Management (EURAM) and as Editor for *European Management Review*, EURAM's peer-reviewed journal.