

# WHY “GOOD” FIRMS DO BAD THINGS: THE EFFECTS OF HIGH ASPIRATIONS, HIGH EXPECTATIONS, AND PROMINENCE ON THE INCIDENCE OF CORPORATE ILLEGALITY

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**Recent high-profile corporate scandals involving prominent, high-performing firms cast doubt on assertions that the costs of getting caught decrease the likelihood such high performers will act illegally. We explain this paradox by using theories of loss aversion and hubris to examine a sample of S&P 500 manufacturers. Results demonstrate that both performance above internal aspirations and performance above external expectations increase the likelihood of illegal activities. The sample firms' prominence enhanced the effects of performance above expectations on the likelihood of illegal actions. Prominent and less prominent firms displayed different patterns of behavior when their performance failed to meet aspirations.**

Research in a variety of disciplines and drawing on a variety of theoretical perspectives has long suggested that good performance provides a variety of benefits and opportunities for organizations that not only decrease the need to consider engaging in unethical, illegitimate, or illegal activities, but also provide strong disincentives for doing so (e.g., Barney, 1991; Coleman, 1988; Fombrun, 1996; Harris & Bromiley, 2007; Karpoff, Lee, & Martin, 2009; Karpoff & Lott, 1993). Researchers have argued that a firm can suffer numerous negative consequences if it is caught engaging in illegal activities, including damaged firm performance (Davidson & Worrell, 1988), loss of access to important resources, and severely tarnished reputations for both the firm

and its managers (e.g., Karpoff et al., 2009; Karpoff & Lott, 1993; Wiesenfeld, Wurthmann, & Hambrick, 2008). Further, research has also suggested that these losses can be greater for prominent firms than for less prominent and less well regarded companies (e.g., Fombrun, 1996; Rhee & Haunschild, 2006; Wade, Porac, Pollock, & Graffin, 2006).

In keeping with these arguments is the view firms that are performing well (“high-performing” firms) are less likely to feel the strains that can trigger the use of illegal activities (e.g., Baucus & Near, 1991; Clinard & Yeager, 1980; Harris & Bromiley, 2007; Staw & Sz wajkowski, 1975). However, empirical tests of this relationship have not yielded consistent results (e.g., Baucus & Near, 1991; Clinard & Yeager, 1980; Hill, Kelley, Agle, Hitt, & Hoskisson, 1992; McKendall & Wagner, 1997; Simpson, 1986; Staw & Sz wajkowski, 1975). Recent history further illustrates the complexity of this issue. Many of the firms involved in corporate scandals, such as Arthur Andersen, Enron, World Com, Tyco, and several leading investment banks, were generally viewed as prominent and/or high-performing companies until their scandals were uncovered.

Thus, although prior research has identified strong disincentives against high-performing and

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prominent firms engaging in illegal activity, research on corporate illegality provides little explanation of why and under what conditions prominent and successful firms would take such risks. This is the paradoxical question we attempt to address in this study. We argue that to unpack this riddle it is necessary to consider a firm's performance *relative* to the performance of its industry peers, rather than its absolute level of performance, which is what most prior research has considered. In exploring this issue, we draw on the literatures in social cognition and behavioral economics to explore how the pressures associated with one's own high performance aspirations (Lant, 1992) and others' expectations that high relative levels of performance will be maintained (Adler & Adler, 1989) can influence the collective perceptions and risk taking of high-performing and/or prominent organizations. We argue that the threat of declines in an organization's future relative performance and the potential costs to the organization and its managers of not meeting internal aspirations and external expectations increase the likelihood of illegal behavior, and that this likelihood is even greater when a firm is also prominent.

Our arguments and findings contribute to the literatures on corporate illegality and managerial decision making in several ways. First, this study contributes both theoretically and empirically to work on corporate illegality by differentiating between a firm's performance relative to the performance of its industry peers (which we label "performance relative to internal aspirations"), its current market performance relative to its prior market performance (which we label "performance relative to external expectations"), and absolute levels of performance. Doing so allows us to delineate the theoretical mechanisms that can make both strong performance relative to internal aspirations and external expectations potential drivers of corporate illegality. Because we consider how relative, rather than absolute, levels of performance can lead to illegal actions, we are able to consider a wider array of theoretical explanations than previous studies to help explain the inconsistencies in this research. To date, Harris and Bromiley (2007) is the only research we are aware of that has addressed the effects of relative performance on corporate malfeasance, and this study focused primarily on performance below aspirations. No research we are aware of explains why performing above aspirations can increase the likelihood of illegal actions or examines how external performance expectations affect the incidence of corporate illegality and how a firm's prominence is likely to moderate these relationships. Finally, our study contributes to the

growing literature exploring how cognitive biases and limitations shape top management team (TMT) decision making by discussing the mechanisms that can lead TMTs to engage directly in illegal actions and/or create the conditions that lead others in their firms to do so, even when past performance has been good (e.g., Carpenter, Pollock, & Leary, 2003; Chatterjee & Hambrick, 2007; Hayward & Hambrick, 1997).

We explore these issues by studying how high performance relative to internal aspirations and high performance relative to external expectations influenced the propensity of a sample of Standard & Poor's (S&P) 500 manufacturing firms to engage in illegal behavior during the period 1990–99. We further examine how firm prominence may amplify the influence of high performance relative to aspirations and expectations on the likelihood of engaging in illegal activity.

## THEORY AND HYPOTHESES

Corporate illegality is defined as *an illegal act primarily meant to benefit a firm by potentially increasing revenues or decreasing costs* (e.g., McKendall & Wagner, 1997; Szwajkowski, 1985). This definition expressly excludes illegal activities that are primarily meant to benefit the specific individual engaging in the act. Thus, a chief financial officer's embezzlement of corporate funds, for example, would not fall under the rubric of corporate illegality, because it is a transgression intended to benefit the individual embezzler at the expense of a firm and its shareholders. In contrast, violating an environmental regulation by inappropriately disposing of hazardous materials would be an instance of corporate illegality, because it is an act meant to lower the compliance costs for a firm, thereby increasing firm profitability and the value of the firm's stock.<sup>1</sup> As such, corporate illegality can be a way for a firm to boost its performance as it faces pressures to meet financial goals and expectations.

Empirical research on corporate illegality has addressed a number of factors that can predict which organizations are more likely to engage in illegal behavior (for reviews, see Birkbeck and LaFree [1993], Hill et al. [1992], McKendall and Wagner [1997], and Vaughan [1999]). Theoretically, this

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<sup>1</sup> Such an action is considered an example of corporate illegality even if individual executives benefit from the resultant stock increase (Zhang, Bartol, Smith, Pfarrer, & Khanin, 2008), because the illegal action was intended to enhance corporate performance and the stock price increase benefited all shareholders, not just executives.

stream of research has built on the general premise that firms are more likely to engage in corporate illegality when the upside benefits of doing so are perceived as outweighing the downside risks (e.g., Braithwaite, 1985; Coleman, 1987; Ehrlich, 1974; Sutherland, 1961). Drawing on this notion, scholars have examined the effects of firm performance, firm structure, executive compensation, and various environmental factors, including market booms and busts, on the incidence of corporate illegality (e.g., Baucus & Near, 1991; Clinard, Yeager, Bissette, Petrashek, & Harries, 1979; Harris & Bromiley, 2007; Hill et al., 1992; Johnson, Ryan, & Tian, 2009; McKendall, DeMarr, & Jones-Rikkens, 2002; McKendall & Wagner, 1997; Povel, Singh, & Winton, 2007; Simpson, 1986; Staw & Sz wajkowski, 1975; Vaughan, 1999).

In this study, we focus on the relationship between prior firm performance that exceeds aspirations and/or exceeds market expectations and corporate illegality and seek to understand the role these factors play in determining why and when decision makers in successful firms are likely to perceive that the potential benefits of illegality outweigh the costs. Other scholars have recently begun to consider why “good” firms may engage in illegal actions (Johnson et al., 2009) or why firms might engage in illegal actions during “good times” (Povel et al., 2007). However, whereas these studies have focused on either executives’ personal compensation incentives (Johnson et al., 2009) or processes associated with general market conditions (i.e., market booms) that are not specific to individual firms (Povel et al., 2007), we focus on firm-level antecedents and argue that high-performing firms may engage in corporate illegality in order to maintain their performance relative to unsustainably high internal aspirations and external expectations and that these pressures may be greater for prominent firms. These pressures can drive firms to take illegal actions even when they have performed well on an absolute basis and continue to do so.

Because of the issue we were studying and the methods we employed, we were not able to directly assess the ex ante aspirations and perceptions of firms’ TMTs. Thus, in developing our theory and hypotheses, we made two important assumptions. First, in keeping with decades of study on “upper echelons” (see Finkelstein, Hambrick, and Cannella [2009] for a recent and exhaustive review), we assumed that the perceptions of a firm’s TMT matter and will affect the firm’s actions. Thus, even though we operationalized our constructs at the organizational level, we employed individual-level theories of psychological processes and cognitive biases to develop our hypotheses. Our empirical

approach and the measures we employ to operationalize our constructs are consistent with the literature on firm performance relative to aspirations (Greve, 2003; Harris & Bromiley, 2007; Mezas, Chen, & Murphy, 2002), which has explored related issues at the firm, industry, and interindustry levels. Second, we could not definitively determine which individual, or group of individuals, was involved in a given illegal act; further, the particulars are likely to differ across firms and events. We therefore assumed that—whether a firm’s TMT members themselves decided to commit an illegal act, or whether it was an individual or group lower in the organization’s hierarchy—it was the TMT who established and fostered the culture of the organization, its aspiration levels, and the pressure to continue meeting or exceeding aspirations.

### High Aspirations and Expectations and Illegal Behavior

Researchers in behavioral economics and psychology have long studied individual decision-making processes and have found that individuals frequently act in ways that violate traditional economic assumptions of rationality in decision making. Rather than explaining these behaviors away as merely irrational or idiosyncratic, researchers have proposed a variety of psychological processes that can explain these seemingly aberrant outcomes. Key to these theories is the insight that absolute levels of performance are less meaningful than performance relative to some reference point that actors will aspire to meet or exceed (Kahneman & Tversky, 1979; Thaler & Johnson, 1990). We focus on three processes that could explain why firms with high relative performance may be more likely to engage in illegal actions: *loss aversion* (Kahneman & Tversky, 1979), the *house money effect* (Thaler & Johnson, 1990) and *executive hubris* (Hayward & Hambrick, 1997). Although these processes have been used to examine individual decision making more generally, a number of authors have suggested that they can be applied specifically to the decision making of CEOs and TMTs (e.g., Fiegenbaum, Hart, & Schendel, 1996; Fiegenbaum & Thomas, 1988; Hayward & Hambrick, 1997; Sanders, 2001; Wiseman & Gomez-Mejia, 1998). We use these processes to understand how both a firm’s internal aspirations and investors’ expectations can shape managers’ framing and perceptions of the riskiness of illegal practices.

**Loss aversion.** A key theoretical perspective that has emerged from research on cognitive biases is prospect theory (Kahneman & Tversky, 1979). According to this perspective, the manner in which

individuals frame choices affects how the choices are evaluated, and the framing can be influenced by whether actors perceive themselves to be in a gain or loss position. Prospect theory suggests that individuals evaluate a choice by gauging whether it represents a potential gain, a sure gain, a potential loss, or a sure loss and that they will behave in a risk-averse manner to protect sure gains and in a risk-seeking manner to avoid sure losses (e.g., Kahneman & Tversky, 1979; Tversky & Kahneman, 1981). Extending these ideas, Tversky and Kahneman (1991) suggested that choices also depend on the reference point used, so that even positive outcomes can be framed as losses, and negative outcomes as gains. Further, they argued that even if potential gains and losses are of similar magnitude, the negative consequences of losses will loom larger than the potential positive consequence of gains and will therefore dominate decision making, a phenomenon they labeled “loss aversion.”

Research in both management and finance has demonstrated that the aspirational reference point used to evaluate performance increases quickly when actors experience performance gains, and that these reference points can be either self-referencing, or relative to some other actor or group. For example, in a set of experiments using teams of managers in an executive education program and teams of MBA students, Lant (1992) found that the teams’ aspiration levels adjusted to performance feedback with an optimistic bias. That is, the teams’ aspiration levels used in determining success or failure increased when they received positive performance feedback. However, as aspirations increase, so does the likelihood that a team will fail to meet its aspirations, as ever higher levels of performance will be required just to maintain the status quo. In competitive strategy, this phenomenon is known as the “Red Queen effect” (Derfus, Maggitti, Grimm, & Smith, 2008)—that is, a circumstance in which a firm must perform better and better relative to its competition just to maintain its current market position.<sup>2</sup> However, performance cannot continue to increase at the same rate indefinitely; thus, performance levels are likely to eventually peak and flatten. When this occurs, teams whose aspirational reference points have increased will

perceive a loss because their relative performance has declined, even if their absolute level of performance is still quite high. Given that losses loom larger than gains, prior research has suggested that individuals will fight harder to retain what they currently possess than they will to gain something they have never owned (Cialdini, 2004). Thus, it is easy to see how high performers can experience pressures to maintain or exceed their performance aspirations that make them more willing to take risky illegal actions.

External investors’ expectations based on historically high stock performance can create similar pressures and perceptions. Research in finance has found that investors tend to extrapolate trends (DeBondt, 1993), and strong current firm performance leads to excessively optimistic expectations about future performance on the parts of both equity analysts (DeBondt & Thaler, 1990; Rajan & Servaes, 1997) and investors (DeBondt & Thaler, 1985, 1986; La Porta, 1996). At the same time, it becomes increasingly difficult to meet these high expectations. Firms face a trade-off between current performance and future performance and growth (Penrose, 1959). Further, because firms’ stock prices tend to be mean-reverting<sup>3</sup> (e.g., Brooks & Buckmaster, 1976), the likelihood of a high performer maintaining or improving its performance in a following period is rather low. High current firm performance, therefore, has the unintended effect of increasing the likelihood that the firm will be unable to meet future expectations.

Unfortunately, unexpected negative information is disproportionately influential (Rozin & Royzman, 2001), and the tendency of both analysts and financial markets is to overreact to unexpected news (e.g., DeBondt & Thaler, 1985). Thus, any indication that a firm may not be able to meet expectations often results in a drop in the firm’s stock price (e.g., Beneish, 1999). For example, Google Inc.’s stock price dropped by 12.4 percent after it announced results for the fourth quarter of 2005, despite strong performance, because results were below the market’s expectations (Liedtke, 2006). Similarly, Amazon.com shares dropped 16 percent on the day after it reported its earnings for the third quarter of 2007, despite beating earnings estimates, because the market expected even greater performance (Martin, 2007). Although inability to meet investors’ and analysts’ expectations

<sup>2</sup> The term is drawn from Alice’s conversation with the Red Queen in *Through the Looking Glass*. “Alice realizes that although she is running as fast as she can, she is not getting anywhere, relative to her surroundings. The Red Queen responds: ‘Here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!’” (Derfus et al., 2008: 61).

<sup>3</sup> That is, higher-than-average performance tends to be followed by performance declines, and lower-than-average performance tends to be followed by performance increases.



can be detrimental to any firm, it is particularly damaging to firms that have a history of high performance. Skinner and Sloan (2002), for example, found that the stocks of firms the financial market was particularly optimistic about tended to show asymmetrically large negative price reactions to negative earnings surprises.

Taken together, these points suggest that firms with high expectations are the most likely to face costly negative future market reactions owing to the combination of shifts in reference point (e.g., De Bondt & Thaler, 1985, 1986; Lant, 1992; La Porta, 1996), difficulties in maintaining high performance (e.g., Brooks & Buckmaster, 1976; Penrose, 1959), and the punitive nature of market judgments (e.g., Skinner & Sloan, 2002).<sup>4</sup> Consequently, the CEOs and managers of firms experiencing high external expectations are likely to frame the future as a choice between an almost certain loss if they fail to make changes or a chance to stave off that loss if they engage in riskier behaviors (e.g., Kahneman & Tversky, 1979; Tversky & Kahneman, 1981, 1991). Indeed, Beneish (1999) found that the primary characteristic of earnings manipulators was that they had high growth in the periods prior to those in which they engaged in earnings manipulation, and he argued this was because the firms' financial positions and capital needs put pressure on managers to achieve earnings targets. We suggest that CEOs and managers of firms facing a potential loss in future stock price performance (due to high current performance) may also view illegal activities as a stop-gap solution to keep from disappointing constituents.

**The house money effect and hubris.** It is also possible that another set of psychological processes associated with high performance increases the likelihood of corporate illegality: the house money effect (Thaler & Johnson, 1990) and hubris (Hayward & Hambrick, 1997; Thaler & Johnson, 1990). Drawing on the idea of mental accounting (Thaler, 1985), whereby gains and losses are coded according to a prospect theory value function, Thaler and Johnson (1990) found that prior gains and prior losses could influence risk taking in such a way that prior gains tended to lead to higher levels of risk seeking. They labeled this phenomenon the

“house money effect,” on the basis of the notion that individuals with prior gains perceive themselves to be gambling with “the house’s money”—i.e., the profits from prior winning bets—rather than with their own capital. Prior losses, on the other hand, lead to risk aversion, except when individuals believe that there is a chance to break even or end up ahead, in which case they also lead to risk seeking.

Since the manner in which decisions are framed affects the willingness to take risks (Kahneman & Tversky, 1979; Tversky & Kahneman, 1981, 1986), high performance will not necessarily induce loss aversion (Tversky & Kahneman, 1991). Rather, the nature of the mental accounting rules (Thaler, 1985) used by managers will determine whether prior gains or losses are readily assimilated into their reference points and affect aspirations and subsequent decision making. Traditional economic reasoning suggests that prior gains and losses represent “sunk costs” and should have no bearing on subsequent decision making (e.g., Denzau, 1992). However, researchers have found that individuals nonetheless often take sunk costs into account when making decisions (Thaler, 1980). As discussed previously, if a company has experienced substantial gains, its CEO and managers may become more risk seeking, since they are now betting with the house’s money.

Thaler and Johnson (1990) noted that, in addition to framing downside costs as less expensive, prior success can also engender hubris (e.g., Hayward & Hambrick, 1997; Roll, 1986). They suggested extended periods of high performance can make organizational managers believe in their own infallibility, leading them to become more risk seeking. Because they believe they cannot fail, these managers ignore the downside consequences of a risky activity and consider only the upside potential of its successful execution. In our research context, this implies that hubristic managers will be more likely to believe they can outsmart regulatory authorities or the market and avoid detection of their illegal activities, thus increasing the likelihood that they will engage in corporate illegality in response to high aspirations and expectations.

Given the data available to us, we cannot adjudicate which process—loss aversion, the house money effect, and/or hubris—is operating in a given situation; however, although different psychological processes may be at work in different cases, all three suggest that high performance relative to aspirations and high stock price performance relative to expectations should increase the likelihood that

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<sup>4</sup> Punitive market judgments also appear to extend to the labor market. For example, Semadini, Cannella, Fraser, and Lee (2008) found that executives of banks that received Federal Deposit Insurance Corporation intervention were more likely to suffer negative career consequences such as demotion and transfer to geographic locations where they lacked client relationships.

a firm will engage in corporate illegality. Therefore, we hypothesize,<sup>5</sup>

*Hypothesis 1. High firm accounting performance relative to aspirations is positively related to the likelihood that a firm engages in corporate illegality.*

*Hypothesis 2. High firm stock price performance relative to expectations is positively related to the likelihood that a firm engages in corporate illegality.*

### The Moderating Effects of Prominence

A firm's prominence reflects the degree to which external audiences are aware of its existence, as well as the extent to which they view it as relevant and salient (e.g., Brooks, Highhouse, Russell, & Mohr, 2003; Ocasio, 1997; Rindova, Petkova, & Kotha, 2007; Rindova, Williamson, Petkova, & Sever, 2005). Prominence can confer many benefits on a firm, including price premiums (Rindova et al., 2005), an enhanced ability to form strategic alliances (Pollock & Gulati, 2007), and heightened investor and media attention and positive evaluations (Pollock, Rindova, & Maggitti, 2008). On the other hand, prominence also makes firms more likely to be targeted for attacks by activists (Briscoe & Safford, 2008; Edelman, 1992) and potential competitors (Chen, 1996; Chen, Su, & Tsai, 2007; Ocasio, 1997). In fact, external audiences monitor the activities and characteristics of prominent firms more closely (Brooks et al., 2003), amplifying the effects of both positive and negative firm actions and outcomes. Thus, the prominence of a firm may moderate the influence of high performance relative to aspirations and market expectations on illegal activities.

We argue that the increased attention prominent firms receive can exacerbate the pressures associated with trying to meet or exceed high internal aspirations and external expectations. Stakeholders are likely to scrutinize a firm's performance in order to make inferences about the firm's ability to provide value to a relationship (e.g., Pollock & Gulati, 2007), the likelihood that the firm will gain in value or take newsworthy actions (e.g., Pollock et al., 2008), and the firm's ability to attack and retal-

iate (e.g., Chen, 1996; Chen et al., 2007). If prominence increases the volume of investor attention (Pollock et al., 2008), organizational audiences are much more likely to notice how well a firm performs relative to their expectations, thereby amplifying any analyst and market reactions to stock price performance shortfalls (e.g., Brooks et al., 2003; DeBondt & Thaler, 1985). Additionally, because a prominent firm's performance will garner substantial stakeholder attention, its managers are likely to be even more acutely aware that others will notice its failure to achieve its aspirations, further increasing the pressure from external expectations (Salancik, 1977). We therefore hypothesize:

*Hypothesis 3a. The more prominent a firm, the greater the effect of high performance relative to aspirations on the likelihood the firm will engage in corporate illegality.*

*Hypothesis 3b. The more prominent a firm, the greater the effect of high firm stock price performance relative to expectations on the likelihood the firm will engage in corporate illegality.*

### DATA AND METHODOLOGY

Our sample consisted of all manufacturing firms that were part of the S&P 500 between 1990 and 1999 and had December 31 fiscal year-ends.<sup>6</sup> The resulting data set contained 194 firms and 1,749 firm-year observations.

#### Dependent Variable

**Corporate illegality.** This dichotomous variable was coded 1 if a focal firm engaged in any incident of corporate illegality in a given year and 0 otherwise (e.g., Baucus & Near, 1991; Schnatterly, 2003). Although some studies on corporate illegality have used the number (e.g., Kesner, Victor, & Lamont, 1986; McKendall & Wagner, 1997; Simpson, 1987) and/or severity (e.g., McKendall et al., 2002) of crimes committed, we used a dichotomous variable in this study as a more conservative test of the propensity of organizations to engage in *any* act of corporate illegality. If all crimes are subject to underreporting and provide only a "crude approximation" of the actual amount of criminality (Simpson, 1986: 863), it becomes difficult to make fine-grained distinctions about the number or severity

<sup>5</sup> Because our theoretical focus was on high performance relative to aspirations and expectations, we did not develop specific hypotheses about the effects of performance below aspirations and expectations. However, we did include measures for performance below aspirations and expectations in our empirical analysis, and we discuss the implications of our findings with respect to these measures in the Discussion section.

<sup>6</sup> We included this criterion to avoid any potential biases associated with using firms that have different fiscal year-ends (Porac, Wade, & Pollock, 1999).

of particular incidents. In particular, the potential for underreporting implies that each incident is *at least as severe* as it appears—and that there may be other, undetected, incidents. Consequently, we felt that examining the antecedents of an illegal action without attempting to distinguish its severity was the most conservative approach.

We coded both convictions and settlements as violations, and violations were coded according to the year in which they were committed, as opposed to the year that they were detected or reported, or when criminal charges were brought. Whenever the original source document did not identify the exact time period in which a particular violation occurred, we utilized other sources (e.g., contacting regulatory agencies, company Securities and Exchange Commission [SEC] filings, etc.) to determine the year(s) of the violation.

We followed a two-step process to ensure completeness in our sample. First, since S&P 500 firms are chosen as the “leading companies in leading industries of the U.S. economy” (Standard & Poor’s, 2004: 1), these firms are likely to receive substantial media coverage. Thus, following Schnatterly (2003), we searched for particular terms and phrases in various media sources using three different databases. We searched all publications under the Business & Finance source list under Business News in Lexis-Nexis; all publications in Infotrac; and the Popular Press, Guildenstern’s List, Newspapers: Top 50 US newspapers, and Major News and Business Publications: U.S. in Factiva. We used a broad range of search terms to identify potential articles but selected only incidents that were consistent with our definition of corporate illegality as acts primarily meant to benefit a firm by increasing revenues or decreasing costs (e.g., McKendall & Wagner, 1997; Szwajkowski, 1985).<sup>7</sup> The illegal acts we considered in this study were environmental violations, anticompetitive actions, false claims, and fraudulent actions.

After the database search, one of us read each article to ensure that it was discussing an incident of corporate illegality, then gathered information regarding the identity of the perpetrating firm and the year in which the violation occurred. In each case, we searched for all available dates in the databases, but we limited ourselves to crimes committed between 1990 and 1999. As a second step, we also searched all 1990–2003 issues of the *Corporate Crime Reporter*, a legal newsletter devoted to reporting instances of criminal and civil cases

involving corporations, between 1990 and 2003. Each incident that we identified in the first step relating to one of our violation categories was identified in the *Corporate Crime Reporter* during our second step.

Our search identified 469 incidents of corporate illegality for the firms in our sample between 1990 and 1999, of which 162 were environmental violations, 96 were fraud-related, 124 were related to false claims, and 87 were anticompetitive violations. Since we measured corporate illegality as a dichotomous variable that indicated whether or not a firm engaged in *any* incident of corporate illegality in a given year, these 469 incidents yielded 270 firm-year observations coded 1 for our sample, with the rest coded 0.

### Independent Variables

**Performance relative to aspirations.** Following recent research, we defined performance relative to aspirations as a spline function based on the difference between a firm’s performance and the performance of a relevant comparison group (Greene, 2003; Greve, 2003). We employed a spline to isolate the effects of performance above aspirations and to see if performance above and below aspirations had different effects on corporate illegality. Return on assets (ROA) was the performance measure used (e.g., Greve, 2003; Harris & Bromiley, 2007), and the variables were coded so that larger positive values represented greater distance from aspirations for both measures. To do this, we created two separate variables:

$$\begin{aligned} \text{Performance above aspirations}_{it} \\ = \text{ROA}_{it} - \text{aspirations}_{it} \end{aligned}$$

$$\begin{aligned} \text{if } \text{ROA}_{it} > \text{aspirations}_{it} \\ = 0 \text{ if } \text{ROA}_{it} \leq \text{aspirations}_{it} \end{aligned}$$

and

$$\begin{aligned} \text{Performance below aspirations}_{it} \\ = \text{aspirations}_{it} - \text{ROA}_{it} \end{aligned}$$

$$\begin{aligned} \text{if } \text{ROA}_{it} < \text{aspirations}_{it} \\ = 0 \text{ if } \text{ROA}_{it} \geq \text{aspirations}_{it}. \end{aligned}$$

Prior research has examined a firm’s current performance relative to both the performance of others (social aspirations) and the firm’s past performance (historical aspirations) (e.g., Baum, Rowley, Shipilov, & Chuang, 2005; Greve, 2003; Harris & Bromiley, 2007). Some scholars have combined these two

<sup>7</sup> A list of search terms is available from the authors upon request.

types of aspirations into a single measure (e.g., Greve, 2003), but others have included separate splines for each aspirational referent (e.g., Baum et al., 2005; Harris & Bromiley, 2007). We explored both approaches and found that, although performance relative to historical aspirations was not significant in any of our models, performance relative to social aspirations and the combined social and historical aspirations measure yielded the same pattern of results. Since our results were the same whether or not performance relative to historical aspirations was included separately in the model with social aspirations, we include only performance relative to social aspirations in our reported analyses.

Since prior research suggests that the two-digit SIC code of a firm's primary industry is a useful indicator that companies themselves find informative (Porac et al., 1999), we defined the relevant peer group as firms in the S&P 500 in a given year that had the same two-digit SIC code as a focal firm (excluding the focal firm). Social aspirations were calculated using the following formula, where  $t$  is time,  $i$  refers to the focal firm,  $j$  refers to the S&P 500 firms in  $i$ 's two-digit SIC code, and  $N$  is the total number of S&P 500 firms in  $i$ 's two-digit SIC code, including  $i$ .

$$\text{Social aspirations}_{it} = \frac{\sum_{j \neq i} ROA_{jt}}{N - 1}.$$

**Stock price performance relative to external expectations.** This variable was operationalized using abnormal returns. Abnormal returns refer to the difference between a firm's observed and expected stock market returns, where the following model is assumed to be descriptive of a firm's market returns (e.g., Zajac & Westphal, 2004):

$$\text{Firm returns}_{it} = \alpha_i + \beta_i \text{market returns}_{it} + \epsilon_{it}.$$

In this model,  $t$  is time,  $i$  is a focal firm,  $\alpha_i$  is the firm's rate of return when the market returns equal 0,  $\beta_i$  is the firm's beta, or systematic risk, and  $\epsilon_{it}$  is a serially independent error term. Abnormal returns is then calculated as follows, where  $a_i$  and  $b_i$  are least squares estimates of  $\alpha_i$  and  $\beta_i$ , respectively (Zajac & Westphal, 2004):

$$\begin{aligned} \text{Abnormal returns}_{it} = & \text{firm returns}_{it} - a_i \\ & - b_i \text{market returns}_{it}. \end{aligned}$$

We calculated  $a_i$  and  $b_i$  by regressing a firm's monthly returns on S&P 500 Composite Index returns for the prior 60 months. A new  $a_i$  and  $b_i$  were estimated for each year in our observational period

for each firm to account for changing relationships between firm and market returns over time. Thus, we used returns from 1984–88 to calculate  $a_i$  and  $b_i$  to predict abnormal returns in 1989, and 1985–89 returns to calculate a different  $a_i$  and  $b_i$  to predict abnormal returns in 1990. The 1989 and 1990 abnormal returns were used to predict illegal activities in 1990 and 1991, respectively. As with performance relative to social aspirations, we created a spline function for this measure. *Positive abnormal returns* equaled the value of the abnormal return if it was greater than 0, and 0 otherwise; *negative abnormal returns* equaled the absolute value of the abnormal return if it was less than 0, and 0 otherwise. Hence, larger values of each measure represent greater distance from the level of external expectations. Data on both firm and market returns were collected from the CRSP database.

**Prominence.** We used presence on *Fortune's* Most Admired Companies list as an indication of prominence. This annual list is based on a survey in which executives, directors, and securities analysts are asked to identify and rate the ten largest companies in their industry. Since not all of the firms in our sample appeared on *Fortune's* Most Admired Companies, we created a dichotomous variable that took the value 1 if a firm appeared on the list in a given year and 0 otherwise. In keeping with the notion that being on the list represents prominence, this variable was correlated .34 with another indicator of prominence, the number of analysts covering a firm (e.g., Pollock & Gulati, 2007).<sup>8</sup>

### Control Variables

We controlled for a number of firm- and industry-level factors that may affect the propensity to engage in corporate illegality, including a firm's corporate governance structures, its levels of slack resources, and characteristics of its industry environment.

**Corporate governance structures.** We controlled for four corporate governance characteristics associated with effective monitoring and control of managerial behavior. *CEO/chair separation* was measured as a dichotomous variable coded 1 if

<sup>8</sup> We did not use analyst coverage as an indicator of prominence because this measure was also significantly correlated with other firm dimensions we measured, thus reducing the discriminant validity of our measures. Because we did not have actual rankings values for firms not included on the *Fortune* "Most Admired" list, we did not consider how favorably firms were assessed (Rindova et al., 2005).



a firm's CEO and chairperson were different individuals. *Board size* was the total number of directors on a firm's board. *Proportion of outside directors* was the number of directors of a firm with no substantial business or family ties with the firm's management (e.g., Baysinger & Butler, 1985) divided by the total number of directors. *Equity ownership* was the natural log of the percentage of outstanding shares beneficially owned by all managers and directors; data were gathered from the beneficial ownership table in proxy statements. Governance variable data were gathered from company proxy statements, 10-K statements, and annual reports from Lexis-Nexis and the SEC's EDGAR database.

We were unable to obtain governance data for firms prior to the 1992 fiscal year; thus, we imputed missing values for these variables in 1989, 1990, and 1991.<sup>9</sup> Scholars have suggested that when some data are missing, multiple imputation of the missing data can be reliably employed to estimate values for the missing cases. Multiple imputation injects the appropriate amount of uncertainty when computing standard errors and confidence intervals (e.g., Fichman & Cummings, 2003) by deriving multiple predicted values for each missing case and using these predicted values to generate a range of possible parameter estimates. It then combines these estimates, approximating the error associated with sampling a variable assuming the reasons for nonresponse are known (i.e., measurement error) as well as the uncertainty associated with the reasons the data may be missing, thereby producing an average parameter estimate and appropriate standard error. Doing so increases the variance in the imputed data, making it less likely that significant results will be due to the use of imputed values.

Following Jensen and Roy (2008), we employed multiple imputation using the "ice" command in Stata 9.2 (Royston, 2005a, 2005b) to impute values for governance variables with missing values. We used 20 imputations (rather than the typical 3 to 5 [e.g., Fichman & Cummings, 2003]) to increase the amount of variance incorporated in the estimates and thereby make our tests more conservative. We also specified a particular random number seed so that we could replicate the imputed data sets in the future.

**Firm size.** We operationalized firm size as the number of employees reported annually in Com-

pustat. The number of employees was transformed into its natural logarithm to reduce the potential effects of extreme values. Because firm size was highly correlated with other variables in our study, particularly prominence (.60) and board size (.36), we partialled the common variance shared by these measures out of the size control by regressing prominence and board size on the logged number of employees and used the residuals from this regression in our models (e.g., Cohen, Cohen, West, & Aiken, 2003: 613). By doing so, we controlled for the elements of firm size that might impact the incidence of illegal activity, but are not related to prominence or board size (e.g., Brown & Perry, 1994; Cohen et al., 2003); firm complexity is an example of such an element. We also ran a robustness check, assigning the shared variance to the size control by regressing the logged number of employees on prominence instead. We obtained the same pattern of results as our in normal analyses, although the board size control and the main effect of the prominence residual were not significant. We also considered sales and total assets as indicators of size, but they yielded the same pattern of results as number of employees and were more highly correlated with the other independent variables.

**Slack.** We controlled for three types of slack resources, because firms with more slack resources have less need to pursue risky alternatives (i.e., illegal activities) to maintain their performance (Cyert & March, 1963; Greve, 2003). *Absorbed slack* was measured as the ratio of selling, general, and administrative expenses to sales; *unabsorbed slack* was measured as the ratio of cash and marketable securities to liabilities; and *potential slack* was measured as the ratio of debt to equity (Greve, 2003).

**Year indicators.** Nine year indicators were constructed to control for systematic differences in the incidence of corporate illegality. The omitted year was 1990.

**Environmental conditions.** We controlled for environmental munificence and dynamism to capture industry-level differences in the environments that firms faced. As have those conducting prior work, we calculated environmental *munificence* as the regression slope coefficient divided by the mean value for the regression of time against the value of shipments for a firm's industry for the preceding five years. *Dynamism* was calculated as the standard error of the regression slope divided by the mean value of shipments using the same regression models as were used in calculating market growth (e.g., Dess & Beard, 1984; Mishina, Pollock, & Porac, 2004). For both measures, we used four-digit SIC codes to determine a firm's industry. Value of

<sup>9</sup> Post hoc analyses with models excluding the first three years suggest that imputing values did not result in spurious relationships.

shipment data were gathered from the Annual Survey of Manufacturers by the U.S. Census Bureau and the NBER-CES Manufacturing Industry Database (Bartelsman, Becker, & Gray, 2000).

All of the independent and control variables were calculated using values from the end of the prior year. We used logistic regression analysis to test our hypotheses since our dependent variable was dichotomous. We specified robust standard errors to control for potential heteroskedasticity and provide a more conservative test of our hypotheses (e.g., White, 1980).<sup>10</sup> We used the “mim” command in Stata 9.2 to analyze the imputed data and combined the parameter estimates using Rubin’s (1987) rules to obtain valid estimates.<sup>11</sup> We also ran collinearity diagnostics to check for potential multicollinearity in our models. Condition numbers for every model were below the threshold of 30 (ranging between 13.81 and 22.27), suggesting that collinearity was not likely to be a significant issue in our models (Belsley, Kuh, & Welsch, 2004).

## RESULTS

Table 1 provides pairwise correlations and descriptive statistics for each of the variables in our study. Table 2 presents the results of our analyses predicting corporate illegality. The predicted likelihood of engaging in illegal activity was 15.4 percent for our sample. Several control variables were significant in our models. The 1999 year dummy was significant and negative in six of our seven models, suggesting that there were fewer incidents of corporate illegality in 1999 than in 1990 (the excluded category). Additionally, both environmental munificence and dynamism were linked with higher incidence of corporate illegality; the latter effect is consistent with the results found by Baucus and Near (1991). The firm-level controls for

board size, firm size, and prominence had positive main effects in all models, and unabsorbed slack had a positive main effect in three of the seven models.<sup>12</sup> Additionally, equity ownership, absorbed slack, and potential slack had negative main effects on the likelihood of corporate illegality in five of the seven models.

Hypothesis 1 predicts that high performance relative to aspirations will be positively related with a firm’s propensity to engage in corporate illegality. Performance above social aspirations was positive and significant in all models, providing good support for Hypothesis 1. In addition, performance below social aspirations was negative and significant in models 2 and 4. Figure 1 graphs the main effect of performance relative to social aspirations. Table 3 summarizes the likelihood of illegal behavior when performance meets aspirations, for performance levels one and two standard deviations above and below aspirations, and for the maximum and minimum values in our sample.<sup>13</sup>

Hypothesis 2 predicts high stock price performance relative to expectations (hereafter referred to as “positive abnormal returns”) will be positively related with a firm’s propensity to engage in illegal activity. Positive abnormal returns were positive and significant, but only in the models that included no interactions with prominence. Thus, there was only partial support for Hypothesis 2. In addition, negative abnormal returns were negative and significant in model 3, which did not include the performance relative to aspirations measures, but the negative abnormal returns measure was not significant when these measures were included. Figure 2 graphs the main effect relationship between stock price performance relative to expectations and the likelihood of corporate illegality, and Table 3 summarizes the likelihood of illegal behavior when stock price performance meets expectations, for performance levels one and two standard deviations above and below expectations, and for the maximum and minimum values in our sample.<sup>14</sup>

Hypothesis 3a predicts that the relationship

<sup>10</sup> We also ran two different robustness checks using rare events logistic regression models (Tomz, King, & Zeng, 1999) to deal with the fact that corporate illegality was a relatively rare outcome in our sample. The robustness checks provided results that were consistent with our original analyses, suggesting that our findings were robust and could be interpreted with confidence.

<sup>11</sup> The rareness of our dependent variable and the lack of variance in many of our measures, as well as Stata’s use of the Gauss-Hermite quadrature method to calculate logistic regressions, made both random- and fixed-effect procedures unstable and infeasible. Although the independent and control variables only controlled for *visible* firm heterogeneity, their stability over time implied that visible firm differences captured a large proportion of the overall firm heterogeneity.

<sup>12</sup> For our sample, prominent firms had a baseline likelihood of engaging in illegal activity of 18.43 percent, and less prominent firms had a baseline of 10.20 percent.

<sup>13</sup> Performance above social aspirations occurred in 50.4 percent of the observations, and 49.6 percent had performance below aspirations. Performance relative to aspirations had a mean of 0.00 and a standard deviation of 0.08.

<sup>14</sup> Positive abnormal returns occurred in 42.0 percent of the observations, and 58.0 percent had negative abnormal returns. Stock price performance relative to external expectations had a mean of  $-0.10$  and a standard deviation of 0.53.

TABLE 1  
Correlations and Descriptive Statistics

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Corporate illegality	0.15	0.36																									
2. 1991 Dummy	0.10	0.30	.02																								
3. 1992 Dummy	0.10	0.30	.01	-.11																							
4. 1993 Dummy	0.10	0.31	.01	-.11	-.11																						
5. 1994 Dummy	0.10	0.31	.02	-.11	-.11	-.12																					
6. 1995 Dummy	0.10	0.30	.02	-.11	-.11	-.11	-.11																				
7. 1996 Dummy	0.10	0.30	.01	-.11	-.11	-.11	-.11	-.11																			
8. 1997 Dummy	0.10	0.30	-.01	-.11	-.11	-.11	-.11	-.11	-.11																		
9. 1998 Dummy	0.10	0.30	-.03	-.11	-.11	-.11	-.11	-.11	-.11	-.11																	
10. 1999 Dummy	0.10	0.29	-.06	-.11	-.11	-.11	-.11	-.11	-.11	-.11	-.11																
11. Munificence	0.05	0.05	.04	.12	-.05	-.14	-.15	-.06	.09	.07	.06	-.04															
12. Dynamism	0.02	0.01	.07	.01	.01	-.03	-.01	-.01	-.01	-.03	-.01	.03	.01														
13. CEO-chair separation	0.14	0.34	-.03	.09	.10	-.05	-.04	-.05	-.05	-.03	-.01	-.03	.07	-.01													
14. Board size	12.61	3.76	.10	.20	.23	-.05	-.08	-.10	-.09	-.11	-.11	-.12	-.09	.00	.05												
15. Percentage of outsiders on board	0.66	0.21	.00	-.17	-.37	.08	.09	.09	.11	.14	.14	.18	-.03	-.06	-.19	-.28											
16. Log equity ownership	1.65	0.96	-.14	.22	.24	-.09	-.09	-.09	-.10	-.11	-.11	-.11	.11	-.04	.17	.14	-.39										
17. Size residual (employees)	0.00	0.78	.23	-.04	-.06	.01	.02	.02	.02	.03	.01	.04	-.03	.00	-.07	.00	.16	-.34									
18. Absorbed slack	0.22	0.14	-.08	-.01	.01	.00	.00	-.01	-.01	.00	.01	.03	.19	-.26	.02	-.01	-.01	.06	-.13								
19. Unabsorbed slack	0.18	0.51	-.02	.02	.03	.02	.02	-.02	-.02	-.01	-.02	-.02	.19	.01	.16	-.13	-.11	.12	-.24	.19							
20. Potential slack	0.60	1.98	.00	.00	-.04	.01	.01	-.01	-.01	-.01	.04	.00	-.05	.04	-.06	.06	.05	.00	.09	-.03	-.07						
21. Prominence	0.59	0.49	.16	-.01	.00	.00	-.01	-.01	.00	.00	.02	.02	-.08	-.03	-.12	.19	.08	-.20	.00	-.10	-.15	.10					
22. Performance above aspirations	0.03	0.05	.08	-.02	-.02	.05	.01	.00	.00	-.03	.01	.04	.14	-.06	.04	-.11	-.03	.02	-.20	.24	.29	-.08	.03				
23. Performance below aspirations	0.03	0.05	-.08	-.01	.04	-.03	.01	-.05	-.01	.03	.04	.01	-.06	.09	-.01	.01	-.02	.02	.05	-.02	-.07	.05	-.03	-.25			
24. Positive abnormal returns	0.15	0.30	.06	-.04	.04	-.03	.04	.00	-.05	.01	.07	.03	-.06	.04	.06	-.06	.00	.02	-.02	.05	.05	-.01	-.03	.07	-.05		
25. Negative abnormal returns	0.25	0.34	-.11	.00	.00	-.05	-.05	-.08	.13	.01	-.03	-.06	.18	.08	.01	-.03	-.09	.13	-.11	-.05	.05	-.03	-.14	-.13	.17	-.36	

TABLE 2  
Multiple Imputation Estimates of Logistic Regression Models Predicting Corporate Illegality<sup>a</sup>

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
1991 Dummy	0.15 (0.50)	0.12 (0.54)	0.05 (0.51)	0.05 (0.55)	0.12 (0.55)	0.04 (0.50)	0.04 (0.55)
1992 Dummy	0.16 (0.51)	0.18 (0.57)	0.05 (0.52)	0.10 (0.58)	0.20 (0.58)	0.03 (0.53)	0.10 (0.60)
1993 Dummy	0.13 (0.47)	-0.01 (0.50)	0.00 (0.48)	-0.08 (0.51)	-0.04 (0.51)	-0.02 (0.48)	-0.11 (0.52)
1994 Dummy	0.20 (0.48)	0.15 (0.51)	0.04 (0.49)	0.04 (0.52)	0.14 (0.52)	0.01 (0.49)	0.01 (0.53)
1995 Dummy	0.23 (0.47)	0.18 (0.50)	0.09 (0.48)	0.10 (0.51)	0.17 (0.51)	0.09 (0.47)	0.09 (0.51)
1996 Dummy	-0.02 (0.48)	-0.05 (0.51)	-0.05 (0.49)	-0.07 (0.52)	-0.06 (0.52)	-0.10 (0.48)	-0.10 (0.52)
1997 Dummy	-0.13 (0.48)	-0.10 (0.52)	-0.29 (0.49)	-0.21 (0.52)	-0.10 (0.53)	-0.29 (0.49)	-0.22 (0.53)
1998 Dummy	-0.43 (0.50)	-0.49 (0.53)	-0.61 (0.51)	-0.62 (0.54)	-0.50 (0.54)	-0.62 (0.51)	-0.62 (0.54)
1999 Dummy	-0.78 (0.53)	-0.94 <sup>†</sup> (0.56)	-0.93 <sup>†</sup> (0.53)	-1.04 <sup>†</sup> (0.56)	-0.96 <sup>†</sup> (0.57)	-0.99 <sup>†</sup> (0.53)	-1.10 <sup>†</sup> (0.57)
Munificence	4.58* (1.73)	3.83* (1.69)	5.73** (1.73)	4.79** (1.69)	3.72* (1.70)	5.99** (1.72)	4.91** (1.70)
Dynamism	13.55* (5.86)	16.26** (5.90)	13.50* (5.92)	15.73* (5.94)	16.13** (5.87)	13.16* (5.91)	15.39* (5.88)
CEO-chair separation	-0.13 (0.34)	-0.14 (0.35)	-0.18 (0.35)	-0.19 (0.36)	-0.12 (0.35)	-0.18 (0.36)	-0.17 (0.36)
Board size	0.08* (0.04)	0.10* (0.04)	0.08 <sup>†</sup> (0.04)	0.10* (0.04)	0.10* (0.04)	0.08 <sup>†</sup> (0.04)	0.10* (0.04)
Percentage of outsiders on board	-0.19 (0.74)	0.13 (0.78)	-0.16 (0.76)	0.15 (0.80)	0.24 (0.78)	-0.13 (0.77)	0.26 (0.80)
Log equity ownership	-0.30 <sup>†</sup> (0.15)	-0.26 <sup>†</sup> (0.15)	-0.29 <sup>†</sup> (0.15)	-0.26 <sup>†</sup> (0.15)	-0.25 (0.15)	-0.29 <sup>†</sup> (0.15)	-0.24 (0.15)
Size residual (employees)	0.78** (0.11)	0.93** (0.11)	0.75** (0.11)	0.90** (0.12)	0.96** (0.12)	0.74** (0.11)	0.91** (0.12)
Absorbed slack	-1.05 (0.71)	-1.82* (0.76)	-1.23 <sup>†</sup> (0.71)	-1.89* (0.76)	-1.80* (0.76)	-1.10 (0.71)	-1.75* (0.76)
Unabsorbed slack	0.32** (0.11)	0.15 (0.12)	0.32** (0.11)	0.16 (0.13)	0.14 (0.16)	0.30** (0.11)	0.13 (0.17)
Potential slack	-0.07* (0.03)	-0.06 <sup>†</sup> (0.03)	-0.08* (0.03)	-0.07 <sup>†</sup> (0.04)	-0.05 (0.04)	-0.07* (0.03)	-0.05 (0.04)
Prominence	0.90** (0.18)	0.82** (0.18)	0.85** (0.18)	0.79** (0.18)	1.10** (0.23)	0.76** (0.27)	0.94** (0.32)
Performance above aspirations		8.13** (1.59)		7.73** (1.56)	10.04* (4.23)		9.80* (4.42)
Performance below aspirations		-6.21* (2.37)		-5.24* (2.20)	1.33 (1.68)		1.47 (1.73)
Positive abnormal returns			0.55** (0.20)	0.58** (0.21)		-0.59 (0.59)	-0.54 (0.61)
Negative abnormal returns			-0.84* (0.36)	-0.48 (0.36)		-0.33 (0.51)	-0.14 (0.50)
Performance above aspirations × prominence					-2.38 (4.13)		-2.79 (4.25)
Performance below aspirations × prominence					-13.29* (5.04)		-11.51* (4.50)
Positive abnormal returns × prominence						1.70* (0.68)	1.64* (0.70)
Negative abnormal returns × prominence						-0.90 (0.69)	-0.66 (0.68)
Constant	-3.03** (0.96)	-3.47** (1.02)	-2.84** (1.01)	-3.39** (1.06)	-3.80** (1.04)	-2.84** (1.03)	-3.66** (1.10)
Minimum <i>df</i>	61.0	56.9	56.9	54.1	56.8	55.0	52.9

<sup>a</sup> Imputations,  $n = 20$ ; minimum observations,  $n = 1,749$ .

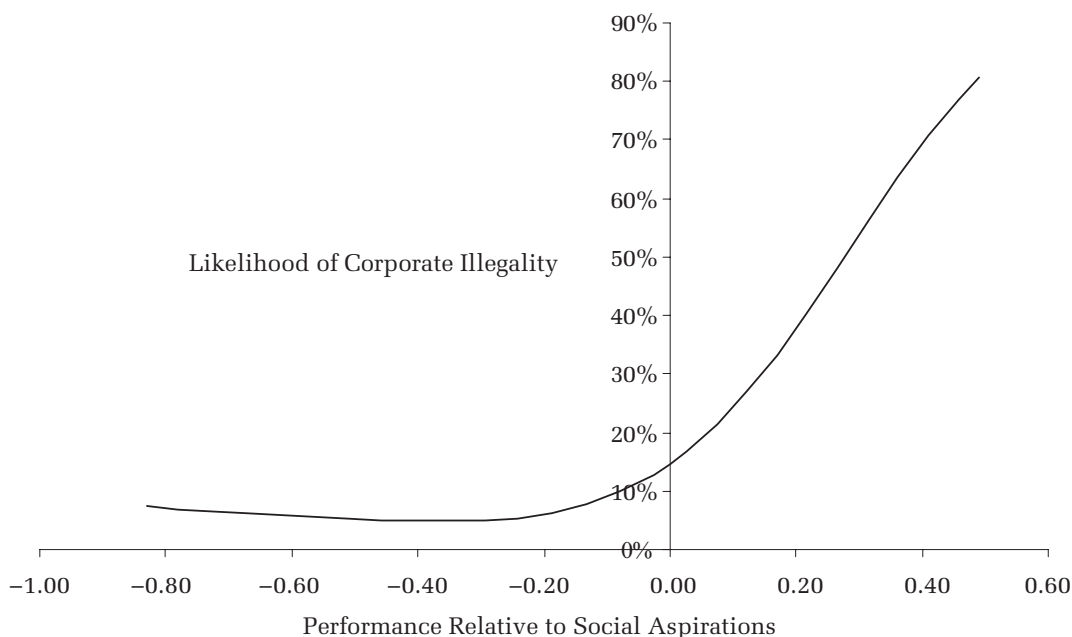
<sup>†</sup>  $p < .10$

\*  $p < .05$

\*\*  $p < .01$



**FIGURE 1**  
**Main Effect of Performance Relative to Social Aspirations on Illegal Behavior**



between performance above social aspirations and illegal behavior will be stronger for more prominent firms. This hypothesis was not supported. The interaction between performance above aspirations and prominence was not significant. However, we also tested the interaction between prominence and performance below social aspirations, and this interaction was negative and significant. To interpret this interaction, we graphed the effects using the method advocated by Hoetker (2007), calculating the predicted values by taking all other variables at their observed values and then averaging the responses across the observations. Figure 3 displays the predicted probability of illegal activity for the entire range of performance relative to aspirations for both prominent and less prominent firms. The

results presented in Figure 3 suggest that less prominent firms have a greater likelihood of engaging in illegal behavior than prominent firms when performance is below social aspirations, but there is essentially no difference between prominent and less prominent firms when performance is above social aspirations. Both become more likely to engage in illegal behavior when their performance exceeds social aspirations.

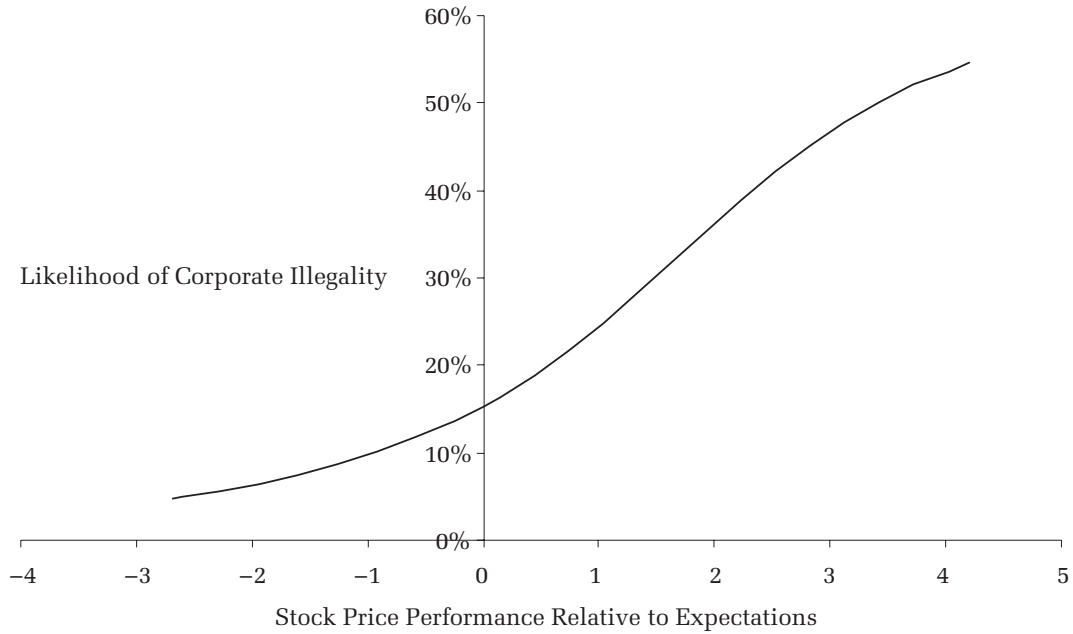
Hypothesis 3b predicts that the positive relationship between positive stock price performance and illegality will increase for prominent firms. This hypothesis was supported. The interaction between positive abnormal returns and prominence was positive and significant in all models in which it was included. Figure 4 graphs the interaction, showing that although prominent firms reacted to performance above and below expectations as we predicted, for less prominent firms the relationship was essentially flat when performance was below expectations and declined as performance exceeded expectations. Table 4 displays the likelihood of illegal behavior for both prominent and less prominent firms at different levels of relative performance for both performance relative to aspirations and stock price performance relative to expectations.

Taken together, these results suggest that performance that exceeds social aspirations and external expectations increased the likelihood managers would engage in corporate illegality. However,

**TABLE 3**  
**Predicted Likelihood of Illegal Activity at Different Levels of Performance Relative to Aspiration or Expectation Level**

Illegal Activity	Performance Relative to Aspirations	Abnormal Returns
At sample minimum	7.30%	4.72%
Two s.d.'s below	6.88	9.51
One s.d. below	9.76	12.08
At aspiration/expectation	14.61	15.28
One s.d. above	22.00	19.56
Two s.d.'s above	31.90	25.01
At sample maximum	80.73	54.53

**FIGURE 2**  
**Main Effect of Stock Price Performance Relative to Expectations on Illegal Behavior**



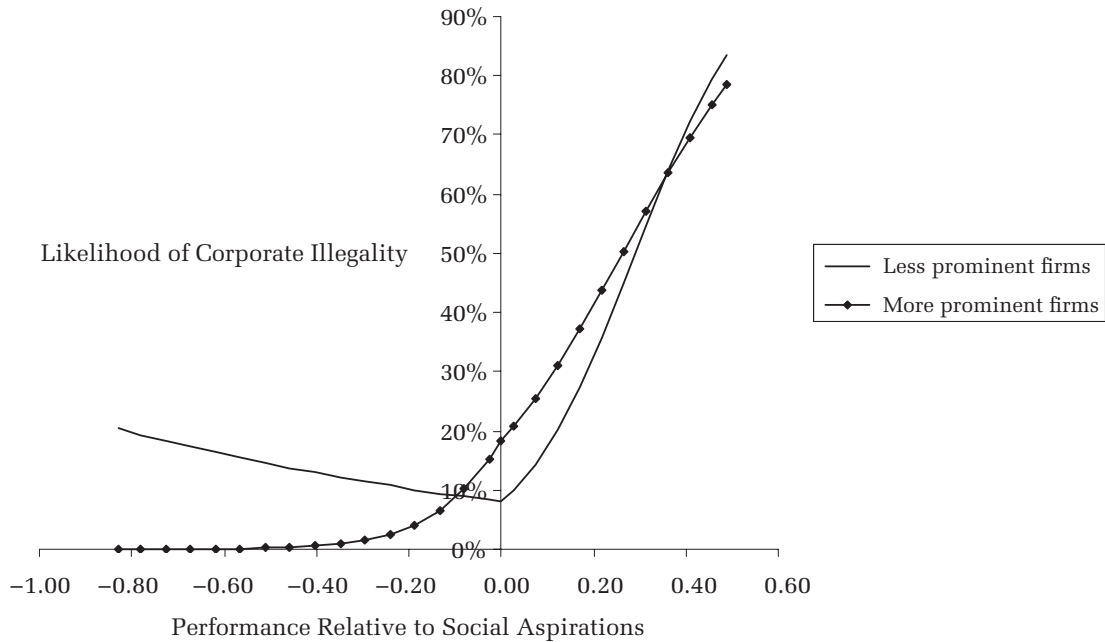
prominence appeared to moderate the effect of relative performance differently depending on whether it was relative to internal aspirations or external expectations. Prominence decreased the likelihood that firms with performance below social aspirations would engage in illegal behavior, but it appeared to increase the likelihood that firms

with stock price performance above expectations would engage in illegal activities.

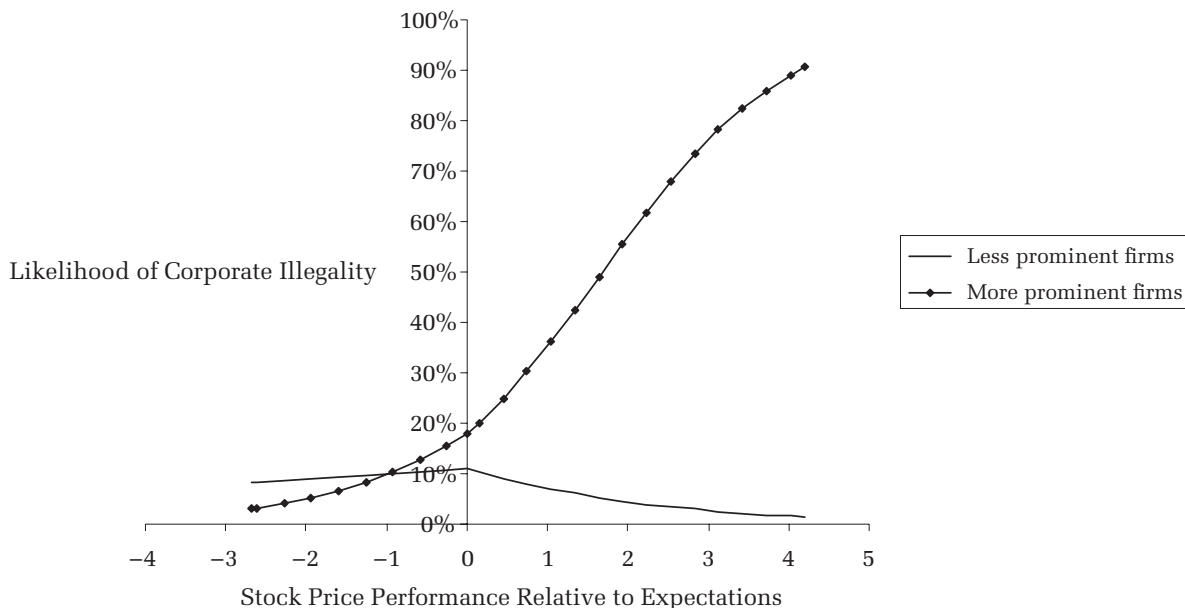
**Prior Illegal Behavior**

One factor we did not control for in this study was a firm’s general propensity to take illegal ac-

**FIGURE 3**  
**Interactive Effects of Performance Relative to Aspirations and Prominence on Illegal Behavior**



**FIGURE 4**  
**Interactive Effects of Stock Price Performance Relative to External Expectations and Prominence on Illegal Behavior**



tions. Although our sample made this a difficult methodological issue to deal with (see footnote 11), the results of supplementary analyses including a lagged measure of prior criminal behavior (not reported here) provided general support for our arguments. Further, it would be a very large coincidence if those firms with a higher propensity to engage in illegal activities also happened to have higher performance relative to aspirations and expectations and tended to be prominent. Indeed, to say that corporate illegality is just about propensity (i.e., that “only bad firms engage in bad behaviors”) is tautological—by definition, then, a firm is not a bad firm until it engages in illegal activity and gets caught. Social psychologists suggest that, regard-

less of an individual’s preexisting propensity to behave criminally, situational factors play a large role in shaping why and when he/she will engage in violent and/or criminal behaviors (e.g., Bakan, 2004; Milgram, 1963; Miller, 2004; Waller, 2002; Zimbardo, 2007). So, although our empirical results should be interpreted with caution, we believe that our theoretical arguments are sound. Future research should verify our findings and explore whether a firm’s general propensity to engage in illegal actions affects our substantive interpretations.

**DISCUSSION**

In this study, we applied insights from social psychology and behavioral economics to demonstrate that, despite the apparent disincentives, even high-performing and prominent firms may have reasons to engage in illegal activities. We argued that strong pressures to maintain high relative performance may induce risk-seeking behavior as a result of either loss aversion (e.g., Tversky & Kahneman, 1991), house money effects (e.g., Thaler & Johnson, 1990), and/or managerial hubris (e.g., Hayward & Hambrick, 1997; Roll, 1986). Further, prominence may intensify these effects. We found support for the notion that performance above social aspirations increases the likelihood of corporate illegality and that performance below social aspirations decreases the likelihood of corporate illegality, particularly for prominent firms. We also

**TABLE 4**  
**Predicted Likelihood of Illegal Activity at Different Levels of Performance Relative to Aspiration or Expectation Level for both Prominent and Less Prominent Firms**

Illegal Activity	Performance Relative to Aspirations		Abnormal Returns	
	Less		Less	
	Prominent	Prominent	Prominent	Prominent
Two s.d.’s below	9.76%	5.23%	9.85%	9.43%
One s.d. below	8.87	10.13	10.45	13.15
At aspiration/ expectation	8.05	18.28	11.08	17.91
One s.d. above	14.93	26.23	8.80	26.24
Two s.d.’s above	25.58	35.88	6.93	36.40

found that pressures on organizations to meet or exceed the expectations of shareholders and financial markets can spur illegal activity, but only for prominent firms. These findings offer a number of theoretical, empirical, and practical contributions.

### Theoretical Contributions

First, we contribute both theoretically and empirically to the literature on corporate illegality by focusing on firms' relative, rather than absolute, performance, differentiating between internal aspirations and external expectations, and by considering the moderating effects of firm prominence. This focus allowed us to take a more nuanced approach to examining the relationship between performance and corporate illegality, using prospect theory and related psychological processes to explain why firms with high relative performance and/or prominence—those with potentially the most to lose—may engage in illegal and illegitimate behaviors.

Like Harris and Bromiley (2007), we found that performance above aspirations and stock price performance above expectations were associated with a greater likelihood of corporate illegality. They anticipated the opposite relationship and did not offer an explanation for this unexpected finding. Our theorizing suggests that loss aversion, the house money effect, and/or hubris can explain these relationships. One possibility is that the more a sampled firm's performance exceeded its aspirations and expectations, the more its top managers perceived it had to lose from a relative performance decrease, and thus the more risk seeking it became to avoid this loss. Alternatively, it is possible that strong relative performance may have made illegal activities appear less risky, either because a firm had performed better than anticipated, or because the firm's high performance relative to aspirations and expectations engendered a sense of infallibility or invulnerability. Our results appear to be consistent with all three of these explanations, although our data do not allow us to distinguish which mechanisms might have been at play in a particular situation.

Further, our results suggest that although there does not appear to be a significant difference between prominent and less prominent firms in the likelihood of committing illegal acts as their performance surpasses social aspirations, there was a dramatic difference in how they responded to high external expectations. Whereas prominent firms became increasingly likely to engage in corporate illegality the higher investors' expectations, the propensity of less prominent firms to engage in illegal actions remained relatively stable, regardless of their performance relative to investor's ex-

pectations. We cannot definitively explain why less prominent firms reacted so differently, but we can speculate. It is possible that executives at prominent firms and those at less prominent firms view internal and external pressures differently. If less prominent firms are not as salient and cognitively available to organizational audiences (Ocasio, 1997; Pollock et al., 2008), then the executives at these firms may feel somewhat less pressure to maintain abnormally high market performance. Conversely, because performance above aspirations is an internal evaluation of performance (since a TMT's aspirations are less visible to external observers), the pressure to meet or exceed aspirations may be ever-present, regardless of the prominence of a firm.

Finally, we contribute to the literature on cognitive biases in managerial decision making (e.g., Carpenter et al., 2003; Chatterjee & Hambrick, 2007; Hayward & Hambrick, 1997) by demonstrating how both internal performance evaluation procedures and concerns about meeting external expectations may influence the decision calculus utilized by organizational managers, as well as how prominence may exacerbate these concerns. These findings suggest that future researchers in this area should give additional consideration to how comparisons of strategic and performance information affect managers' perceptions and decision making.

### Practical Implications

Our results also provide several practical implications for regulators and investors. Because prominence magnifies both positive and negative firm actions and outcomes (Brooks et al., 2003), prominent firms may be the most likely to acutely feel pressures to maintain or improve their relative performance. In addition, our findings suggest that the prospect of poor *future relative* performance may compel high-performing firms to engage in illegal activities. Thus, regulators should endeavor to monitor the activities of both high- and low-performing firms to detect illegal corporate behavior, and they should consider a firm's prominence and performance relative to industry peers in assessing which firms should receive closer attention. Investors should also be more cognizant of this dynamic, because prominent and high-performing firms may be the most likely to take illegal actions that are damaging to the organizations and their stakeholders.<sup>15</sup>

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<sup>15</sup> This recommendation is also consistent with the persistent finding in the finance literature that "glamour stocks" tend to perform more poorly than "value stocks" (e.g., La Porta, 1996; La Porta, Lakonishok, Shleifer, & Vishny, 1997).



Finally, our results suggest that analysts, investors, and directors may also need to be careful about the manner in which they evaluate firm performance and the pressure they place on managements to constantly top their prior accomplishments. Although we believe that a firm's TMT is responsible for ensuring that the firm and its employees conduct themselves in an ethical and legal manner, at least some blame also lies with those who constantly pressure executives for better and better relative performance and are unforgiving of any slips. Despite research suggesting that it is unrealistic to expect such outcomes, analysts and investors still show tendencies to extrapolate trends (DeBondt, 1993), become overly optimistic (DeBondt & Thaler, 1985, 1986, 1990; La Porta, 1996), and overreact to unexpected negative news (DeBondt & Thaler, 1985; Skinner & Sloan, 2002). Although it will largely be up to investors and analysts to police their own behaviors, corporate directors can help reduce the undesirable effects of these pressures for unrealistic levels of short-term performance by reducing the unhealthy focus on quarterly earnings and designing systems that base executives' evaluations on their firms' long-term performance. Doing so may reduce the likelihood executives will look to stop-gap measures such as corporate illegality to maintain unsustainable levels of short-term performance.

### Future Directions

Although our study represents a first step in considering the psychological processes that may influence organizational decisions to engage in corporate illegality, our results also suggest several future research opportunities. First, although we proposed three psychological processes that could lead managers of high-performing firms to engage in illegal corporate behavior, we were unable to directly observe whether or not these psychological processes mediated the relationship between high relative firm performance and illegal activity. Unfortunately, we did not have direct information on the managerial perceptions and cognitions we theorized about. Indeed, these data are notoriously difficult to obtain, particularly because managers are likely to engage in socially desirable responses and self-serving attributions (e.g., Salancik & Meindl, 1984; Staw, McKechnie, & Puffer, 1983), given the nature of the outcome being studied. Future research should continue to explore this important issue, and those conducting it should attempt

to differentiate the different cognitive processes that may be at play.<sup>16</sup>

Second, there may also be a benefit to examining the manner in which executives attempt to manage the expectations of investors and external stakeholders. Many studies have examined how managers make self-serving attributions (e.g., Bettman & Weitz, 1983; Clapham & Schwenk, 1991; Salancik & Meindl, 1984; Staw et al., 1983; Wade, Porac, & Pollock, 1997), but if strong performance can lead to higher performance pressures, it may be that managers actively manage external expectations to try and keep them from becoming too optimistic or unrealistic (Elsbach, Sutton, & Principe, 1998).

Third, although we examined the moderating effects of one dimension of corporate reputation—firm prominence—there may be benefits to studying other aspects of reputation, such as favorability, strategic content, and exemplar status (Rindova et al., 2007); reputations for particular types of behaviors; reputations with particular stakeholder groups (e.g., consumers); or other types of social evaluations, such as firm celebrity (e.g., Rindova, Pollock, & Hayward, 2006) or status (e.g., Washington & Zajac, 2005). Additionally, other factors in a firm's social environment may need to be explored to fully flesh out a theory of corporate illegality. For example, institutional configurations may influence the degree to which organizations' leaders face pressures to consider the interests of broader groups of stakeholders (e.g., Aguilera, 2005) or promote corporate social responsibility as a primary organizational goal (Aguilera, Rupp, Williams, & Ganapathi, 2004).

Finally, our findings imply that corporate governance structures may have a more complex relationship with illegal behavior than previously theorized. Although we only used governance characteristics as controls in our analyses, we found that various governance characteristics influenced corporate illegality differently. Specifically, although executive and director equity ownership were negatively related to corporate illegality, board size was positively related to it. These findings stand in contrast to prior research that has shown that governance structures such as CEO duality and board composition have no direct effect on a firm's involvement in illegal activities (e.g., Kesner et al., 1986;

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<sup>16</sup> The results of post hoc analyses using Hayward and Hambrick's (1997) pay gap measure provided some evidence that hubris may indeed play a role in decisions to engage in corporate illegality in highly prominent firms, but this finding does not change our other results and is consistent with our theory and expectation that loss aversion and/or the house money effect may also be at work in some instances.

Schnatterly, 2003). Future research should continue to examine the manner in which particular governance mechanisms affect firm behaviors by prioritizing different stakeholder interests.

## Conclusion

In this study, we show that the mixed findings in the corporate illegality literature can begin to be reconciled by considering relative performance and applying research on psychological biases to the study of corporate illegality. Our results demonstrate that internal performance aspirations, external performance expectations, and firm prominence interact in particular ways to predict illegal behavior. Our analysis suggests that seemingly “good” firm attributes, such as strong performance and prominence, can bring with them differing incentives and pressures that can lead to decisions that may ultimately be detrimental to a firm.

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