

When More Is Not Enough: Executive Greed and Its Influence on Shareholder Wealth

Katalin Takacs Haynes

University of Delaware

Joanna Tochman Campbell

University of Arkansas

Michael A. Hitt

Texas A&M University

The concept of greed is one of the oldest social constructs; however, greed as a managerial attribute that affects firm outcomes has yet to attract scholarly attention in management. In this study, we examine the relationship of CEO greed to shareholder wealth. After anchoring greed to familiar constructs in organizational literature, we test our hypotheses on a sample of over 300 publicly traded firms from multiple industries. As predicted, greed has a negative relationship with shareholder return, but this relationship is moderated by the presence of a powerful, independent board, managerial discretion, and CEO tenure. The contributions of this study, which include refining our understanding of self-interest and opportunism, developing the greed construct, and illustrating its impact on shareholder wealth, are intended to open a new line of inquiry in the management literature.

Keywords: *greed; CEO; firm performance; board of directors; managerial discretion*

All for ourselves, and nothing for other people, seems, in every age of the world, to have been the vile maxim of the masters of mankind.

—Adam Smith (1776/1937: 448)

An infectious greed seemed to grip much of our business community.

—Alan Greenspan (2002)

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Corresponding author: Katalin Takacs Haynes, University of Delaware, Alfred Lerner College of Business and Economics, 214 Alfred Lerner Hall, Newark, DE 19716, USA.

E-mail: ktakacsh@udel.edu

The concept of greed, defined as the pursuit of excessive or extraordinary material wealth, has existed throughout human history; it has been the subject of legal, theological, and philosophical treatises. A classic social construct of human development (Balot, 2001; Robertson, 2001), greed was considered a basic element of human nature in Greek antiquity (e.g., Plato, Aristotle, Thucydides) and a sin by early theologians and philosophers (e.g., St. Thomas Aquinas). More recently greed has captured some scholarly attention in management (Wang, Malhotra, & Murnighan, 2011; Wang & Murnighan, 2011), behavioral finance (Malmendier & Tate, 2005), law (Olazabal & Abril, 2008), political economy (Collier & Hoeffler, 1998), and cultural anthropology (Robertson, 2001). It also appears often in the business press: over 18,000 references to greed in nonscholarly articles in the ABI/Inform database, including terms such as “greedy managers,” “corporate greed,” and “greedy behavior,” illustrate that among analysts, journalists, and members of the general public the concept is well known and accepted. Yet, the term largely remains undefined in academic writings. While greed has been linked in a perfunctory manner to hubris and power (Delbecq, 1999; Hayward & Hambrick, 1997), wealth and selfishness (Delbecq, 1999), and corporate governance practices (Conyon, Judge, & Useem, 2011)—and even related to the excesses that led to the recent economic crisis (Mahoney, McGahan, & Pitelis, 2009)—the specifics of the concept of greed have generated but minimal interest in scholarly management research.

A possible reason for the paucity of studies on greed in management is the unexplored, blurred boundary between greed and universal, wealth-maximizing self-interest, a fundamental assumption about rational managers (Wang & Murnighan, 2011). As Wang and Murnighan (2011: 305) speculate, due to the lack of definitional clarity surrounding greed and challenges inherent in developing empirical measures, many researchers may have abandoned their interest in studying greed, as “studying other issues may be easier.” However, Wang and Murnighan also suggest that “extensive research on greed could be particularly fruitful” (2011: 307) and “the practical implications of understanding greed may be critical, particularly in the aftermath of the recent financial crisis” (2011: 306). Therefore, we take up the challenge to study greed, as an important step to fill this conspicuous gap in the literature, to serve as a base for more research necessary to refine and extend our theory and empirics.

The goal of this study is to explore whether and how greed differs from self-interest, thereby opening a new line of inquiry focused on the concept of managerial greed. Our main theoretical contribution is presenting greed as applicable across different extant theories in both the “macro” and “micro” organizational domains, such as agency theory, upper echelons theory, and organizational justice. We develop the greed construct theoretically and empirically, differentiating it from other constructs such as self-interest, envy, narcissism, and hubris.

We explore the direct effects of greed on shareholder wealth in our empirical analysis of over 300 publicly traded firms. Additional theoretical precision allows us to specify the moderating effects of industry discretion, board power, and CEO tenure. Our study contributes to corporate governance research by providing theoretical refinement of and empirical evidence on one of the fundamental tenets of agency theory, managerial opportunism, of which, we posit, managerial greed is a manifestation. The greed construct holds relevance for a number of research topics, such as leadership, culture, job satisfaction, international management, and many others, and has the potential to contribute to the long-standing public and academic debate on the size and nature of executive compensation.

The Nomological Net of the Greed Construct

The concept of greed has been the subject of philosophers', economists', and policy makers' writings for millennia, highlighting its significance to the human experience. As such, the discourse on greed, including its social acceptability, and the schools of thought regarding its consequences have played a significant role in the shaping of laws and economic policies for many centuries. Early conceptualizations of greed date back to 2300 BCE, the time of the Fifth Dynasty in Egypt (Loprieno, 1996). Despite the enduring interest in this concept across time and geographic area, defining greed has proven elusive. Dictionary definitions of greed include (a) excessive or rapacious desire, particularly for wealth or possessions (Collins English Dictionary, 2010), (b) excessive desire to acquire or possess more than one needs or deserves, especially with respect to material wealth (American Heritage Dictionary, 2000), and (c) intense and selfish desire for something, predominantly money or power (Oxford Dictionary, 2010). Herein, we focus on materialistic desires or materialistic greed, as it holds the greatest relevance for organizational settings (Wang & Murnighan, 2011). We build on the common threads in the definitions above and propose an integrated and generalized conceptualization of greed as the desire for and pursuit of extraordinary material wealth.¹

We arrived at this definition after engaging in two rounds of external validation and input. Specifically, we conducted a round of interviews with 12 senior business executives and analysts from a variety of industries, and surveyed a panel of eight subject matter experts. The semistructured interview questions are provided in Appendix A, the results of the survey are summarized in Appendix B, and both procedures and samples (including the specific composition of our expert panel) are described further in the methodology section.

The definition of greed as the desire for and pursuit of extraordinary material wealth was informed by our expert panel and the unanimous opinion of the interview subjects, who stated that (possessing) wealth did not equate to nor was it necessarily the result of greed (for example, a person may inherit wealth from her/his family). Indeed, according to our interviewees, wealth does not even need to be realized for greed to exist. The desire for and active pursuit of extraordinary wealth are, however, mechanisms associated with greed. In other words, our panel of experts and interviewees perceived greed as an underlying latent construct that begins with desire, and might be followed by the disposition to act on the desire (Smith, 1987, 1994) through the pursuit of extraordinary or excessive wealth.

Pursuit implies the individual's active participation in the compensation process, corresponding to the complex negotiations that result in managerial compensation and benefit packages. Thus, while employees at all organizational levels may have the desire for extraordinary wealth, the context provided to nonmanagerial employees might prohibit them from pursuing extraordinary wealth. The position of top-level executives on the other hand allows them to actively pursue and even realize extraordinary wealth, should they choose to do so. To wit, pursuit, stemming from desire, implies the individual's inclination to actively participate in the compensation process, corresponding to the true-to-life complex negotiations that result in managerial compensation and benefit packages. Some scholars suggest that the CEO is more influential in setting his or her own pay than the board of directors, or major shareholders (Tosi & Gomez-Mejia, 1989). Compensation, however, viewed as a function of relative power and influence contrasts with the idea that pay is a fair exchange for the CEO's human and social capital, institutions of governance, or the market for managerial talent (Dalton, Hitt, Certo, & Dalton, 2007), and that it is aimed at maximizing shareholder wealth.

Yet, scholars have documented many cases of what appears to be the pursuit of extraordinary personal wealth with little regard for shareholder concerns. Examples include backdating options and attributing the resulting gains to sheer luck (Bebchuk, Grinstein, & Peyer, 2010) or the adoption of golden parachutes, in spite of golden parachutes' documented links to lower firm performance (Bebchuk, Cohen, & Wang, 2010). These examples suggest that greed may be linked to another important construct, namely, self-interest. We discuss the nature of this relationship in the next section.

Greed and Self-Interest

Although the works of Bebchuk and colleagues (Bebchuk, Cohen, et al., 2010; Bebchuk, Grinstein, et al., 2010) and Wang and Murnighan (2011) indicate that greed indeed might exist and may be distinct in some way from rational self-interest, the boundaries of the construct remain ill defined. Numerous societies throughout history have identified greed, yet the point at which greed begins and self-interest ends is based on the societal value system in which it exists: "Greed is rarely something an agent predicates of himself. Rather, members of a moral community use the concept to criticize others" (Balot, 2001: 1). Greed is embedded in and acted on by individuals and sanctioned by a larger group (e.g., society) in which the individual is embedded. The outcome of the pursuit of excessive wealth also exists at the individual and group, or societal, level.

The notion of self-interested economic actors as the engine of growth originates in Adam Smith's *Wealth of Nations*, who wrote, "It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest" (Smith, 1776/1937: 34). Thus, in rational choice economic theories based on Smith's writings, managers' uniformly self-interested and wealth-maximizing behavior is not only justified (Hirschman, 1977), but also identified as the "driving force behind human well-being" (Engler, 1995; Wang & Murnighan, 2011: 286) and the foundation of economic behavior (Hirschman, 1977). The apparent contrast between the historical conceptualization of greed and the scholarly description of rational self-interest motivates this research. The difficulty in clearly differentiating greed from self-interest is that while intuitively individuals or groups might have norms regarding what is excessive, on a case-by-case basis, it is difficult to determine whether a specific compensation package is the outcome of market forces, human capital, institutional pressures, an individual's pursuit of excessive wealth, or a combination thereof. Perhaps due to the difficulty in defining greed, determining the point at which rational self-interest ends and the excessive pursuit of material wealth begins, and what is deserved or undeserved in the eyes of various individuals and groups, relating to the treatment of greed by academics and practitioners has been incongruent in recent decades. While often invoking greed, the popular business press does not venture to circumscribe or define it. In the academic literature, including management scholarship, the boundary has largely dissolved between greed and rational self-interest, a universal trait of even boundedly rational managers.

As Posner (2003: 1099) articulates, "Greed has a paradoxical relationship with economics: it is at once a paradigm of self-interested behavior at the heart of economics and a contradiction of it." Greed and self-interest are distinct concepts; while often confused in popular or even academic writings, greed—in contrast to self-interest—does not have a place in nor is it justified by economic theory. People, who accumulate wealth through their hard work,

generate a surplus, and “do not take more than their fair share,” are rarely considered greedy; the accusation of greed “carries with it a moral charge” (Posner, 2003: 1100). “Self-interest in law and economics is . . . not empty, and yet it is a far cry from greed” (Posner, 2003: 1101). Self-interest is general, while greed is narrow; self-interest is constant, while greed varies over time; self-interest includes the calculus of the present versus future, while greed is myopic; and importantly, self-interest refers to moderate desires, while greed refers to excess and lack of moderation (Posner, 2003). In other words, self-interest implies some degree of moderation, and when taken to the extreme, becomes something else entirely (i.e., greed).

The results of our semistructured interviews also conclusively indicate that self-interest is distinct from greed by degree. Our interview subjects unanimously stated in separate, individual interviews that self-interest (including gains realized through self-interest) is distinct from greed, and they almost unanimously relayed to us that greed is either the equivalent or a manifestation of hyper-self-interest, or self-interest taken to excess. With respect to the distinction between greed and self-interest, one interviewee stated, “While self-interest can lead to greed, self-interest does not necessarily signify greed,” adding, “self-interest underlies the capitalistic system. Success measured in a variety of ways is a way we tend to keep score. But, carried to the extreme, it could evidence greed.” Another executive relayed the following:

Successful self-interest is not the same as greed. In fact, self-interest is a critical element of entrepreneurship and the capitalistic system. One can be successful in satisfying self-interest without being greedy. . . . In fact, entrepreneurs who satisfy their self-interest by being successful also benefit many others. . . . If people are self-interested to the exclusion of others, not making a contribution to others or not desiring to do so, this might represent greed. In other words, we might call this exclusive self-interest.

A third business executive stated, “Self-interest and being self-centered are . . . not greed itself.” When further probed about the specifics of the distinction between self-interest and greed, subjects of the semistructured interviews provided responses that corresponded to those of the independent expert panel in identifying hyper-self-interest with greed. For example, our interviewees articulated the following:

I do think that greed is the same as hyper-self-interest. I think it’s good to have self-interest . . . , but it can’t be all about you either and if you do nothing else but think about yourself and meeting your own needs then you are greedy.

Greed is the same as hyper-self-interest.

Greed and self-interest are very related. Greed is self-interest taken too far.

Strong self-interest may be greed.

This theme seems to be consistent with the contention of Wang and Murnighan (2011: 283), who note “self-interest or selfishness seems necessary, but not sufficient” (to represent greed). This distinction between basic self-interest and extreme self-interest appears to overlap with Williamson’s (1979) description of the difference between self-interest

and self-interest with guile, or opportunism. Opportunism, Williamson notes, “is a variety of self-interest seeking but extends simple self-interest seeking to include self-interest seeking with guile. It is not necessary that all agents be regarded as opportunistic in identical degree” (Williamson, 1979: 234). Our conceptualization allows for opportunistic behavior to manifest in the pursuit and occasional subsequent realization of extraordinary material wealth; but we recognize that greed is but one of many possible manifestations of opportunism. As our interviewees stated, “Greed is but one aspect of opportunism. You can be greedy, and that’s opportunism, but greed is only one way you can express opportunism.”

Greed and Related Constructs

Greed can also be distinguished from related constructs such as envy, narcissism, and hubris (e.g., Chatterjee & Hambrick, 2007; Hayward & Hambrick, 1997; Nickerson & Zenger, 2008). Below we present points of comparison between these related concepts.

Envy. Envy originates in social comparison (Nickerson & Zenger, 2008) and is concerned with comparing the self to others with respect to material wealth, power, or some other attribute of social life. The focus of envy is to prevent the other from possessing something that the focal individual wants for himself or herself (Polledri, 2003). In contrast, greed is realized through aggressive acquisitiveness (Polledri, 2003), and its focus is on possession, accumulation for the focal individual. As Nickerson and Zenger (2008: 1434) note, “it is envy and jealousy that generate feelings from social comparison that give rise to actions to reduce such feelings because people systematically care more about others ahead of them compared to those behind them.” As such, envy may propel greed, as individuals focus on reducing the negative feeling of jealousy resulting from constant comparison of themselves to those socioeconomically above them. Foster (1972) argues that envy has a distinct competitive component and is in an important element of every industrial economy, in which consumers are influenced through advertising to feel envy for others and simultaneously shown how they can avoid that feeling by engaging in appropriate consumer behaviors. This “envy avoidance” effect may be especially pronounced in the context of the executive suite, as compensation of the five highest paid officers at a publicly traded firm must be disclosed per SEC regulations. Therefore, CEOs have access to detailed compensation data for their peers (the upper echelon equivalent of “the Joneses”), and research suggests (e.g., Cowherd & Levine, 1992) are more likely to compare themselves to those with higher, rather than lower, pay than their own.

Narcissism. Narcissism is “consuming self-absorption or self-love; a type of egotism. Narcissists constantly assess their appearance, desires, feelings, and abilities” (American Heritage Dictionary, 2010). Levine (2005: 728) notes that individuals in leadership positions in corrupt organizations seek a unique type of gratification in the form of “ultimate narcissistic fulfillment,” driven by “relentless greed” (Kernberg, 1980: 136). According to Chatterjee and Hambrick (2007: 354), “narcissism carries an intense need to have one’s superiority reaffirmed,” which can manifest in the desire to receive ever increasing material rewards. Levine (2005: 728) further suggests that taking possession of things establishes the unique worth of their owner, rendering the narcissistic individual able to realize his or her “grandiose self-fantasy.” Leahy (1992: 249) also identifies a connection between narcissism and greed, when writing,

Acquisitive narcissists find themselves trapped in a double-bind: If they do not acquire more, they believe that they have failed. But if they do acquire more, it is never enough. Paradoxically, the underlying fear is the fear of being satisfied. Being satisfied—that this is enough—is a condition to be avoided, since to the narcissist, it represents giving up on the ideal self-image of unlimited potential and represents defeat of the omnipotent self and its sense of uniqueness.

One of our interviewees noted, “Greedy people are probably very narcissistic.”

Hubris. Hubris, the “exaggerated pride or self-confidence, often resulting in retribution” (Hayward & Hambrick, 1997: 106), has been the subject of philosophical and literary works as well as academic research (e.g., Hayward & Hambrick, 1997; Seth, Song, & Pettit, 2000). In Ancient Greece, hubris described people who believed themselves to be superior to the gods. The more modern connotation of the word, however, is related to extreme arrogance, exaggerated self-confidence, or extreme or excessive pride. In addition, hubris is linked to, yet distinct from greed. As one of our interview subjects pointed out, “Greed and hubris are very related,” while others explained, “greed and hubris are independent concepts,” “greed and hubris don’t always co-exist in a person,” and “hubris and greed are not the same, definitely not.”

Historically, pride has been considered both a virtue and a sin. For example, St. Augustine defined pride as the “love of one’s own excellence,” while Aristotle, in the *Nicomachean Ethics*, spoke of the upper-class Greek virtue of proper pride and self-esteem (Aristotle, 2004). Drawing a parallel to the distinction between healthy self-interest and greed, we propose that hubris is the exaggerated form of “proper pride.” Hubris, a construct at the intersection of social comparison and self-serving bias, conceptually overlaps with other social constructs, including hyper-core self-evaluation (Hiller & Hambrick, 2005), overconfidence (Hayward, Rindova, & Pollock, 2004), and the “better-than-average effect” (Alicke & Govorun, 2005). Social psychology research shows that most individuals suffer from a “better-than-average effect” (Alicke & Govorun, 2005; Larwood & Whittaker, 1977) and overestimate their skills relative to the average person on any given characteristic, such as driving ability. The better-than-average effect is a common social comparison bias (Larrick, Burson, & Soll, 2007), and “one of the most robust of all self-enhancing phenomena” (Alicke & Govorun, 2005: 85). While in most social comparison biases, the comparison is between an individual and a referent other, individuals who consider themselves to be better than the average compare themselves favorably to a norm or standard they perceive to be the average of their peers. The better-than-average effect leads individuals to think they are better than or likely to outperform their peers based on the perception that their own skills or attributes are superior (Alicke & Govorun, 2005). Overconfidence—a related bias—exists when the accuracy of prediction about a certain outcome is greater *ex ante* than it is *ex post*. In such a judgment bias, an individual believes that he or she has more control over a given outcome than he or she actually does. Recently, Finkelstein and colleagues concluded that overconfidence and hubris are “essentially synonymous” (Finkelstein, Hambrick, & Cannella, 2009: 82).

Hypothesis Development

Greed and Shareholder Wealth

Adam Smith (1776/1937) suggested that self-interest, rather than concern for others, leads individuals to seek the most advantageous employment in exchange for their human capital.

The most advantageous employment is aligned with the greater good and provides the most benefits for society (Smith, 1776/1937). Self-interest as discussed by Adam Smith is accompanied by positive externalities, and benefits not only the self-interested actors, but also the larger group in which the actor is embedded. In today's business world, the larger group to which the positive externality would extend could be shareholders, and the measurable benefit would be an increase in shareholder wealth. In contrast, excessive self-interest seeking—manifested in greed—is not accompanied by positive externalities. As Smith noted, such purely self-serving acts are a “vile maxim of the masters of mankind” (Smith, 1776/1937: 448). Wang and Murnighan (2011: 306) add that “individual greed benefits one person at the expense of others, with systemic greed damaging the whole system.” Building on Smith's (1776/1937) fundamental distinction between self-interest and greed, we explore the difference between extraordinary levels of compensation suggestive of greed, as opposed to self-interest, and explain the former construct's effects on shareholder wealth.

As in the case of all tangible or intangible resources, executive talent is expected to create value and contribute to above average returns for the firm. The manager's self-interested, wealth-maximizing behavior is realized as his or her extraordinary human and social capital serves the purposes of the firm in exchange for compensation. Research on executive compensation suggests that it should be a function of the modern-day corporate equivalent of Adam Smith's greater good, namely the creation of shareholder wealth. In other words, wealth maximization is merely the cost of extraordinary human and social capital that, in turn, is the source of added shareholder value. Thus, marginal increases in returns to shareholders, theoretically, should be aligned with increases in executive pay packages, for the further benefit of shareholders. Because executives are compensated for their human and social capital that is deployed in the service of the firm, shareholders expect value creation from executive talent, as they do from other resources. The value added by the executive is realized through higher performance and returns in excess of what was invested directly or indirectly into the executive resource. Therefore, high levels of compensation paid to CEOs are justified if the CEO's human and social capital lead to high firm performance, and when marginal increases in CEO compensation are associated with similar marginal increases in performance. Yet, executives sometimes appear to pursue and extract excess compensation relative to the value they provide.

The unbridled pursuit of personal wealth is decoupled from the greater good expressed as shareholder wealth (e.g., Bebchuk, Cohen, et al., 2010). In other words, the greater good, namely the maximization of shareholder wealth, is no longer aligned with managerial self-interest when managerial greed is at play. We propose that greed influences shareholder returns through its effect on agency costs to the firm, which represent costs resulting from the agency relationship. Although various governance mechanisms are used to limit the extent of such costs, a certain amount of residual loss is inevitable (Jensen & Meckling, 1976). When the manager is also the sole owner, all the excess returns accrue to the manager; thus, self-interest dictates that the manager will seek to maximize firm returns, regardless of greed. In professionally managed corporations (i.e., in the presence of agency), however, greed exacerbates agency costs.

First, the greedy manager extracts excess returns from the firm for his or her personal material gain, which leads to lower firm performance (e.g., Bebchuk, Cohen, et al., 2010; Bebchuk, Grinstein, et al., 2010) and thus lower total shareholder returns. According to this conceptualization, greed is related to but not the equivalent of overcompensation (Wade,

O'Reilly, & Pollock, 2006), the effects of which include excessive costs to shareholders (Hambrick & D'Aveni, 1992). Thus, overcompensation can be conceived of as the observable result of greed. Second, greedy managers are also likely to extract other benefits from the firm, such as lavish perks, which impose additional costs on the firm. These two mechanisms represent agency costs to the firm, and specifically “the residual loss of firm value as a result of managerial opportunism” (Campbell, Campbell, Sirmon, Bierman, & Tuggle, 2012: 1431). The higher the agency costs, the lower the residual value available to shareholders. In addition, CEO greed is expected to affect the compensation of other top managers, as greedy CEOs are more likely to insist upon appropriating a greater share of compensation for themselves. Pay level becomes a basis for comparison among top management team (TMT) members, as it signifies “relative worth” to the organization (Bloom, 1999). Large pay gaps fuel feelings of inequity and injustice, potentially leading to greater conflict, competition between TMT members, and self-serving behaviors at the expense of other team members, including political sabotage (Henderson & Fredrickson, 2001). Thus, large pay dispersion—likely to occur when CEO greed is present—can be detrimental to organizational effectiveness and performance, because it creates an atmosphere of competition for greatest rewards, as opposed to a focus on maximizing shareholder wealth. Justice research has also demonstrated that feelings of inequity can motivate individuals to seek retribution, which includes stealing from the organization (e.g., Greenberg, 1990). Such behaviors further exacerbate agency costs. Thus, we propose that greed harms shareholder wealth. Formally,

Hypothesis 1: Greed has a negative effect on shareholder return.

Not all CEOs can equally exploit their position—as one of our interviewees pointed out: “If you wanted to label somebody as greedy that might be somebody who might continually look for opportunities to leverage or exploit their position of power with regard to acquiring things that might be inappropriate based on their contribution.” In the next section, we introduce three important contextual factors (conditions), which have been explored in research on upper echelons theory (i.e., managerial discretion and tenure) and agency theory research (i.e., power). Importantly, these constructs represent limits on either the CEO’s *ability* (via discretion and board power) or *willingness* (via changes resulting from longer tenure) to engage in non-profit-maximizing behaviors that erode shareholder wealth. In other words, we explore the influence of external (i.e., industry), internal (i.e., board characteristics), and CEO-specific constraints on greedy behavior. Thus, we propose that the extent of agency costs resulting from greed can be limited not only by factors outside of the CEO’s direct control, such as an industry-based discretion or board power, but also by personal attributes of the executive.

Contextual Influences: Discretion, Power, and Firm Tenure

Managerial discretion. The construct of managerial discretion is one of the “most notable refinements” of upper echelons theory (Hambrick, 2007: 335). Managerial discretion refers to the latitude of options top managers have in making strategic choices (Hambrick & Finkelstein, 1987). The source of managerial discretion can be the industry (Hambrick & Finkelstein, 1987), the firm (Magan & St-Onge, 1997), or the individual manager (Carpenter & Golden, 1997). The theory regarding managerial discretion reconciles two opposing

propositions regarding managerial action, the first held by proponents of upper echelons theory and the second held by population ecologists. Upper echelons theory is “based on the premise that top managers structure decisions to fit their view of the world” (Finkelstein & Hambrick, 1990: 484). The contrasting view is that managers have limited influence on firm outcomes due to environmental constraints and inertia (Hannan & Freeman, 1977; Salancik & Pfeffer, 1977). The notion of managerial discretion reconciles these two diverging perspectives, suggesting that in high discretion environments managers have more latitude of action, and consequently can exercise more influence over firm outcomes than their counterparts in low discretion environments (Finkelstein & Hambrick, 1990).

Extending these findings to the greed–shareholder return relationship, it follows that a CEO with high managerial discretion is able to pursue excessive material wealth more than one with low managerial discretion. If the CEO has limited freedom of action, the impact of executive greed is reduced because the executive’s discretion to act is restricted. Conversely, if the CEO operates in a high discretion environment, monitoring is difficult and the executive has the freedom to pursue personal wealth-maximizing objectives at the expense of the firm. This argument is consistent with the theoretical treatment of discretion as providing latitude in the objectives pursued, which corresponds to managerial freedom to pursue personal goals (Shen & Cho, 2005).

In line with this view, Finkelstein and Boyd (1998: 180) note that the agency theoretic or corporate governance depiction of discretion is usually focused on “the potential decision-making freedom of high discretion CEOs and implies that such freedom will promote non-profit-maximizing choices by the CEO.” Campbell and colleagues (2012: 1438) also suggest that “the potential for self-interested behavior is higher when the CEO’s discretion is high.” As such, we would expect greater freedom to pursue greed-driven objectives to result in even lower firm shareholder returns in high discretion environments. Thus,

Hypothesis 2: Managerial discretion moderates the relationship between greed and shareholder return, such that the higher the managerial discretion, the more negative the relationship.

Board power. Executives are able to express their preferences and exert their will largely due to the fact that they hold powerful positions (Eisenhardt & Bourgeois, 1988; Finkelstein, 1992). The separation of ownership and control is at the core of agency theory (Jensen & Meckling, 1976), and is the focus of the majority of corporate governance research. One of the primary mechanisms for dealing with the problems created by the separation of ownership and control is monitoring of executives’ behavior by the board of directors. The board has a fiduciary duty to provide oversight and control executives’ behavior, preventing actions that would harm shareholder interests. All boards are expected to perform this duty; yet, not all boards are uniformly well suited to do so—board power is a critical attribute for controlling greedy CEOs.

The board’s ability to monitor executives’ behavior and actions is contingent upon the distribution of power—defined as “the capacity of individual actors to exert their will” (Finkelstein, 1992: 506)—between the CEO and the board of directors (Finkelstein et al., 2009). Power has an influence on performance, because the more powerful entity’s preferences are likely to be reflected in the strategic decisions and subsequent strategic actions of the firm (Child, 1972). For example, Golden and Zajac (2001) found that when CEOs have greater power vis-à-vis the board, the board is less likely to influence strategic change. A

powerful CEO threatens the independent judgment of the board (Dalton & Kesner, 1987), and his or her preferences dampen the influence of the board (Boyd, 1994). If the CEO is more powerful than the board, her or his preferences to pursue material wealth—or take actions that are either self-serving or driven by hubris and reduce shareholder wealth—might go unchecked (e.g., Combs, Ketchen, Perryman, & Donahue, 2007; Dunn, 2004; Frankforter, Berman, & Jones, 2000; Kalyta, 2009).

Executives' preferences are expressed and manifested in firm decisions to the degree that they have sufficient position power (Eisenhardt & Bourgeois, 1988; Finkelstein, 1992). Thus, executives with more power are better able to exercise their greed in the strategic decisions they make and implement. While a powerful CEO's questionable decisions and actions are unlikely to be restricted by the board, a powerful board can limit the extent to which executive greed affects the firm. Therefore, we propose that the CEO's ability to engage in actions driven by greed prevails when the CEO is more powerful than the board. However, when the CEO's power is constrained by a powerful board, the CEO's greed is more likely to be held in check; that is, the CEO is less likely to take actions that have a negative effect on shareholder wealth. These outcomes arise because the directors engage in more discussion and debate (Zahra & Pearce, 1989) about significant strategic and performance-related issues, and exercise greater monitoring and control of CEO decisions and actions. A powerful board often has a high percentage of independent outside directors (members appointed prior to the date the CEO's tenure began; e.g., Campbell et al., 2012; Combs et al., 2007) with ownership in the focal firm (Finkelstein, 1992; Westphal & Bednar, 2005). Independence and ownership in the focal firm give the board both the incentives and the ability to control the CEO, and conversely, limit the CEO's ability to exercise discretion. In sum, when the balance of power between the board and the CEO favors the board, the board is more likely to effectively protect shareholder interests and mitigate the impact of greed on shareholder return. Therefore,

Hypothesis 3: Board power moderates the relationship between greed and shareholder return, such that when board power is higher, the relationship is less negative.

CEO tenure. Average CEO tenure has been decreasing in recent years, and is now shorter than it has been since the 1970s (Kaplan, 2008). Research on executive tenure shows that the length of CEO decision horizons plays an important role in some of the decisions they make (Martin & Davis, 2010). Tenure has also been linked to agency costs as evidenced by studies on CEO earnings manipulation behaviors (e.g., Zhang, Bartol, Smith, Pfarrer, & Khanin, 2008). We posit that over time, executives' pursuit of material wealth changes. As such, tenure has an important effect on the manifestation of CEO greed.

CEOs are more likely to extract as much as possible from their employment contract while they are in position to do so. Although the likelihood of dismissal of newly appointed CEOs is higher for outsider successors (Zhang, 2008), both insider and outsider CEOs are likely to feel pressure to maximize the benefits associated with their new position as soon as such benefits become available, or in other words, early in their tenure as CEO. In later years of tenure, however, CEOs perfect their portfolios of success strategies and knowledge of the firm. Because they were able to successfully navigate the adjustment period inherent in the new position, their confidence in their future with the firm grows. They build relationships and networks within the firm (Hambrick & Finkelstein, 1987), and likely develop a stronger organizational identity (Tajfel & Turner, 1986), as well as an identity as the CEO of the firm.

As these identities develop throughout their tenure, executives' view of themselves becomes more psychologically integrated with the fate of the organization (Ashforth & Mael, 1989). Research suggests that individuals who wish to maintain a positive self-identity will act in ways that are socially acceptable even in the absence of monitoring; thus, they will activate a mindset that restrains greedy behavior (Wang & Murnighan, 2011).

Over time, CEOs can become more personally invested in the firm, and their focus is likely to shift from the self to the social context (Wang & Murnighan, 2011), which should reduce their pursuit of excessive wealth at the expense of the firm and its shareholders. Because of stronger identity with the organization, the effect of greed on firm performance will be less negative as CEO tenure increases, because harming the organization—and by extension its shareholders—would concomitantly be in conflict with part of the manager's self-concept. In sum, increasing tenure is likely to decrease the manager's willingness to engage in greed-satisfying behaviors. Formally,

Hypothesis 4: CEO tenure moderates the relationship between greed and shareholder return, such that when CEO tenure is longer, the relationship is less negative.

Method

Sample and Data Sources

We began constructing our sample by identifying all public firms in Compustat 1999 to 2006 with CEOs who were employed 3 years or more at an S&P 1500 firm (not necessarily at the same firm) during the 1997 to 2006 period. The 3-year period was employed to ensure proper statistical control, because it allowed us to capture more than a snapshot of a given executive's greed and calculate lagged values of the greed measure ($t-1$, $t-2$) used in some of our analyses, which accounted for the potentially endogenous nature of greed. We then restricted our sample to the 70 industries for which validated managerial discretion data were available (Finkelstein et al., 2009). We chose to focus on managerial discretion at the industry level, because we were interested in discretion as an external or exogenous moderating mechanism, reflecting industry constraints on managerial freedom (Hambrick & Finkelstein, 1987), as opposed to firm-level discretion, which many believe is subject to managerial manipulation. Statistical tests indicate that the firms in the group for which data were available do not significantly differ on firm size, firm market performance, accounting performance (ROA), firm risk, or sales growth from a group of firms in a wider range of industries. Moreover, we found that the firms' governance characteristics, including duality, outsider ratio, average director tenure, and percentage of relatives on board, were not statistically different between the two groups at $p < .05$. As such, we concluded that restricting our sample to the industries for which validated managerial discretion data were available did not bias the results.

One of our key controls, managerial hubris, entails a highly time-intensive data collection effort (discussed below). That is why we chose to use random sampling to create a smaller yet unbiased sample with sufficient power to detect the relationships of interest. We used a very conservative benchmark for power, namely, the level of power required to support a null hypothesis. As Cohen and Cohen (1983) discuss, a null hypothesis can be supported if statistical power ($1 - \beta$) is high, and the relationship is found to be trivial. With high statistical

power, failing to reject the null indicates that no nontrivial relationship exists (Cohen, 1990; Kim, Hoskisson, & Wan, 2004). Following Lane, Cannella, and Lubatkin (1998) and Kim and colleagues (2004), we use a medium anticipated effect size ($f^2 = .15$), relying on common approximations of an effect size as outlined by Cohen (1992). Thus, setting $\alpha = .05$, power = .95 (β or Type II error = .05) with 31 predictors (described below, including year dummy variables), the minimum sample size required is 265.² As noted above, because of the time-intensive nature of the data collection involved, we drew a random sample of 400 firms from the larger set of firms identified above, which is well above the recommended sample size. Observations missing requisite data on our dependent variables, as well as on moderators and key controls (e.g., CEO compensation, CEO tenure, percentage ownership of the firm, etc.), were necessarily omitted from further analysis. Our final sample consisted of 335 firms (409 firm–executive combinations) over the 1999 to 2006 period, representing an unbalanced panel; the total number of firm–year observations was 1691.

Market return measures were calculated using information collected from CRSP. Firm-level dependent and control variables were collected from Compustat. CEO data were collected from Compustat's Execucomp database. Governance data were collected from the RiskMetrics database. Finally, media reports of CEOs (used in the calculation of hubris) were obtained from Factiva for all sources covered. Factiva has been used as a news source in prior research (e.g., Chatterjee & Hambrick, 2007; Mishina, Dykes, Block, & Pollock, 2010).

As discussed earlier, we also conducted semistructured interviews with a set of 12 executives. The reason we focused on top executives rather than lower-level employees is that top managers have knowledge of executive inputs (e.g., expertise, skill, effort) as well as outputs (various components of pay). The issue of greed is tied to perceptions of distributive justice, which are driven by comparative judgments (Adams, 1965). Lower-level employees are likely to have less accurate—and therefore more biased—perceptions of executive inputs and outputs, which is bound to affect their perceptions of greed in the executive suite. Moreover, we asked our informants about executive greed in the abstract rather than their own greed, ameliorating concern about social desirability bias. The executives were all employed at companies on the East Coast or the South-Central region of the United States, and all were either the top executive, the founder/CEO of the company, or a member of the TMT. The executives' home companies included private and public S&P 500 firms, and represented a variety of industries, such as financial services, defense, health care, telecommunications, agri-business and energy exploration, among others. Each author personally conducted four interviews following the guidelines of semistructured interviewing. All topics to be explored and types of questions to be asked were determined in advance. The authors agreed to cover all of the topics during the interviews, but were also given flexibility to explore certain topics in more depth, based on the flow of each subject's responses (Lindlof & Taylor, 2002). The set of topics determined *ex ante* as well as sample of questions are presented in Appendix A.

Finally, we also surveyed a multidisciplinary independent panel of experts. Our goal in constructing this panel was to draw on the expertise of both scholars and practitioners, as well as reach out beyond the discipline of management to related social sciences. As discussed earlier, little extant theory on greed exists. As such, the expertise we sought was related to top-level managers, executive compensation, and incentives. The academic side of the eight-member expert panel (cf. Crossland & Hambrick, 2011) included one prominent

management scholar, two corporate finance scholars with expertise in executive compensation and financial incentives, and a professor of sociology who could provide important insights regarding the social context of greed. All four scholars are tenured professors at top research institutions. The remaining four panel members were senior business executives of a leading, U.S.-based global financial management company. Each executive is responsible for asset management in different industry sectors; as such, they provided varied industry expertise. According to standard practice for academic research involving human subjects, all experts were offered anonymity. Despite the diversity of our panel, the responses were remarkably consistent. According to the expert panel, greed is distinct from hubris and self-interest. In line with our theory, the respondents stated that high levels of compensation, both absolute and relative, are not synonymous with greed, but the excessive pursuit of material wealth is. The feedback obtained suggested that it is possible to differentiate greed and self-interest, based on the excessive nature of greed. Sample questions and responses from the panel survey are depicted in Appendix B.

Measures

Dependent variable. *Shareholder return* was operationalized as stock return, or total shareholder return, calculated as change in share price over the year plus dividends divided by beginning-of-the-year price (Chatterjee & Hambrick, 2007; Sanders & Hambrick, 2007). We chose this market measure of firm performance because we were interested in how greed affects shareholder wealth; moreover, accounting measures are more subject to manipulation by executives, a concern that was highly relevant for the greed hypotheses tests. We used a one-year lag (the variable was measured at year $t+1$).

Independent variable. Because executives wield considerable influence over the setting of their compensation contracts (Bebchuk & Fried, 2004; Chatterjee & Hambrick, 2007; Tosi & Gomez-Mejia, 1989), we captured *CEO greed* using three proxies of extraordinary compensation reflected by (a) the market's reaction to those forms of compensation, (b) the comparison to other top executives at the focal firm, and (c) the comparison of CEO total pay to a benchmark based on known predictors of executive compensation from extant research. Because we define greed as the pursuit of extraordinary material wealth, we aim to identify abnormal (i.e., extraordinary) material outcomes. While pursuit is an important part of the definition, we measure greed through outcomes realized for at least two important reasons. First, measuring pursuit of abnormal material wealth on a sample of large, public company executives would present insurmountable practical challenges. Pursuit stems from desire or intent, and is itself a latent variable. At best, pursuit could only be captured through primary data collection. However, pursuit of extraordinary material wealth is likely subject to social desirability bias. Consequently, the improbable scenario under which hundreds of CEOs return a survey or agree to be interviewed about their desire for or pursuit of extraordinary wealth would yield data of questionable reliability.

Second, while measuring pursuit directly would be the ideal method to capture the construct, a correlated variable, namely, the outcome of pursuit as actualized extraordinary wealth, is a judicious proxy. Logically, actualized extraordinary wealth is correlated with the intensity of the pursuit, and therefore, conservatively represents pursuit. In the domain of

CEO compensation, weak pursuit is unlikely to result in a successful outcome. In turn, the presence of abnormally high, or extraordinary wealth is unlikely to be accidental, and more likely to result from the pursuit of such wealth. In other words, realized extraordinary wealth implies pursuit.

However, because both our theory and the qualitative information gained from the expert panel and interview subjects imply that high pay and wealth do not necessarily equate to greed, we do not use high pay as the indicator of greed. Rather, we construct the *CEO greed* measure from three variables. The first proxy (1) is the dollar amount of perquisite compensation reflected by the dollar value of other annual compensation not properly categorized as salary or bonus (or long-term/incentive compensation), including perquisites and other personal benefits. Yermack (2006) found that shareholders react negatively when perks (e.g., personal aircraft use) are disclosed, and firms that disclose perks tend to significantly underperform market benchmarks. This suggests that shareholders do not consider perquisite compensation to reflect pay for skill or to be effective in motivating managers; rather, they view perks as reflective of agency costs and value extraction. Importantly, the majority of CEOs in the population of S&P 1500 firms received zero perquisite compensation, inconsistent with the argument that perks are a “normal” component of pay. Moreover, the correlation between perks and firm size, while positive, is only .11 (indicating 1.2% shared variance). The use of perks also corresponds to the social connotation of greed with conspicuous consumption (Posner, 2003).

As a second proxy (2), we used the ratio of the CEO’s cash compensation to cash compensation of the next most highly paid executive in the firm. We propose that a large pay disparity between the CEO and the next highest paid officer is a proximate indicator of greed. The results of our factor analysis, discussed below, confirmed this classification. According to Chatterjee and Hambrick (2007: 364), CEOs have “nearly total control over the pay of other executives in their companies.” Also, Wang and Murnighan (2011: 283) point out that “definitions of greed suggest that the negative social consequences of greed focus primarily on its uneven distribution of resources.” As discussed earlier, research suggests that large pay gaps lead to greater conflict, in-team competition, and self-serving behaviors at the expense of other team members, including political sabotage (Henderson & Fredrickson, 2001). Such inequalities have also been linked to voluntary (non-CEO) executive turnover/resignation (Kale, Reis, & Venkateswaran, 2013). This greed proxy is also in line with the measurement of greed by the majority of empirical research on greed in experimental economics, in which people determine how much money to allocate themselves versus a partner in “dictator” games.

Finally, the third proxy was reflected in (3) CEO “overpayment”—the portion of the CEO’s total pay that *exceeds what can be explained* by firm size, prior performance, firm risk, and other key factors. To construct this measure, we draw on previous research (Brick, Palmon, & Wald, 2006; Fong, Misangyi, & Tosi, 2010; Markoczy, Sun, Peng, Shi, & Ren, 2013; Wade et al., 2006) and construct as a measure of overpayment based residuals from CEO pay regression. Wade and colleagues (2006) calculated a measure of CEO over/underpayment by taking residuals from a firm fixed-effects regression model, with a number of controls, and estimating the log of CEO salary (base compensation and annual bonus only). Consistent with Fong et al. (2010) and Brick et al. (2006), we expanded our analyses to estimate the log of total annual compensation, including salary, bonus, the value of restricted

stock grants, and long-term incentive compensation. We included explanatory variables for CEO age, CEO tenure, firm size, duality, percentage of true outsiders on the board, percentage of directors who are also relatives of current executives on the board, firm risk, sales growth, and recent firm performance, using a one-year lag. Our adjusted R^2 from the fixed-effects regression model (accounting for stable firm and industry effects) with year dummies was .73, which is equal or superior to that found in prior research (e.g., Brick et al., 2006; Core, Guay, & Larcker, 2008; Wade et al., 2006). CEO overpayment was calculated as equal to the residual if the residual was positive—reflecting the unexplained portion of executive compensation—and 0 otherwise (Carpenter & Sanders, 2002).

To allow for parsimonious hypothesis testing, the three greed proxies were combined into a single indicator of greed using principal components factor analysis, as discussed in greater detail below.

Moderator variables. The measure of *managerial discretion* is based on Hambrick and Abrahamson (1995); we use the numerical score provided for the full range of industries reported in Finkelstein et al. (2009). When measuring *board power*, our intent was to capture the ownership power of truly independent directors (Finkelstein, 1992; Westphal & Bednar, 2005). Independent outside directors are board members with no existing or prior relationship with the firm who were appointed prior to the date the CEO's tenure began (e.g., Campbell et al., 2012; Takacs Haynes & Hillman, 2010). Board power was operationalized as the proportion of firm shares held by independent outside directors divided by the total number of company shares outstanding. *CEO tenure* was measured as the number of years the executive held the CEO position at the focal firm (Sanders, 2001).

Control variables. Prior literature suggests that managerial greed and hubris may be related such that the boundary between greed and hubris may sometimes be blurred (Hayward & Hambrick, 1997). Moreover, hubris is also likely to be negatively related to shareholder wealth; as such, it is important to control for potential effects of hubris. To anchor the greed construct to extant literature and establish its distinctiveness from hubris, the three aforementioned proxies for greed were included in a factor analysis with the proxies for hubris. The *CEO hubris* measure was constructed using the following three variables. First, the media's portrayal of the CEO was determined through content analysis of news articles using Hayward and Hambrick's (1997: 113) methodology—only articles “specifically attributing organizational outcomes to CEOs or otherwise commenting on CEOs' performance” were used; articles that only named or quoted a CEO or described a company action were not used. Individual articles were coded ranging from -2 (*clearly negative coverage*) through 0 to $+3$ (*clearly positive coverage*). Results were then summed to create a CEO-year media portrayal index, which ranged from -2 to 12. Second, the total number of media mentions per year was another proxy for hubris. While this variable is correlated with firm size ($r = .29, p < .001$), (a) these two variables have less than 9% common variance and (b) we expect that, all else equal, leading a large firm is in fact more likely to trigger hubris than leading a small firm. Third was the total (over)confidence score, following Malmendier and Tate (2008), based on counts of key words—such as “optimistic” or “confident”—in articles about the CEO or expressing CEO opinions. After following the same procedure as Malmendier and Tate (2008), the final variable is a total confidence indicator, which is equal to 1 if the CEO is on average overconfident and 0 otherwise.³

The results of a principal component factor analysis with varimax rotation provided discriminant validity for the greed and hubris constructs. The six variables clearly loaded on two distinct factors, with significant loadings on the expected factor and no significant cross-loadings. Based on the results, factor weightings were used to construct overall *CEO hubris* (eigenvalue = 1.67; 56.6% variance explained) and *CEO greed* (eigenvalue = 1.10; 36.6% variance explained) indices for parsimonious hypothesis testing.

We included a number of additional controls in our models. *Firm size* has been shown to affect a number of firm outcomes, including shareholder returns (Nyberg, Fulmer, Gerhart, & Carpenter, 2010). It was measured as a factor composed of three variables—number of employees, total annual sales, and total firm assets (Werner & Tosi, 1995).⁴ As Boyd, Gove, and Hitt (2005) discuss, the three aforementioned indicators are the most widely used measures of firm size by extant research, and using multiple indicators of the same construct allows for assessments of reliability and reduces measurement error. We also included a measure of the firm's accounting performance, which tends to be closely linked to market measures of firm performance. The performance measure, *return on assets* (ROA), calculated as net income scaled by total assets, "indicates the efficiency with which a firm employs its current asset base" (Carpenter, Sanders, & Gregersen, 2001: 500).

Given our focus on shareholder return, we also included a set of controls related to the firm's governance. According to theory, managerial pay packages serve as a way of aligning managerial and shareholder interests (Jensen & Meckling, 1976). *Salary* or base pay has been linked to total shareholder return by prior research (e.g., Bloom & Milkovich, 1998). *Bonus* and *option awards* (Black–Scholes value) variables were included to control for long-term incentives, which are in theory linked to firm performance (see Gerhart, Rynes, & Fulmer, 2009, for a review). *Percentage CEO ownership* is a proxy for the degree of a CEO's alignment with shareholders (i.e., the degree of agency conflict; Jensen & Meckling, 1976); we used a natural log of total CEO equity ownership (Sanders & Hambrick, 2007). *CEO age* was used to control for the CEO's general experience and the degree of the so-called "horizon problem," whereby the investment decisions made by CEOs nearing retirement deviate from shareholders' best interests (Brickley, Linck, & Coles, 1999).

We also included controls for board vigilance/quality of board oversight, which is proposed to limit agency problems and affect firm performance (Finkelstein et al., 2009). *Duality*, previously used as a proxy for CEO power (e.g., Fong et al., 2010; Takacs Haynes & Hillman, 2010), was coded as 1 if the CEO was also the chairman of the board and 0 otherwise. *Percentage relative* was the proportion of directors related to any member of the TMT to control for board leniency as a result of family ties (Gomez-Mejia, Nunez-Nickel, & Gutierrez, 2001). *Average director tenure* (excluding the CEO) controls for firm-specific director experience (Campbell et al., 2012). A control for board independence and proxy for vigilance, measured as *true outsider percentage* (i.e., the percentage of outside directors that were appointed before the CEO took office), was also included (Takacs Haynes & Hillman, 2010). Finally, we included year dummy variables to control for time/year effects and remove the issue of contemporaneous correlation (Certo & Semadeni, 2006).

Analysis

Given the structure of the data (observations for multiple firms at multiple points in time), we used panel data analysis. We relied on the Hausman test to select the most appropriate

modeling approach. The test rejected the null hypothesis, indicating that the random-effect estimator was inconsistent and a fixed-effect estimator was appropriate. Firm fixed effects help to control for any unobserved firm and industry-level (through industry affiliation) factors that are constant through time. We employ firm and CEO fixed-effect modeling (i.e., firm–executive combination as the grouping variable). We use clustered robust standard errors in all regressions to account for intragroup correlations and mitigate concerns about heteroscedasticity (the errors are clustered by firm–executive combination). This specification provides for a more conservative test of our hypotheses. Finally, all statistical significance tests in the models reflect two-tailed tests. Thus, our approach is conservative.

Results

Table 1 presents summary statistics and correlations. All variables that were involved in the moderator (interaction effects) tests were first centered to eliminate nonessential multicollinearity. Multicollinearity diagnostics showed that all of the individual variable variance inflation factor (VIF) values were below 2 (mean VIF below 1.5 for all models), well below the recommended cutoff of 10, so multicollinearity was not a concern in the analyses or interpretation of the results.⁵

Table 2 shows the results of the fixed-effect regression models for firm performance regressed on CEO greed, and its interactions with proposed moderators. Model 1 includes only the control variables and the three moderators; Model 2 includes the main effect of greed, Models 3 to 5 add the interaction terms individually, while Model 6 is the fully specified model.

Hypothesis 1 proposed a negative effect of CEO greed on shareholder return. Model 2 shows that greed is negatively and significantly related to shareholder wealth ($p < .05$). The negative and statistically significant coefficient ($p < .01$) for the CEO greed variable in the fully specified Model 6 of Table 2 (also in Model 2) provides strong support for Hypothesis 1, suggesting a negative effect of CEO greed on firm market performance. This effect is also practically significant; controlling for the effect of hubris, one standard deviation increase in greed yields a 6.20% decrease in shareholder wealth.

Hypothesis 2, predicting that managerial discretion moderates the relationship between greed and shareholder return such that the higher the managerial discretion, the more negative the relationship, also receives support. As predicted, the coefficient for the interaction of CEO greed and managerial discretion displayed in Models 3 and 6 of Table 2 is negative and statistically significant ($p < .05$). Figure 1 illustrates that when managerial discretion is low, greed has a marginal effect on shareholder return; when managerial discretion is high, however, greed has a strong negative effect.

Hypothesis 3 predicted that board power moderates the relationship between greed and shareholder return, such that when board power is higher, the relationship is less negative. The coefficient for the interaction of CEO greed and board power in the restricted model, Model 4 of Table 2, is positive and marginally significant ($p < .10$). The positive and statistically significant coefficient ($p < .05$) for the interaction in the fully specified model, Model 6 of Table 2, provides support for hypothesis 3. Figure 2 shows that when board power is low, the effect of greed on firm performance is significantly more negative than when board power is high.

Hypothesis 4 predicted that CEO tenure moderates the relationship between greed and shareholder return, such that when CEO tenure is greater (longer), this relationship is less

Table 1
Descriptive Statistics and Correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1 Firm performance _{<i>t</i>+1}	0.17	0.59											
2 CEO greed ^a	0.00	1.00	-.08										
3 CEO hubris ^a	0.00	1.00	-.01	.12									
4 Managerial discretion	4.67	1.22	-.02	-.01	.06								
5 Board power	0.02	0.08	-.01	.00	.00	.06							
6 CEO tenure	7.46	7.37	.00	-.03	-.07	.00	-.14						
7 Firm size	0.04	0.92	-.07	.04	.22	-.01	-.04	-.10					
8 Return on assets	0.03	0.19	-.12	.03	-.02	-.04	.04	.07	.03				
9 Salary	686.90	383.09	-.08	.23	.20	-.06	-.03	-.04	.47	.08			
10 Bonus	857.26	1519.85	-.04	.16	.23	-.03	-.04	-.02	.42	.06	.44		
11 Option awards	3250.78	7870.35	-.09	.31	.20	.12	-.01	-.06	.18	-.01	.15	.19	
12 % CEO ownership (log)	-5.59	2.13	.01	-.08	-.09	.09	-.07	.34	-.10	.02	-.13	-.06	-.10
13 CEO age	55.24	7.52	-.02	.02	-.02	-.10	-.11	.42	.10	.07	.24	.19	.00
14 Duality	0.80	0.40	-.02	.05	.08	-.03	-.25	.10	.18	-.01	.21	.10	.08
15 Percentage relative	0.01	0.05	.02	-.04	-.03	.02	.20	.08	-.02	.03	.09	.02	.01
16 Average director tenure	7.32	3.64	-.02	-.05	-.10	.02	.30	.29	-.06	.11	-.05	-.01	-.11
17 True outsider percentage	0.20	0.23	-.03	.06	.05	.04	.34	-.41	.08	-.01	.02	.00	.01
				12		13		14		15		16	
13 CEO age				.09									
14 Duality				-.01		.13							
15 Percentage relative				.07		.00		-.04					
16 Average director tenure				.09		.19		-.19		.18			
17 True outsider percentage				-.23		-.19		-.24		-.04			.31

Note: $N = 1,691$. Correlations greater than .04 are statistically significant at $p < .05$.

^aCEO greed and hubris variables were created following factor analysis using the regression scoring method, resulting in a mean of 0 and an *SD* of 1.

negative. The positive and statistically significant coefficients for the interaction of CEO greed and CEO tenure in Models 5 and 6 of Table 2 ($p < .05$ and $p < .01$, respectively) provide support for hypothesis 4. Figure 3 illustrates that the effect of CEO greed on shareholder wealth decreases with CEO tenure. When CEO tenure is short (0-1 years), the negative effect of greed is strongly negative compared to when CEO tenure is long (14-15 years), where the effect of greed is marginal.

Endogeneity Robustness Check

We addressed the possibility that endogeneity in the form of an unobserved variable bias has an effect on our results. Specifically, we employed the generalized method of moments

Table 2
Results of Fixed-Effect Panel Regression Models for Shareholder Return_{t+1}

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CEO hubris	-0.08**	-0.08**	-0.08**	-0.08**	-0.08**	-0.08**
Firm size	-0.16	-0.18	-0.18	-0.18	-0.19	-0.17
Return on assets	-0.58*	-0.58*	-0.58*	-0.58*	-0.58*	-0.58*
Salary	0.00**	0.00*	0.00*	0.00*	0.00*	0.00*
Bonus	0.00	0.00	0.00	0.00	0.00	0.00
Option awards	0.00*	0.00	0.00	0.00	0.00	0.00
% CEO ownership	1.65***	1.64***	1.63***	1.64***	1.62***	1.60***
CEO age	0.04	0.06	0.06	0.05	0.06	0.05
Duality	0.01	0.00	0.00	0.00	0.01	0.01
Percentage relative	1.79†	1.80†	1.83†	1.81†	1.80†	1.84†
Average director tenure	0.01	0.01	0.01	0.01	0.01	0.01
True outsider percentage	-0.16	-0.17	-0.17	-0.16	-0.16	-0.16
Managerial discretion	0.15	0.15	0.21	0.15	0.15	0.21
Board power	0.78*	0.76*	0.76*	0.77*	0.77*	0.80*
CEO tenure	-0.06	-0.05	-0.05	-0.05	-0.05	-0.05
CEO greed		-0.06*	-0.06*	-0.06*	-0.06*	-0.06**
Greed × discretion			-0.05*			-0.05*
Greed × board power				0.18†		0.33*
Greed × CEO tenure					0.01*	0.01**
Constant	-2.11	-2.97	-3.38	-2.65	-2.96	-2.83
R ² (within)	0.21	0.22	0.22	0.22	0.22	0.22
R ² (overall)	0.04	0.04	0.04	0.04	0.04	0.04
F df	22	23	24	24	24	26
F	12.4***	12.0***	11.7***	11.5***	11.5***	10.8***
N	1,691	1,691	1,691	1,691	1,691	1,691

Note: Year dummy variables are included in all models (three are statistically significant at $p < .05$).

† $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

(GMM) approach (Arellano & Bond, 1991), which handles endogeneity problems in a dynamic setting by introducing temporal lags of the troublesome variables as instruments (Wooldridge, 1997). The estimators are designed for “small T, large N” panels with fixed effects (Stata 10, 2007), fitting the empirical design of our study. We employed a first-difference GMM and, following Agarwal, Ganco, and Ziedonis (2009), instrumented greed and hubris using their 1- and 2-year-lagged values. Both the Sargan test and the Hansen test support instrument exogeneity. Our results and conclusions are substantively unchanged, suggesting that endogeneity is not introducing a bias to our results.

Discussion

Greed is one of the oldest and most ubiquitous social constructs. In this study, our goal was to define and measure greed and empirically demonstrate its impact on shareholder

Figure 1
The Moderating Effect of Managerial Discretion on CEO Greed

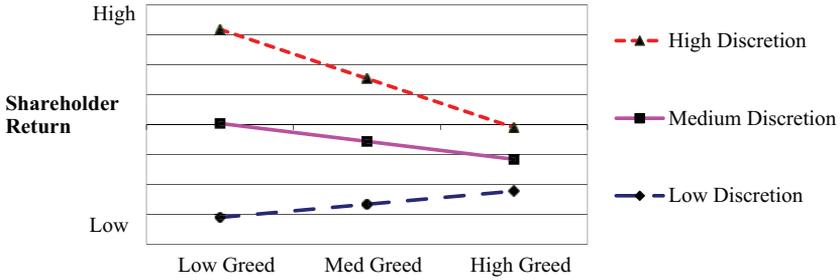


Figure 2
The Moderating Effect of Board Power on CEO Greed

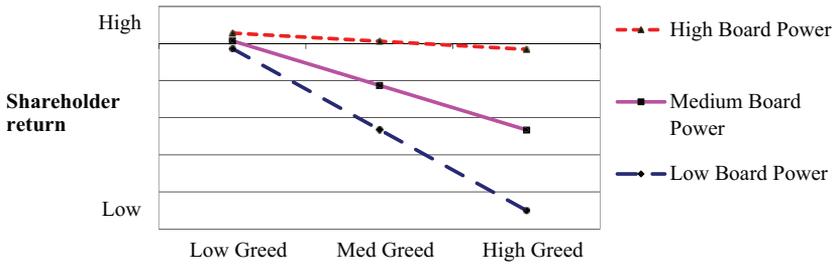
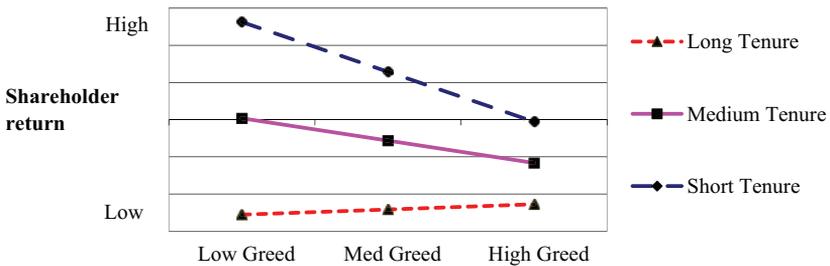


Figure 3
The Moderating Effect of CEO Tenure on CEO Greed



returns. As part of this endeavor, we also argued that managerial discretion, a powerful board, and executive tenure are likely to influence this relationship. Our results supported our

theoretical arguments, highlighting the ways greed influences shareholder wealth through its effect on agency costs, which can be mitigated by the context surrounding CEO decisions.

The primary contribution of this study is the development and operationalization of the greed construct. In so doing, we open an important, new line of inquiry in the research on CEO compensation, and specifically on executive overcompensation. While it has been noted that CEO pay was “out of control” (e.g., Moriarty, 2005), the majority of these accounts and commentaries had a normative focus. Scholars in management have yet to explore the phenomenon of excessively high CEO pay and its relationship with costs to the firm beyond the immediate monetary cost. Our treatment of the concept of greed shifts the focus away from the top executive as a passive recipient of high pay, as the term “overpaid CEO” may suggest, to a top manager whose unbridled self-interest leads to lower firm performance and loss of shareholder wealth. Thus, we conceptualize and develop a construct that allows us to capture the detrimental components of CEO pay and demonstrate their direct effect on firm performance. As such, we posit that greed, or the pursuit of extraordinary material wealth by managers, is the manifestation of managerial opportunism, one of the fundamental tenets of agency theory.

The theoretical development of greed as a construct prompted us to revisit one of the most fundamental texts in the history of modern capitalism, *The Wealth of Nations*, by Adam Smith (1776/1937). Interestingly, unlike economic theories based on Smith’s work that assume uniformly self-interested, rational actors with little attention to individual differences, the classic work by Smith (1776/1937) distinguished between self-interest and greed. Smith noted that the effects of self-interest are positive and beneficial for the larger group to which the individual belongs, while the effects of greed are not. Building on that distinction, this study focuses on the industry and firm as the larger social context. We predicted and found that the pursuit of extreme material wealth by top managers can lead to lower performance and loss of shareholder value. Thus, an important contribution of this study is the refinement and extension of our understanding of self-interest, highlighting the fact that when taken to the extreme—when it becomes greed—it is detrimental to firm value.

Our main contribution, however, is best considered when we examine our findings about greed in context. We find that managers indeed are not uniformly greedy, as it is sometimes suggested, but differ in their pursuit of material wealth. More precisely, some CEOs appear to direct more of the firm’s resources toward themselves than others, which results in higher agency costs, as reflected in lower shareholder return. This is particularly true under certain conditions, such as when managers have high discretion, when the board is weak, and when the manager’s tenure is short. These findings add to our knowledge of managerial opportunism and provide an empirical illustration of one of the fundamental and theoretically intuitive, but empirically elusive assumptions of agency theory.

Our contribution to agency theory then is twofold. First, we provide a theoretical examination of the pursuit of managerial self-interest with guile. Our historical review of the social constructs of greed illustrates that the concept has been the focus of attention for millennia in social, political, economic, and philosophical discourse. Our work suggests that a more fine-grained approach to contrasting self-interest and greed might reveal important and at times overlooked dimensions about their nature and inform 21st-century scholars and practitioners.

Our second contribution to agency theory is the identification of conditions that exacerbate the deleterious effect of managerial opportunism on firm performance, adding to the recent discourse about the conditions that aggravate agency costs (see Campbell et al., 2012). Managerial opportunism is one of the theoretical cornerstones of agency theory. Yet, due to the elusive nature of this construct, it has been difficult to measure and empirically test its effect on firm outcomes. Social desirability bias and the difficulties of primary data collection from top executives render direct measurement of opportunism highly challenging. Our study, using secondary data, allows us to change the focus on opportunism from acceptance based on theoretically robust evidence to inquiry based on empirical testing.

Our study also contributes to the research on top managers and the upper echelons perspective, as we examine an underexplored managerial attribute and demonstrate its influence on firm outcomes. Within the upper echelons perspective, our study extends the stream of work on top managers, especially the research on narcissism (e.g., Chatterjee & Hambrick, 2007) and hubris (e.g., Hayward & Hambrick, 1997). Governance scholars and practitioners should also find the results of our study important, as they underscore the significance of a powerful board to control the CEO. This is noteworthy because some prior governance research has produced mixed findings on the effects of board composition and other attributes (Dalton et al., 2007).

Interestingly, we find that the negative effects of executive greed on shareholder wealth decrease as CEOs experience more time in their role, confirming the view that greed is not necessarily stable over time (Posner, 2003; Wang & Murnighan, 2011). Yet, executive tenures are also decreasing on average. Thus, due to the trend toward shorter tenures, executives may rarely reach the point in their tenure at which they no longer desire nor are willing to extract excessive amounts of material wealth from the firms they lead. This outcome suggests that the reduction in executive tenure may have a negative rather than a positive influence on shareholder wealth. These results support the message that short-termism is not in the best interest of shareholders, adding to the long-standing debate in this topic (e.g., Laverly, 1996).

This study also makes a methodological contribution by modeling the development of a new construct, greed, and establishing its discriminant and predictive validity. We go beyond demographic measures used in much prior research on top managers to make inferences about top managerial characteristics that affect firm outcomes. In addition to extant theory, we relied on interviews with senior executives to help frame the context of the issues in our study and form the nomological network. Moreover, an expert panel of highly qualified individuals (scholars and industry analysts) contrasted greed and other constructs, providing support for the approach taken. While Hayward and Hambrick (1997) briefly suggested that the boundary between greed and hubris is blurred and that they might be highly related constructs (in the context of acquisitions), our theoretical examination and empirical modeling showed the constructs to be distinct and independent of one another.

Implications for Practice

Our findings underscore the negative effects of greed on shareholder wealth. This suggests that shareholders should pay careful attention to the design of executive compensation packages. Recent regulatory changes should enable shareholders to take action when it

appears that managerial greed is at play. Specifically, firms subject to SEC regulations must now allow shareholders to have an advisory vote on executive compensation, commonly referred to as “say-on-pay.” While the vote is nonbinding (i.e., the board can choose to ignore the outcome), as Krause, Whitley, and Semadeni (2013) discuss, no-votes often invite public scrutiny and boards should—and often do—take them seriously. The results of our study not only provide additional gravity to this issue but also help point shareholders to contexts where the effects of greed are likely to be most deleterious—in cases of short-tenured CEOs, high managerial discretion afforded by the industry, and low board power.

While shareholder “say-on-pay” votes may help curb managerial greed, boards of directors would be well served by tackling this issue at the source, when designing and negotiating executive pay. Rather than waiting for firm performance to suffer and/or shareholders to express their displeasure, boards can act to ensure that the CEO receives a fair compensation package he or she deserves without overcompensation. However, although our findings caution against rampant greed, we do not suggest that all instances of high executive pay are always driven by greed. As such, we are not necessarily advocating for universal caps on executive pay—as some observers of corporate governance note, trying to limit CEO pay is like squeezing a balloon: You squeeze it in one place, it pops out in another. However, a more enlightened approach to evaluating the appropriateness of executive pay seems called for.

Finally, although our results cannot speak to how greed impacts other stakeholders, as Miller and Le Breton-Miller (2007: 28) note, all “too often it is the workers, customers, and community who pay the tolls of executive greed.” The recent financial crisis is a very fitting example of that. We hope that our study opens a new line of inquiry into the systemic effects of greed, including its impact on multiple stakeholder groups.

Limitations and Future Directions

This study has some strengths and some limitations. We relied on qualitative semistructured interviews to explore the nature of greed and related constructs. We obtained additional primary data from an expert panel to inform our operationalization of greed. However, we used secondary data to build proxies for greed and study its impact on firm-level outcomes. While our results indicate the existence of the proposed relationships, collecting primary data would likely strengthen the study. We encourage future research to build on this foundation using other methodological approaches.

Future research using primary or secondary data could reveal additional linkages between greed and other firm-level outcomes. It could also be useful to investigate the potential drivers of greed. Such work could be extended to multiple country settings, as greed appears to be a universally acknowledged construct that might, nevertheless, be uniquely influenced by different formal and informal institutional environments. Refining our understanding of the relationship between greed and the related constructs of narcissism, hubris, and envy is another promising avenue for future research. While Hiller and Hambrick (2005) summarized the literature on narcissism, hubris, and overconfidence, there is much more to learn about these important managerial attributes, their interrelationships, and their potential outcomes. Some characteristics of pathological narcissism resemble hubris, such as overestimation of one’s abilities, but others, such as strong feelings of entitlement and excessive need for admiration and affirmation, do not. Future research could investigate the relationship

between narcissism and greed to determine whether, for example, the narcissist's need for admiration and affirmation may manifest as the excessive pursuit of material wealth.

Conclusion

The results of this work contribute to research on both upper echelons and corporate governance. One of the goals of this study was to introduce the managerial greed construct to the strategic management field. The second goal of our research was to investigate whether and how greed affects shareholder wealth. Our empirical results indicate that greed reduces shareholder wealth, and that managerial discretion exacerbates this relationship. Alternatively, a powerful board reduces the negative effect of greed on performance. Furthermore, managerial tenure, as predicted, negatively moderates or attenuates the negative greed–return relationship. These results have important implications for scholars and practitioners.

Appendix A

Semistructured Interview Questions

The following topics were discussed during the semistructured interviews, using these or similar questions. While all of the topics were addressed in each interview, the order of the topics and the actual questions depended on the flow of the exchange between the interviewer and the subject.

1. CEOs' role in setting own pay: Based on your experience and knowledge, how active are CEOs in setting their own pay?
2. Greed as pursuit: Do you think greed is more of the pursuit of excessive material wealth, or more of the realization of it?
3. Greed and self-interest: What do you think about the concepts of greed and self-interest? Are they the same or different? Is successful self-interest the same as greed? What about hyper-self-interest and greed?
4. On greed and related constructs: What about other concepts, such as power, opportunism, hubris? Are any of these concepts related to any others, and if so, how? Does the presence of power change any of these concepts?
5. On the nature of greed and hubris: Are either greed or hubris permanent traits, or are they situational?

Appendix B

Sample Questions and Responses From an Expert Panel (N = 8) Survey

What is your definition of greed?

Sample responses:

“The unbridled pursuit of money or material goods, beyond what is needed or deserved based on contributions one makes.”

“Excessive desire for wealth or other material things.”

“Excessive desire (beyond reasonable self-interest) to gain money to the detriment of yourself or others, with little or no concern for the consequences of actions taken other than the resulting gain of money.”

“Desire beyond needs regardless of the cost of others.”

“Excessive desire to possess wealth or goods.”

What is your definition of *hubris* (overconfidence)?

Sample responses:

“Hubris is excessive self confidence. Hubristic people think that they can perform tasks better than others, and that they are more talented than others.”

“Excessive pride or self-confidence beyond the warranted level.”

“A person with hubris/overconfidence believes that they have more control or influence over risky or uncertain outcomes than they actually do.”

“Blindness to limitations.”

“Hubris is the refusal of a person to consider that he or she might be incorrect. Hubris is a form of blindness to reality.”

Please indicate the extent to which you agree with the following statements using the following scale: “Strongly Disagree” (1), “Disagree” (2), “Neither Agree nor Disagree” (3), “Agree” (4), “Strongly Agree” (5)

“Greed is just another word for self-interest.”	($M = 1.6$)
“There is no such thing as greed.”	($M = 1.5$)
“Being overpaid is exactly the same as being greedy.”	($M = 1.6$)
“Overly confident people are always greedy.”	($M = 2.0$)
“Greedy people are always overly confident.”	($M = 2.0$)
“I can tell greed when I observe it.”	($M = 4.3$)
“There is such a thing as excessive compensation.”	($M = 4.6$)
“There is such a thing as healthy self-interest.”	($M = 4.4$)
“Greed is excessive self-interest that hurts others.”	($M = 4.0$)

Notes

1. The definitions also reveal several concepts related to greed, namely, power and excessiveness (e.g., in actions taken). We discuss these relationships.

2. Setting α (the probability of Type I error) and β (the probability of Type II error) equal to .05 means that the probability of our not finding a significant effect when it is actually present is equal to the probability of incorrectly rejecting the null (i.e., finding a spurious effect when it is not present in the population).

3. We use a dichotomous variable to be consistent with prior research on which we based this measure (cf. Malmendier & Tate, 2008). Using the indicator variable also results in higher hubris factor loadings. However, we examined the correlation between the two hubris *factor* variables—one constructed using a dichotomous CEO overconfidence variable and one using a continuous CEO confidence variable—and the two variables are highly correlated at .94. Our results are essentially unchanged if we use the continuous measure to create the hubris control.

4. A principal components factor analysis with varimax rotation showed all variables to load highly on one factor with an eigenvalue = 2.12.

5. We calculated multicollinearity diagnostics using a standard linear regression model because, as Menard (2001) notes, the appropriate functional form of the model is irrelevant for the purposes of diagnosing multicollinearity.

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