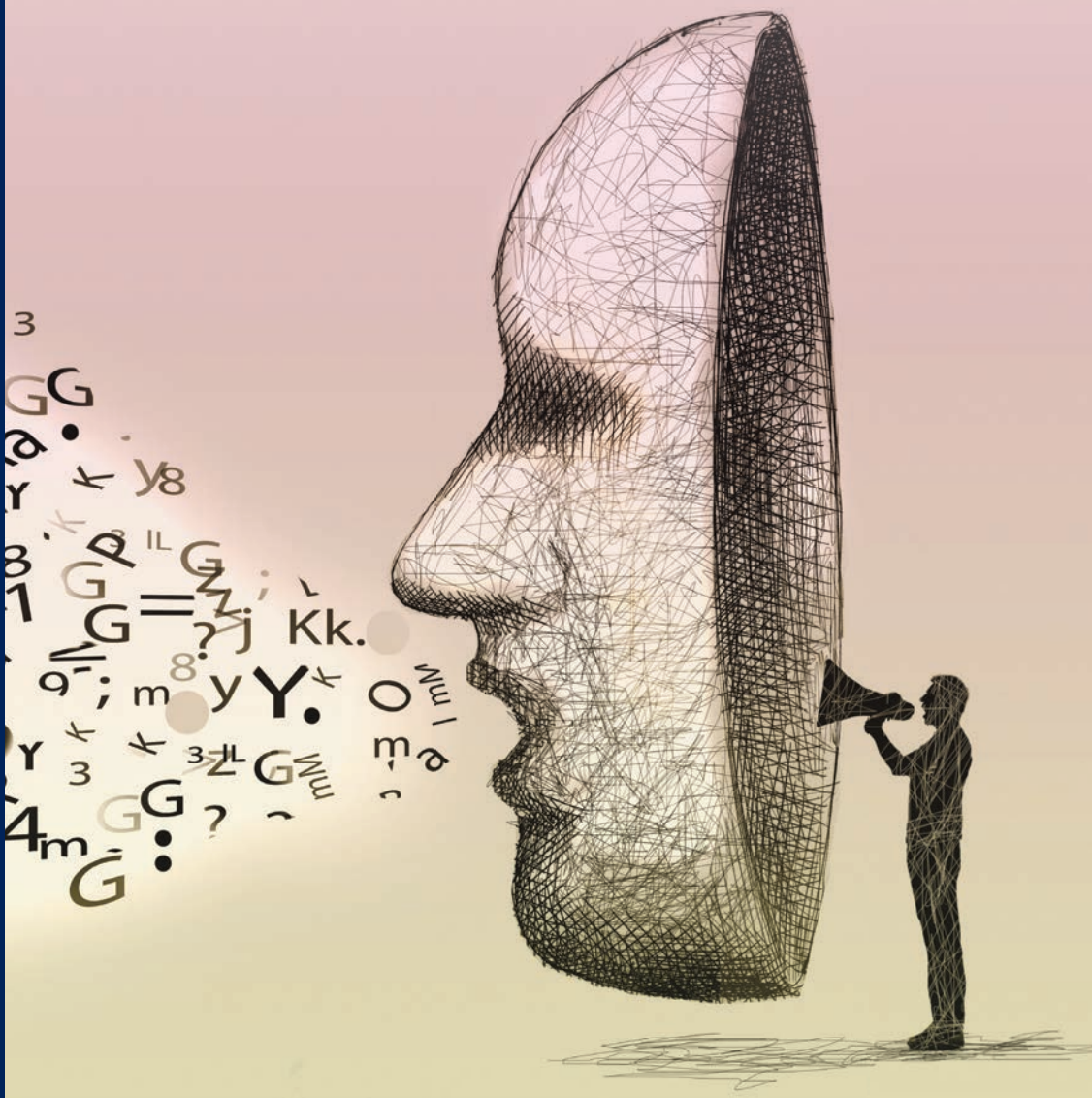
RADINA RUMENOVA BLAGOEVA

The hard power of soft power

A behavioral strategy perspective on how power, reputation, and status affect firms



The Hard Power Of Soft Power:

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De Harde Kracht Van Zachte Kracht:
Een gedragsstrategisch perspectief over hoe macht, reputatie en status bedrijven beïnvloeden

Thesis

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PREFACE

There are numerous people who made my journey to and through academia possible, productive, successful, and fun, and to whom I would like to express my deepest appreciation.

My family, thank you for raising me the way you did. Thank you for teaching me the importance of being responsible, determined, curious, imaginative and aiming high, and believing that nothing is impossible if one works hard enough for it. Thank you for always loving me and believing in me, and having high expectations for me, which motivated me to achieve things, which I would not believe that I could otherwise. I know it was difficult for you to be tough, but your toughness made me tough, and gave me the strength to "fight" for what I think is right, worth, and to follow my passion. It was those qualities which you helped me built as a child that led me to academia. Thank you for sacrificing your time with me so that I could pursue what I like and what brings fulfillment in my life.

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think of so appealing that I do not start writing my hypothesis development anymore without having my own schema of logical steps. Simplicity has not only helped me research-wise, but also made me a better teacher. Not as good and engaged as you are with executive teaching, but I hope I can become like you one day and confidently teach and develop courses for executives. What better way of making impact than that.

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Radina Blagoeva

Rotterdam 2020

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CHAPTER 1

INTRODUCTION

This chapter explains the theoretical relevance and importance of the phenomenon under investigation in this dissertation, namely the mutual influence of firms, CEOs and financial markets. It provides a theoretical justification of why power, reputation and status are appropriate theoretical lenses with which to shed new light on this phenomenon. Furthermore, the chapter also presents three research questions, which are the main pillars of this dissertation. A summary of the three studies that answer those research questions is provided next, and the chapter concludes with a discussion of the author's personal contribution to each chapter.

1.1 MY "ONE AND ONLY": THE RELATIONSHIP BETWEEN FIRMS AND FINANCIAL MARKETS

"*I thought a lot about what, in addition to building shareholder value, a company can contribute to the world. It's not Milton Friedman's 1970s shareholder value world anymore… Except when it is.*"

Chad Dickerson, an ex-CEO of Etsy

Going public is a milestone for many companies because of the benefits associated with it. Becoming a publicly traded firm provides a platform for continued growth and ensures access to financial capital and other relevant resources. Because of such benefits, public firms often prioritize financial markets above other stakeholders and even above the firm (Brauer and Wiersema, 2018; Sanders and Carpenter, 2003). Lack of support from the financial markets, i.e., analysts and investors, can negatively impact firms' market value, limit their access to financial resources, increase the scrutiny over corporate strategy, and could lead to the dismissal of the CEO (Boivie, Graffin, and Gentry, 2016; Washburn and Bromiley, 2014; Wiersema and Zhang, 2011). That is why managers of public firms seek approval from the financial markets to pursue certain strategies. They also try to maintain positive relations with the financial markets by symbolically or substantively aligning the firm's actions with the interests of the markets (Benner and Ranganathan, 2012; Westphal and Graebner 2010; Westphal and Zajac, 1998).

Financial markets often favor corporate strategies associated with predictability and strong financial performance generated in the short term (Zuckerman, 1999, 2000). Pursuing strategies that are favored by financial markets, however, is not necessarily beneficial for firms. Even though they may not be as popular with the financial markets, complex strategies that involve more information asymmetry could create competitive advantage for firms (Litov, Moreton, and Zenger, 2012). Similarly, strategies that may not fit with the

preferences of the financial markets because they are risky and involve uncertain outcomes may have the potential to generate high pay-offs for firms (Sanders and Carpenter, 2003). When under pressure from financial markets, however, firms usually avoid such strategies (e.g., Zhang and Gimeno, 2010).

The relationship between firms and financial markets is one of mutual influence. On the one hand, pressures from financial markets impact firm strategy. Pressure from financial markets can sometimes lead firms to forego economically valuable opportunities (Gentry and Shen, 2013), make choices that are ethically questionable (Westphal and Graebner, 2010; Westphal and Zajac, 2001), or engage in corporate misconduct (Mishina, Dykes, Block, and Pollock, 2010). On the other hand, firms may try to influence how financial markets perceive their strategy so as to ensure a positive evaluation. In doing so, they might try to frame their strategy in a positive light, decouple policy from practice, reduce information transparency, or bombard the markets with irrelevant information in order to distract them (Fiss and Zajac, 2006; Graffin, Haleblian, and Kiley, 2016; Louis and Sun, 2010). As may become apparent from such findings, the interaction between firms and financial markets may lead to potentially counterproductive outcomes. Little is known, unfortunately, about which type of firms could deal with such pressures in ways that ensures the well-being of the firm is not jeopardized in the long run and that expectations are made more transparent.

My goal in this dissertation is to identify how potentially counterproductive outcomes arising from the mutual influence of firms and financial markets can be prevented. I consider both aspects of this interaction, namely (1) how evaluations by financial markets affect firms' decision making, and (2) how strategic decisions are evaluated by financial markets. I take a behavioral perspective, which provides a suitable angle to explain decision-making and evaluation processes (Cyert and March, 1963; Westphal and Zajac, 2013). I am able to combine micro and macro theories to explain the phenomenon in multiple organizational contexts and to provide novel insights to the field of strategy.

1.2 A POWER PESPECTIVE ON HOW FIRMS AND FINANCIAL MARKETS INFLUENCE EACH OTHER

"*Power can be countered only by power, and however strong Wall Street is, the businesses that make up the rest of the economy are far stronger*."

Gautam Mukunda, Harvard Business Review, 2014

Many consider power to be the most basic force behind human behavior and a central concept in the analysis of social interactions (Raven, Schwarzwald, and Koslowsky, 1998; Russel, 1938). Very broadly, *power* is defined as having "the discretion and the means to influence the behavior, opinions, attitudes, etc., of others" (French and Raven 1959; Sturm and Antonakis, 2014). As French and Raven note, power implies a dyadic relationship, which might be studied from two points of view: (1) "What determines the behavior of the agent who exerts power" and (2) "What determines the reactions of the recipient of this behavior" (1959: pp. 259). These two points of view associated with the effects of power on decision makers and on others upon whom power is exerted seem to complement the types of questions that I am trying to address in my dissertation. Specifically, power could have implications for how evaluations by financial markets are used by decision makers when determining what course of action a firm should take. Power could also have implications for how financial markets evaluate firm strategies. Therefore, power could be a promising theoretical lens through which to study the mutual influence of firms and financial markets.

Scholars have made a distinction between two types of power: 'harsh' or 'control' power and 'soft' or 'persuasive' power (Raven *et al*., 1998; Turner, 2005). 'Harsh' or 'control' power arises from formal positions within the organization and gives high-placed managers such as CEOs authority to control the behavior of others. Some sources of harsh power within firms could be a manager's ownership or founder status, having a seat on the boards of directors or being the chair of the

board (Finkelstein, 1992; Finkelstein and D'Aveni, 1994). 'Soft' or 'persuasive' power, on the other hand, emerges from "personal" characteristics of individuals or organizations that can be used to influence others (Raven *et al*., 1998). At the individual level, a person's expertise, prestige or status could represent soft sources of power (Finkelstein, 1992; Graffin, Wade, Porac, and McNamee, 2008; Hayward and Hambrick, 1997). At the organizational level, the source could be assets relating to social approval such as reputation (Pfarrer, Pollock, and Rindova, 2010).

The relatively little research on this to date has delivered mixed findings in terms of whether harsh power has a more damaging impact on social interactions or whether soft power is more beneficial (Fiske and Berdahl, 2007; Williams, 2014). This suggests that the role of power in shaping mutual influences might be more complex than initially thought and may need further investigation. Given the nature of harsh and soft power, it is likely that both may affect how decision-making processes unfold in firms in response to evaluations by financial markets. However, when it comes to how firms are able to influence the evaluative processes of those markets, soft power may provide a more suitable lens. Managers and firms do not have the means to exert harsh power over financial markets. These are the angles which I will focus on in my dissertation. In the next section, I narrow down my focus to three specific questions, which form the pillars of my dissertation.

1.2.1 Power: its power to impact strategic decision making

Participants in financial markets have increasingly been demanding that firms should place limits on the power of corporate leaders so as to prevent CEOs from engaging in self-interested behavior. However, the scientific findings on whether powerful CEOs are a liability or an asset for firms and their shareholders are inconclusive (e.g., Boivie, Lange, McDonald, and Westphal, 2011; Finkelstein and D'Aveni, 1994; Haynes and Hillman, 2010). This may be because, although CEO power has been theorized to motivate and provide opportunities for a CEO to act in a certain way, those actions may in fact be driven by other situational or

dispositional factors (Busenbark, Krause, Boivie, and Graffin, 2016). That is to say, CEO power is usually treated as a magnifying factor, which enhances specific behavior (Williams, 2014). Scientific research does not shed any light, however, on how the power of CEOs shapes their preferences to engage in specific behaviors. I take this novel approach in my dissertation by studying how CEO power affects tendencies for CEOs to prioritize their own interests or the interests of the firm.

One situation in which the interests of the CEO and the firm might diverge is when financial analysts indicate that the firm should anticipate drops in future performance, despite having been successful in the past. Specifically, it is in the best interests of the firm to be proactive and to attempt to mitigate the potential losses expected by analysts (Cyert and March, 1963; Greve, 2003). However, such behavior might raise concerns regarding the competence of the CEO and may limit his/her power (Jordan and Audia, 2012), so it may be in the best interests of the CEO to dismiss the analysts' assessment and to focus instead on the firm's past success. Thus, by understanding how CEO power shapes a firm's responsiveness to inconsistent feedback of this kind, I may be able to assess the extent to which it affects CEOs' tendencies to prioritize their own interests over the interests of the firm. As previously discussed, CEO power can be broken down into harsh and soft power, and I incorporate these two types of CEO power in my first research question:

Research question 1: How do CEO harsh power and soft power affect a firm's responsiveness to inconsistent feedback?

1.2.2 Reputation: its power to impact investors' evaluations of firm strategy

The recent trend for investors to give almost unconditional support to firms with a strong reputation for growth has raised concerns. Such biased behavior by investors might harm the stability of the financial markets. It may also have a detrimental effect on firms, both high-growth firms and those that have chosen to

deliver shareholder value by pursuing stable profits and paying dividends. Similarly, studies have shown the complexity involved in building a strong reputation and the mixed results it can bring (Zavyalova, Pfarrer, Reger, and Hubbard, 2016). Reputation can be beneficial to firms as it can provide a positive frame that can be used by observers to interpret information relating to the firm even when negative events occur (Pfarrer *et al*., 2010). However, it can also be a burden to firms, because high reputation brings high expectations, and this puts pressure on them (Mishina *et al*., 2010). The notion of expectations seems to be crucial in understanding the consequences of firm reputation for external evaluations (Graffin *et al*., 2016). However, management research is limited in terms of explaining the different expectations that investors have of firms with various types of reputation (Rindova, Williamson, Petkova, and Sever, 2005). To rectify this, I investigate how investors evaluate similar strategic initiatives undertaken by firms with different types of reputations, namely growth or dividend reputations, according to the expectations they have of those firms.

One context that might be particularly suitable for studying investors' evaluative processes is that of acquisition announcements. Acquisitions are still not adequately understood and are quite controversial with respect to their consequences for firms (Haleblian *et al*., 2009). Even though acquisitions are meant to create value for a firm and its shareholders, investors usually react negatively to them (Graffin *et al*., 2016). This suggests that they see acquisitions as destroying rather than creating value. Some acquisitions, however, seem to be perceived favorably by investors, as indicated by the fact that their announcement results in positive returns (Campbell, Sirmon, and Schijven, 2016). Variations in investors' reactions to acquisitions might be explained by the fact that investors adjust their evaluative processes based on what they expect from firms with different reputations. As such, I investigate:

Research question 2: How do investors evaluate acquisitions by firm with growth and dividend reputations?

1.2.3 Status: its power to motivate CEOs to manage the impressions of investors

The proliferation of awards in recent years has created a status hierarchy between winners and non-winners. Due to the popularity of such practices, scholars have started to study the consequences of attaining status by means of winning an award (e.g., Graffin *et al*., 2008; Wade, Porac, Pollock, and Graffin, 2006). It is still unclear whether the decisions made by individuals who attained or did not attain status in this way are better or worse (Cho *et al*., 2016; Lovelace, Bundy, Hambrick, and Pollock, 2018; Wade *et al*., 2006). Nevertheless, external audiences interpret the sudden increase in status as a sign of quality and competence, especially when there is a high level of uncertainty and information asymmetry (Wade *et al*., 2006; Podolny, 2005). This might be because external audiences – and investors in particular – may have a positive bias towards choices made by high-status individuals (Malmendier and Tate, 2009). While such a conclusion is plausible, failing to consider individuals who did not win an award (Shi, Zhang, and Hoskisson, 2017) might preclude scholars from exploring other possible explanations for those findings.

The few studies done on this have revealed that CEOs, who do not have high status deliberately engage in certain strategies in order to enhance their status (Shi *et al*., 2017). Likewise, they may try to compensate for their lack of high status by managing investors' impressions through language. The very strong link between status and language use has indeed been documented in studies on sociolinguistics (Tausczik and Pennebaker, 2010; Toma and D'Angelo, 2015). Exploring this link might lead to new explanations as to why investors react as they do to decisions and information released by CEOs whose status has been attained through the winning of an award. As language may shape the perceptions of investors, they may not be

biased per se towards the decisions made by CEOs of differing status but may be reacting to the kind of language used by those CEOs. I explore this possibility in the context of earnings announcements, where linguistic choices play a crucial role in how investors react to the information released (Pan *et al*., 2017). This is reflected in my final research question:

Research question 3: How does CEO status shape CEO's linguistic style, and how does such linguistic style affect investors' evaluation of the firm?

I provide an overview of my research questions in Figure 1.1.

Figure 1.1 Research questions overview

RQ 1:	How do CEO harsh power and soft power affect a firm's responsiveness to inconsistent feedback?
RQ 2:	How do investors evaluate acquisitions by firm with growth and dividend reputations?
RQ 3:	How does CEO status shape CEO's linguistic style, and how does such linguistic style affect investors' evaluation of the firm?

1.3 DISSERTATION OVERVIEW

I answer those research questions in three studies, which constitute the next three chapters of my dissertation. Here I provide a brief overview of each study.

1.3.1 Study 1

Chapter 2 sheds light on how CEO harsh and soft power affect a firm's responsiveness to inconsistent feedback. It reports on a study in which my co-authors and I integrate insights from the behavioral theory of the firm (BTOF) and self-enhancement theory with insights on how power affects interpersonal interactions. Table 1.1 summarizes the main aspects of Study 1.

Table 1.1 Summary of Study 1

Concepts	*Independent variable*: inconsistent feedback *Dependent variable*: R&D search *Moderators*: CEO power (structural, ownership, expert, prestige)
Theories	Behavioral theory of the firm (BTOF), self-enhancement theory
Empirical setting	R&D investment decisions by S&P 500 firms for the years 2002–2014, $N = 1887$
Methods	Arellano–Bond dynamic panel estimator
Findings	Firms respond to inconsistent feedback with *less* R&D search when the CEO has more structural, ownership and expert power, and with *more* R&D search when the CEO has more prestige power.
Contributions	(1) To BTOF – considering the role of CEO power and how it shapes decision-making processes relating to performance feedback could clarify how inconsistent feedback affects problemistic search. (2) To self-enhancement theory – separating CEO power into two types, soft and harsh, provides new insights into the relationship between power and self-enhancement.

Scholars have used insights from the intersection of BTOF and self-enhancement theory to capture the complexity and specificity of how firms react to inconsistent feedback. There are mixed findings with regard to whether firms problem-solve and are thus *more* responsive to inconsistent feedback or whether they self-enhance and are thus *less* responsive to it (Chen, 2008; Hu, He, Blettner, and Bettis, 2017; Joseph and Gaba, 2015). To integrate such disparate findings, we looked at CEO power to identify not *whether* firms problem-solved or self-enhanced when faced with inconsistent feedback but *when* they did so. Indeed, examining CEO power might shed light on the interactions between CEOs and other important firm stakeholders, which could then explain decision-making processes in response to performance feedback (Boeker, 1997; Desai, 2016; Fang, Kim, and Milliken, 2014). We focused on four sources of CEO power: structural, ownership, expert and prestige power. Respectively these define the relationships between the CEO and the top management team (TMT) members, the board of directors,

stakeholders in the firm's task environment, and stakeholders in the firm's institutional environment (Finkelstein, 1992).

CEO structural and ownership power are a form of harsh power. We anticipated that harsh power would make inconsistent feedback more threatening to CEOs and would not add to their confidence that they would be able to address inconsistent feedback in an effective way. We therefore predicted that CEO structural and ownership power would result in a greater degree of self-enhancement and less responsiveness to inconsistent feedback. CEO expert and prestige power are a form of soft power. We argued that soft power provided CEOs with opportunities to influence others in such a way that addressing inconsistent feedback did not threaten their position or self-image. As a result, we predicted that CEO prestige and expert power would result in more problem-solving and a higher degree of responsiveness to inconsistent feedback. Following established practices, we captured the firm's responsiveness to inconsistent feedback by means of its investment in R&D search.

We tested this theory on a sample of S&P 500 firms between 2002 and 2014 (N = 1887 firm-year observations). We used established measures for R&D search (Chen, 2008), inconsistent feedback (Chen, 2008), and the different types of CEO power (Finkelstein, 1992). The analysis was performed using the Arellano–Bond dynamic panel estimator. Results showed that inconsistent feedback led to lower levels of investment in R&D search when CEOs had high levels of structural and ownership power, and – contrary to our predictions – also when they had high levels of expert power. Inconsistent feedback resulted in higher levels of R&D search only when CEOs had high levels of prestige power.

Our theory and findings contribute to the BTOF by integrating theoretical logics on how firms address inconsistent feedback (e.g., Audia and Brion, 2007; Joseph and Gaba, 2015). We show that, since CEO power serves as a foundational source of bias, it could explain the decision rules used by CEOs when interpreting inconsistent feedback. We also contribute to self-enhancement theory by revising

the assumption that power leads to self-enhancement (e.g., Jordan and Audia, 2012; Pfeffer and Fong, 2005). We show that soft power leads to less self-enhancement while harsh power results in more.

1.3.2 Study 2

Chapter 3 presents a study which sheds light on how investors evaluate acquisitions by firms with growth and dividend reputations. We do that by integrating insights from expectancy violation theory (EVT), impression management, and reputation and applying them to the context of acquisitions. Table 1.2 summarizes the main aspects of Study 2.

Table 1.2 Summary of Study 2

Concepts	*Independent variables*: dividend reputation of the acquirer, growth reputation of the acquirer *Dependent variable*: investors' reaction to acquisition announcement *Moderator 1*: acquiring a target with a growth reputation *Moderator 2*: dividend framing, growth framing
Theories	Expectancy violation theory (EVT), impression management
Empirical setting	Acquisition announcements by S&P 500 firms for the years 2000–2015, $N = 462$
Methods	Event study methodology, content analysis, Heckman two-stage estimation procedure
Findings	(1) Investors react positively to acquisitions made by firms with strong dividend or growth reputations. (2) Investors react negatively when firms with a dividend reputation acquire targets with a growth reputation. (3) Investors react positively the framing of acquisition announcements is aligned with the acquirer's reputation.
Contributions	(1) To literature on investors' reactions to acquisition announcements by high-reputation firms – distinguishing between the growth and dividend reputations of acquirers provides new insights into how and why firm reputation affects investors' reactions to acquisition announcements. (2) To EVT – substantive and symbolic information cues shape the predictions of EVT differently in the contexts of positive and negative expectancy violations.

Scholars have used insights from EVT to explain why investors react negatively to acquisition announcements (Graffin *et al*., 2016; Haleblian *et al*., 2017). To capture variations in investors' reactions to acquisitions, scholars have looked at firm reputation because this drives investors' expectations. Nevertheless, the findings revealed that investors react even more negatively to acquisitions by firms with a high reputation (Graffin *et al*., 2016). Current theory has advanced our understanding of the negative reactions of investors to acquisitions, but has failed to explain why they react *positively* to some acquisitions (Campbell *et al*., 2016). This may be because the set of expectations considered was too narrow. That is, the expectations associated with firm reputation are linked to the extent that firms are expected to deliver shareholder value, but they do not specify how such value should be delivered. We examine two different forms of reputation, namely dividend reputation and growth reputation, which set different expectations for investors of *how* shareholder value should be pursued. In this way, we are able to capture the full spectrum of predictions of EVT with respect to when investors will react positively to acquisitions and when their reaction will be negative.

We hypothesized that, when evaluated against expectations for firms with a strong dividend reputation, acquisitions would be perceived as negative violations of expectancy, whereas when evaluated against expectations for firms with a strong growth reputation they would be seen as positive violations. As investors evaluate acquisitions holistically (Campbell *et al*., 2016), they would use substantive and symbolic information cues to assess the extent to which acquisitions represent violations of expectancy. Substantive cues are based on the actions taken by a firm (Fiss and Zajac, 2006), and are used by investors to confirm their interpretations of the acquisition (Pyszczynski and Greenberg, 1987). A substantive cue to support investors' initial interpretations would be the acquisition of a target with a growth reputation. We hypothesized that, when made by a firm with a growth reputation, an acquisition of this kind would strengthen investors' perceptions that it represented a positive expectancy violation; however, when made by a firm with a

dividend reputation, it would reinforce their view of it being a negative expectancy violation. Additionally, symbolic cues are based on firm's stated intentions (Fiss and Zajac, 2004), and are used by management to shape the perceptions of investors (Rhee and Fiss, 2014). A symbolic cue that can shape investors' interpretations of acquisitions in a positive way is the framing used in the acquisition announcement. Investors would interpret acquisitions as more positive expectancy violations when firms with a dividend reputation use more dividend framing in their acquisition announcements and when firms with a growth reputation use more growth framing.

We tested this theory on a sample of acquisitions completed by S&P 500 firms between 2000 and 2015 ($N = 462$). We estimated cumulative abnormal returns (CARs) using event study methodology and we used financial ratios to measure growth and dividend reputation. We developed measures for dividend and growth framing using content analysis (Short *et al*., 2010). The analyses were performed using OLS regression with standard errors clustered on the acquirer and were corrected for sample selection bias (Certo *et al*., 2016). The results showed that investors reacted positively to acquisition announcements by firms with a growth reputation. Contrary to our predictions, they also responded positively when the acquiring firm had a strong dividend reputation, even though the effect was much smaller. Investors reacted negatively when firms with a dividend reputation acquired targets with a growth reputation. Investors' reactions were more positive when firms with a dividend reputation used more dividend framing in their acquisition announcements, and also when those with a growth reputation used more growth framing.

Our theory and findings contribute to research that uses the lens of EVT to examine the behavioral underpinnings of investors' reactions to acquisitions by high-reputation firms (Graffin *et al*., 2016; Haleblian *et al*., 2017). By re-conceptualizing reputation from being known for *whether* the firm creates shareholder value, into being known for *how* the firm creates shareholder value, we capture the diverse sets of expectations that investors might use to evaluate

acquisitions and their different reactions. We also enhance EVT by identifying a comprehensive set of boundary conditions to the predictions of the theory. Our work shows that perceptions of both negative and positive expectancy violations could be shaped by either substantive or symbolic information cues.

1.3.3 Study 3

Chapter 4 presents a study that sheds light on how the status of a CEO shapes his or her linguistic style, and how such linguistic style affects investors' evaluations of the firm. We do this by integrating insights from social comparison theory, sociolinguistics and literature on CEO awards. Table 1.3 summarizes the main aspects of Study 3.

Table 1.3 Summary of Study 3

Concepts	*Independent variable*: the status of the CEO *Dependent variable 1*: the level of powerful language in a CEO's communications to investors *Dependent variable 2*: investors' evaluations of the firm *Moderators*: CEO overconfidence, CEO compensation
Theories	Social comparison theory, sociolinguistics, impression management
Empirical setting	Earnings announcements by S&P 1500 firms for the years 2010–2018, $N = 1902$
Methods	Propensity score matching, content analysis
Findings	(1) CEOs without high status use higher levels of powerful language than those with high status. (2) The relationship between CEO status and the level of powerful language used by the CEO is stronger for overconfident CEOs and weaker for highly paid CEOs. (3) Higher levels of powerful language from CEOs lead to lower evaluations of the firm by investors.
Contributions	(1) To social comparison theory in the context of upper echelons – upward social comparison by CEOs affects not only substantive but also symbolic strategic actions. (2) To impression management research – impression management can backfire and shape impressions *negatively* rather than positively.

Scholars have used insights from social comparison theory to explain the motivational properties of upward social comparison among CEOs (e.g., Seo, Gamache, Devers, and Carpenter, 2015). The theory predicts that CEOs who find themselves in a lower position than some of their fellow CEOs are motivated to take immediate action to enhance their position (Festinger, 1954). A practice that has recently started to become increasingly common is the use of CEO awards, which substantially boosts a CEO's status and social recognition (Hayward, Rindova, and Pollock, 2004), and this has given CEOs a clear point of comparison. We refer to award-winning CEOs as *high-status CEOs*; those who do not win an award when a competitor CEO with similar characteristics does so we refer to as *non-high-status CEOs*. Currently, research has revealed that non-high-status CEOs undertake costly strategic initiatives such as engagement in acquisitions and patenting activity in an attempt to enhance their status (Ammann, Horsch, and Oesch, 2016; Shi *et al.*, 2017). However, insights from sociolinguistics suggest that some individuals might use powerful language to enhance their status (Logue and Miller, 1995). By integrating insights from social comparison theory and sociolinguistics, we look more closely at how and under what conditions non-winning CEOs make strategic use of different levels of powerful language in their communications. We also look at the consequences of CEOs' use of powerful language for the firms they manage, which determines the effectiveness of powerful language as an impression management technique.

We hypothesized that non-high status CEOs would compare themselves to high-status CEOs and as a result would use higher levels of powerful language in their communication than high-status CEOs in an attempt to boost their own perceived status. Indeed, non-high status CEOs would try to generate for themselves some of the benefits associated with high status by using more powerful language to manage impressions in a positive way. In addition, as a CEO's status is indicative of his or her perceived quality and ability, both the CEO's own perception of his or her abilities and how those abilities are perceived by others would affect the

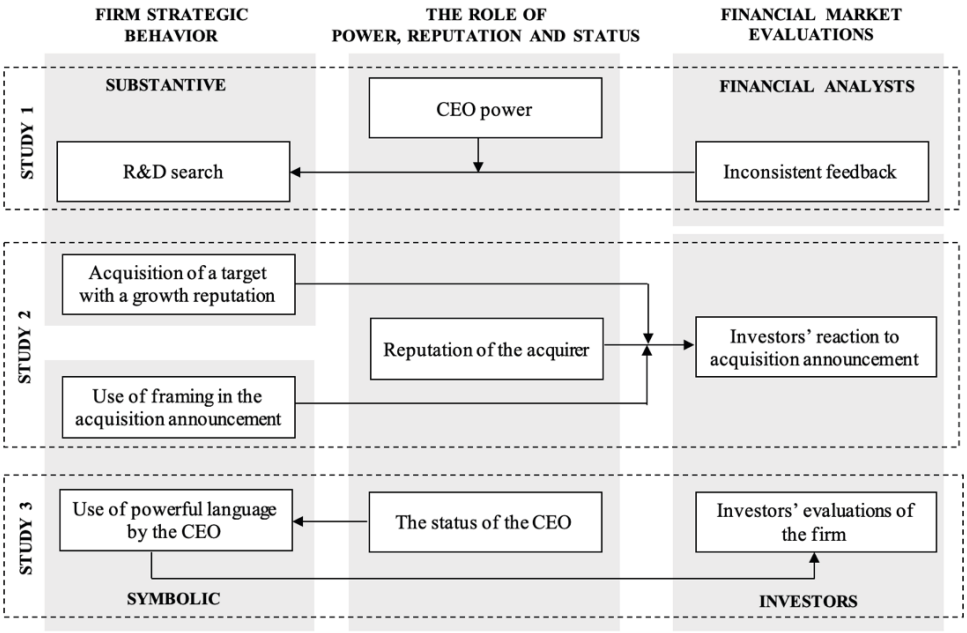
intensity with which non-high-status CEOs would use powerful language. CEO overconfidence, which is associated with an elevated perception of one's own abilities and quality (Chen, Crossland, and Luo, 2015), would make non-high status CEOs use even higher levels of powerful language in their communication. On the other hand, CEO compensation, which is indicative of other people's recognition of a CEO's quality and ability (Seo *et al*., 2015), would make non-high status CEOs use less powerful language in their communication. Finally, we looked at the consequences for the firm of CEOs using different levels of powerful language. As using high levels of powerful language could be perceived by investors as indicating a detachment from reality, and could therefore seem deceitful and less appealing to them, we hypothesized that its use would result in lower evaluations of the firm from investors.

We tested this theory on a matched sample of high-status and non-high-status CEOs from S&P1500 firms in the context of earnings announcements for the period 2010–2018 ($N = 1902$). We measured CEO status by whether the CEO won at least one prominent CEO award (e.g., Graffin, Boivie, and Carpenter, 2013; Malmendier and Tate, 2009). We developed a content analysis measure for the level of powerful language in CEO communication. We operationalized investors' evaluations of the firm by using the cumulative abnormal returns around the earnings announcement. We followed other scholars in terms of how we operationalized CEO overconfidence (Chen *et al*., 2015) and CEO compensation (Seo *et al*., 2015). The analyses were performed using OLS regression with standard errors clustered on the CEO (to test Hypotheses 1, 2 and 3) or the firm (to test Hypothesis 4). Our results showed that non-high-status CEOs used a higher level of powerful language in their communication than high-status CEOs. This effect was stronger when CEOs were overconfident and weaker when they received a higher level of compensation. Finally, we found that excessively high levels of powerful language in CEO communication resulted in lower investor evaluations of the firm.

Our theory and findings contribute to research on social comparison theory in the context of upper echelons and impression management. We broaden the predictions of social comparison theory with respect to how CEOs might behave after making upward social comparisons (e.g., Seo *et al*., 2015; Shi *et al*., 2017). While most previous studies have considered substantive strategic actions such as acquisition activity, we show that non-high-status CEOs could also use different linguistic styles, an action which is more symbolic and falls into the category of impression management techniques, to enhance their relative standing. We also reveal that impression management such as using powerful language, intended to shape evaluations positively, could in fact backfire and result in lower evaluations. This is a previously unanticipated outcome of impression management and is worthy of further investigation.

Figure 1.2 below presents an integrated conceptual framework of the three studies in my dissertation.

Figure 1.2 Integrated conceptual framework



1.4 DECLARATION OF CONTRIBUTION

Some of the chapters in my dissertation are written solely by me (Chapters 1 and 5), while others are a joint effort (Chapters 2, 3, and 4). I elaborate on my contribution in each of those chapters by providing a brief overview of the co-author team, my relation to the co-authors, and my precise contribution.

1.4.1 My contribution to Chapter 2

Chapter 2 is a published paper in the *Academy of Management Journal*. I am the first author. The other three co-authors are Tom Mom, Justin Jansen and Gerry George. Justin Jansen and Tom Mom are my supervisors. Gerry George is a member of my dissertation committee. I came up with the research question independently, carried out the literature review, collected and analyzed all the data, interpreted the findings, and wrote the initial manuscript of the paper. The paper it draws on my theoretical expertise in the areas of performance feedback, self-enhancement and CEO power. Given that Chapter 2 is the published version of my manuscript, the other three co-authors contributed by providing detailed feedback throughout the process, guided the review process and the implementation of suggestions from reviewers and the journal editor, and revised the writing of some parts of the manuscript. With respect to the writing, the other three co-authors contributed mainly to the INTRODUCTION and the THEORY AND HYPOTHESES of Chapter 2. Table 1.4 summarizes the contributors.

Table 1.4 Summary of contributors to Chapter 2

Development stage	Published in the **A*cademy of Management Journal***
My role	First co-author
Other co-authors (special relationship) *Affiliation*	**Tom Mom** & **Justin Jansen** (Supervisors) *Erasmus University Rotterdam* **Gerry George** (Member of the dissertation committee) *Singapore Management University*

1.4.2 My contribution to Chapter 3

Chapter 3 is a manuscript currently accepted for a publication in the *Strategic Management Journal*. The other co-authors are Korcan Kavusan, an Assistant Professor in my department, and Justin Jansen, my supervisor. I came up with the research question independently, carried out the literature review, collected and analyzed all the data, interpreted the findings, and wrote the initial manuscript. My theoretical contribution to the paper was my expertise on reputation and impression management. The other co-authors contributed theoretical knowledge relating to acquisitions. Given that Chapter 3 is a manuscript under review, the other two co-authors contributed by providing detailed feedback throughout the process; they guided the review process and the implementation of suggestions from reviewers and the journal editor, and revised the writing of some parts of the manuscript. With respect to the writing, the other two co-authors contributed mainly to the INTRODUCTION and the THEORY AND HYPOTHESES of Chapter 3. Table 1.5 summarizes the main contributors to Chapter 3.

Table 1.5 Summary of contributors to Chapter 3

Development stage	Accepted for a publication in the **S*trategic Management Journal***
My role	First co-author
Other co-authors (special relationship) *Affiliation*	**Korcan Kavusan** *Erasmus University Rotterdam* **Justin Jansen** (Supervisor) *Erasmus University Rotterdam*

1.4.3 My contribution to Chapter 4

Chapter 4 is an unpublished manuscript. I am the first co-author. The other two co-authors are Gokhan Ertug and Abhijith Acharya both from Singapore Management University. Gokhan Ertug is an Associate Professor and Abhijith Acharya is an Assistant Professor. I came up with the research question independently, carried out the literature review, collected all the data (except for

one of the control variables, which was collected by Abhijith Acharya), analyzed the data, interpreted the findings, and wrote the manuscript. My theoretical contribution to the paper was my expertise in status, linguistics and impression management. The other co-authors added some more in-depth theoretical knowledge relating to status and upper echelons. They also contributed to the paper's development by providing some feedback. Table 1.6 summarizes this.

Table 1.6 Summary of contributors to Chapter 4

Development stage	Unpublished
My role	First co-author
Other co-authors *Affiliation*	**Gokhan Ertug** *Singapore Management University* **Abhijith Acharya** *Singapore Management University*

CHAPTER 2

PROBLEM-SOLVING OR SELF-ENHANCEMENT? A POWER PERSPECTIVE ON HOW CEOS AFFECT R&D SEARCH IN THE FACE OF INCONSISTENT FEEDBACK[1]

ABSTRACT

Firms consider multiple reference points simultaneously to assess performance, yet often these referents may be inconsistent in signaling success or failure. Consequently, decision makers use two contrasting decision rules when responding to inconsistent feedback: problem-solving or self-enhancement. So far, disparate theoretical logics and mixed evidence has limited our understanding about when decision makers may shift their attention from positive to negative aspects of inconsistent feedback or vice versa, and may increase or decrease their R&D search. We examine how different types of CEO power explain why some firms may respond to inconsistent feedback, i.e. positive performance feedback and negative prospects, in distinct ways. We find that firms engaged in less R&D search as a response to inconsistent feedback when CEOs had high levels of structural, ownership or expert power. In contrast, when CEOs had high levels of prestige power, firms undertook more R&D search as a response to inconsistent feedback. Our findings provide new insights and contribute to conversations about CEO power and performance feedback within the context of the behavioral theory of the firm.

[1]This study has been published. **Blagoeva RR**, Mom TJ, Jansen JJP, George G. 2020. Problem-solving or self-enhancement? A power perspective on how CEOs affect R&D search in the face of inconsistent feedback. *Academy of Management Journal* **63**: 332–355.

2.1 INTRODUCTION

Research on the role of performance feedback in understanding organizational behavior has been burgeoning (Gavetti, Greve, Levinthal, and Ocasio, 2012), and scholars have devoted substantial attention to addressing the impact of performance feedback on strategic decisions such as investment in research and development (R&D) (Cyert and March, 1963; Greve, 2003). Although earlier studies have largely focused on the effects of single performance referents, scholars have suggested that decision makers use multiple and diverse reference points simultaneously when gauging organizational performance (Baum, Rowley, Shipilov, and Chuang, 2005; Chen, 2008; Washburn and Bromiley, 2012). If these differ in terms of signaling success or failure, decision makers are confronted with inconsistent feedback that causes important distortions in performance assessment and decision-making processes (Baum *et al*., 2005; Chen, 2008; Hu, He, Blettner, and Bettis, 2017; Joseph and Gaba, 2015; Lucas, Knopen, and Meeus, 2018). For instance, interpretive efforts of inconsistent feedback may amplify differences in opinion and may cause intense debates among senior executives and other stakeholders which complicates decision making (Greve and Gaba, 2017). Because of these complex and challenging circumstances, scholars have proposed two contrasting decision rules that decision makers may use when assessing and responding to inconsistent feedback (Audia and Brion, 2007; Greve, 1998).

The first decision rule – referred to as problem-solving (Cyert and March, 1963; Greve, 2003) – suggests that decision makers prioritize those indicators that fall below aspirations. Assuming that individuals are motivated to solve problems, they try to reduce negative discrepancies between actual and desired outcomes by engaging in problemistic R&D search. The second decision rule – referred to as self-enhancement (Audia and Brion, 2007; Sedikides and Strube, 1997) – predicts that decision makers give greater attention to performance referents that are above the aspiration level. Because of the desire to protect their self-image, they tend to

portray inconsistent feedback more positively and judge R&D search to be unnecessary (Audia and Brion, 2007; Dunning, Meyerowitz, and Holzberg, 1989). Empirical evidence about which decision rule prevails when dealing with inconsistent feedback has been rather inconclusive and mixed. Whereas Greve (1998) did not find any significant effect between inconsistent feedback and new product introductions, others have found support for either the problem-solving (Baum *et al*., 2005; Hu *et al*., 2017; Joseph and Gaba, 2015) or self-enhancing perspective (Lucas *et al*., 2018). These disparate findings clearly signal the need for a deeper understanding about the conditions under which decision makers may act as problem-solvers or self-enhancers when responding to inconsistent feedback. Hence, we respond to recent calls for providing more exhaustive explanations (Greve and Gaba, 2017; Lucas *et al.*, 2018) and advance research about how inconsistent feedback affects organizational adaptation in three important ways.

First, we bring together disparate theoretical logics and identify when decision makers problem-solve or self-enhance while interpreting and responding to inconsistent feedback. Given the profound impact of chief executive officers (CEOs) on decision-making processes and strategic actions (Quigley and Hambrick, 2015), we examine how CEO power serves as a foundational source of bias and shapes decision rules when considering inconsistent feedback. Referred to as the capacity of individuals to influence other coalition members (Finkelstein, 1992: 506), powerful CEOs may not only employ explicit influence tactics such as information withholding or agenda control but also exercise their power more implicitly by shaping the norms governing decisions and other executives' interpretive schemes (Pfeffer, 1981). Our contingency model augments research on performance feedback and self-enhancement theory (Jordan and Audia, 2012) and sheds light on controversies from both theories' predictions about how decision makers may respond to inconsistent feedback.

Second, although research has acknowledged that CEOs play a critical role in shaping strategic decision making (Quigley and Hambrick, 2015), it has typically

assumed self-enhancing biases to be prevalent among powerful CEOs (Jordan and Audia, 2012; Pfeffer and Fong, 2005). We move beyond such a restricted focus on power and self-serving attributions and forward a more balanced view about the impact of CEO power on the assessment process of and subsequent response to inconsistent feedback. Since CEO power may come from various sources associated with different types of power including structural, ownership, expert and prestige power (Finkelstein, 1992), we suggest that what distinguishes powerful CEOs from using either the problem-solving or self-enhancement decision rule is their underlying basis of power. Even when confronted with similar inconsistent feedback, we recognize that each type of CEO power shapes attention shifts to either positive or negative parts of inconsistent feedback, and hence, explains whether firms increase their R&D search or not (Greve and Gaba, 2017).

Third, recent studies examining the consequences of inconsistent feedback have almost exclusively focused on internal contradictions among backward-looking performance assessments such as the ones based on historical and social aspirations (Hu *et al*., 2017; Joseph and Gaba, 2015; Lucas *et al*., 2018). Yet, forward-looking prospects indicate whether probable outcomes of planned behavior would result in the successful achievement of set targets (Chen, 2008; Gavetti and Levinthal, 2000; Greve, 2003). Because the allocation of resources to R&D requires complex judgement about future prospects (Arrfelt, Wiseman, and Hult, 2013), we argue that CEOs are particularly confronted with inconsistencies when they have positive feedback about past performance, yet receive poor future prospects. By using this configuration of inconsistent feedback, we are able to explore how distinct sources of CEO power affect the tendencies that firms may resist problemistic search and persist with outdated strategies that have proven to be successful in the past (Clapham and Schwenk, 1991). For completeness, we also show the results for the alternative configuration of inconsistent performance referents where performance feedback is negative but future prospects are positive.

2.2 THEORY AND HYPOTHESES

Building on the seminal work of Cyert and March (1963), scholars have widely considered the role of performance feedback in organizational behavior. Portraying performance feedback as a performance evaluation process during which current performance is evaluated against an aspiration level, the behavioral theory of the firm (BTOF) generally suggests that firms initiate problemistic search when they perform below aspiration levels (Posen, Keil, Kim, and Meissner, 2018). Scholars have discerned various types of problemistic search behaviors, including new product introductions (Greve, 1998), acquisitions (Iyer, and Miller, 2008) and strategic investments (Souder and Bromiley, 2012), yet most studies have considered R&D search, or the allocation of resources to R&D, as a key behavioral consequence of performance feedback (Shinkle, 2012). Research has also established that performance is often evaluated using historical and social aspiration levels so that current performance is compared with either the past performance of the focal organization or its peers (Washburn and Bromiley, 2012). Reflecting such a backward-looking search model, BTOF generally predicts that firms allocate resources to R&D when the discrepancy between current performance and aspiration levels increases.

Although the backward-looking search model has dominated performance feedback research (Gavetti *et al*., 2012), scholars have argued that the allocation of resources to R&D reflects a forward-looking search model that requires complex judgments about future prospects (Arrfelt *et al*., 2013). Rather than being focused on remedying potential deficiencies between past performance and aspirations, the forward-looking search model suggests that firms increase R&D when performance prospects indicate that their future performance might not be sufficient to meet current targets (Chen, 2008). For instance, financial analysts' estimates pointing towards unsatisfactory prospects might be particularly salient to decision makers due to the estimates' impact on investors' behavior, and the associated negative

consequences for firms and their senior executives (e.g., Wiersema and Zhang, 2011). Financial analysts' estimates falling below performance targets represent *negative forward-looking prospects*, which indicate that given current managerial choices, future performance might not be satisfactory to meet set targets. Although empirical evidence seems to support the notion that negative forward-looking prospects trigger problemistic R&D search among firms (Chen, 2008), scholars have suggested that both backward- and forward-looking decision-making processes need to be taken into account because they act in tandem in determining the allocation of resources to R&D (Arrfelt *et al.*, 2013; Chen, 2008). Especially important for understanding the consequences of negative prospects could be when *backward-looking feedback* is positive, which indicates that past managerial choices were able to generate desired levels of performance, because it introduces inconsistency in the performance assessments.

When backward-looking feedback and forward-looking prospects are inconsistent, comparisons of current performance levels relative to those from the past and those foreseen in the future diverge systematically (Hu *et al.*, 2017; Joseph and Gaba, 2015). Hence, internal contradictions between distinct aspects of firm performance make an unequivocal assessment unlikely (Lucas *et al.*, 2018). For instance, when firms are able to achieve their past targets and demonstrate strong performance, stakeholders start extrapolating from past successes and form the opinion that the firm has the right capabilities to deliver similar levels of value (Mishina, Block, and Mannor, 2012). When firms then receive signals of potential failure to meet targets, such inconsistency in performance feedback may lead to intense debate among those involved in decision making (Desai, 2016; Joseph and Gaba, 2015). Originating from different personal ambitions, interests, and cognitive representations of future states (Allison, 1971; Chen, 2008), divergent preferences for responses may emerge because of dissimilar formal positions and responsibilities. It may raise subjectivity of performance evaluations that may lead to attention shifts among multiple reference points (Greve, 1998; Lucas *et al.*,

2018). Stakeholders, such as other top management team (TMT) members or board of directors (BOD), may try to steer discussions and start using influence tactics to advance their own opinions and interests (Fang, Kim, and Milliken, 2014; Westphal and Bednar, 2008). Earlier studies have suggested that attention shifts and the prioritization of individual rather than organizational goals could lead to negative performance prospects being recoded as temporary, which curbs the tendency to engage in problemistic search (Jordan and Audia, 2012). To deal with the complexity of decision making and the cognitively challenging nature of assessing and responding to inconsistent feedback, research has suggested that decisions makers use decision rules that guide their behavior (Greve, 2003).

In accordance with literatures on heuristics, scholars have broadly categorized two diametrically opposed decision rules; the problem-solving and the self-enhancement rule (Audia and Brion, 2007; Greve, 1998; Hu *et al*., 2017). Problem-solvers prioritize the negative aspect of the inconsistent feedback and engage in more R&D search (Baum *et al*., 2005). Indeed, successfully achieving one goal frees up managerial attention and enables the firm to allocate more resources to problemistic search when another goal is not achieved (Hu *et al*., 2017). Such facets of inconsistent feedback shape decision makers' perceptions of the situation as an opportunity to restore firm performance and motivate them to identify potential solutions through investing in problemistic search (Shimizu, 2007). Self-enhancers, on the other hand, prioritize the positive aspect of the inconsistent feedback and engage in less R&D search (Audia and Brion, 2007). Concerned with being held responsible for the negative aspect of the inconsistent feedback and motivated to protect their self-image and position, self-enhancers consider the positive part of the inconsistent feedback as an opportunity to hide potential problems and avoid attempts to remedy anticipated performance shortfalls (Audia and Brion, 2007; Jordan and Audia, 2012). Despite earlier studies explicating disparate theoretical logics underlying each decision rule, empirical evidence about which decision rule prevails when dealing with inconsistent

feedback has been rather inconclusive. So far, it is rather unclear when decision makers act as problem-solvers or self-enhancers when responding to inconsistent feedback.

2.2.1 CEO Power, inconsistent feedback and R&D search

CEOs are considered to be the most influential decision maker within firms and to play a critical role in explaining firms' actions and performance (Hambrick and Finkelstein, 1987; Quigley and Hambrick, 2015). For instance, studies have shown that CEO attributes and preferences determine strategic investments, changes in organizational structure and cultural values (Hambrick, 2007; Tang, Crossan, and Rowe, 2011). Together with such a consequential role in the firm, comes the fact that CEOs are often being held accountable for firm performance, which could lead to dismissal when the firm is underperforming, or may lead to promotion and pay raise in case of outstanding results (Chen, Luo, Tang, and Tong, 2015; Crossland and Chen, 2013). As such, CEOs might be particularly motivated to shape the ways in which inconsistent feedback about backward- and forward-looking referents is approached and assessed.

Nevertheless, CEOs rarely make critical decisions in isolation and studies have sought to explain how the interactions between CEOs and other TMT members, the BOD as well as other stakeholders may shape decision-making processes regarding performance feedback (Boeker, 1997; Desai, 2016; Fang, Kim, and Milliken, 2014). By so doing, earlier theorizing has demonstrated that power is an inherent component of the performance evaluation process and showed how CEOs may use interpersonal influence tactics to deal with pressures from other senior executives and external constituents (Westphal and Bednar, 2005). Accordingly, we suggest that CEO power, referred to as the CEO's capacity to influence other stakeholders (Finkelstein 1992; Pfeffer, 1981), shapes the way in which firms respond to inconsistent feedback and explains the extent to which either the problem-solving or self-enhancement rule manifests itself in decisions about

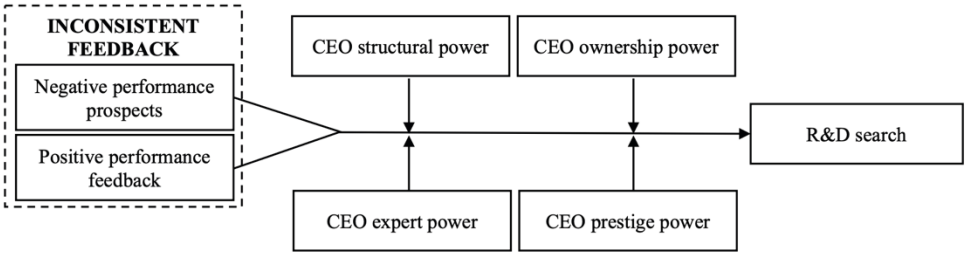
R&D search. Importantly, power gives opportunities to CEOs but also entails responsibilities (De Wit, Scheepers, Ellemers, Sassenberg, and Scholl, 2017; Williams, 2014). For instance, powerful CEOs have access to valuable resources and tend to be more optimistic about the success of their chosen courses of action (Gupta, Han, Nanda, and Silveri, 2016; Finkelstein, 1992). Therefore, they might have more confidence in solving the problem that has caused the inconsistency in performance feedback and prospects, and intensify R&D search as a result. However, powerful CEOs are also held personally responsible for firm outcomes (Finkelstein and D'Aveni, 1994), which means that they may feel threatened by inconsistencies in performance assessments, and therefore, start engaging in self-enhancement behaviors and steer decision making towards reducing R&D search. A threat to their ability to exercise power and to be in control leads decision makers to act defensively. As such, they may use their power to advance their own interests in order to maintain their position (Deng, Zheng, and Guinote, 2018).

We investigate specific sources of power in order to understand how CEO power affects the choice of problem-solving and self-enhancement rules when CEOs are faced with negative prospects and positive feedback. In the context of strategic decision making, Finkelstein (1992) noted that four types – associated with different sources – of CEO power are critical: structural, ownership, expert, and prestige power. *CEO structural power* is based on formal organizational structure and hierarchical authority, and defines the interpersonal dynamics within TMTs (Patel and Cooper, 2014). *CEO ownership power* is determined by the CEO's position in the principal–agent relationship, and indicates how the CEO interacts with the BOD and powerful shareholders (Canella and Shen, 2001). *CEO expert power* is derived from the CEO's exposure and relationships with stakeholders within the firm's task environment, such as employees, suppliers and customers (Park and Tzabbar, 2016). Finally, *CEO prestige power* is based on the CEO's reputation and standing within the firm's institutional environment (Finkelstein, 1992). Each of the four types of power can be classified along broader categories of

power including 'harsh' versus 'soft' power or 'control' versus 'persuasive' power (Raven, Schwarzwald, and Koslowsky, 1998; Turner, 2005). In this respect, CEO structural and ownership power are considered to be 'harsh' or 'control' concepts of power, that arise from formal positions within the organization and give CEOs legitimate authority to control the behavior of others. On the contrary, CEO expert and prestige power can be defined as 'soft' or 'persuasive' concepts of power that emerge from personal characteristics of individuals such as superior knowledge, experience, background and mutual relationships (Raven *et al*., 1998).

Overall, we expect powerful CEOs to problem-solve when the source of their power provides them with opportunities to influence others in such a way that addressing inconsistent feedback does not threaten their position and self-image. Rather, we argue that CEOs tend to self-enhance when their source of power does not provide such opportunities and inconsistent feedback threatens their position, or when they lack confidence that they are able to address inconsistent feedback in an effective way. Our theoretical model is summarized in Figure 2.1.

Figure 2.1 The moderating effect of CEO power on the relationship between inconsistent feedback and R&D search



CEO structural power. The concentration of power in a firm's CEO has been shown to lead to more biased attributions of information (Fulmer and Gelfand, 2012), which might facilitate self-enhancement attempts in dealing with inconsistent feedback. In addition, TMT members tend to engage in political

behaviors and to start secretly building coalitions in order to enhance their influence (Eisenhardt and Bourgeois, 1988). Earlier research has revealed that such a politicized context may weaken social bonds and interrupt habitual cooperation based on trusted relationships within TMTs. This reduces the willingness of decision makers to share private information, which could negatively impact problem-solving and increase the tendency of powerful CEOs to underweight advice from others (Tost, Gino, and Larrick, 2012). CEO structural power thus paralyzes constructive debate during which openly questioning the effectiveness of organizational behavior is deemed inappropriate (McNulty and Pettigrew, 1999; Park, Westphal, and Stern, 2011) and self-enhancement is more likely to occur. Given the more stringent set of cognitive and social resources that is dedicated to the evaluation process, decision makers are more constrained when assessing inconsistent feedback and identifying alternative responses (Abebe, Angriawan, and Liu, 2011; Fulmer and Gelfand, 2012; Tang, Crossan, and Rowe, 2011). Such cognitive constraints may prime structurally powerful CEOs to perceive threats to their self-image because of concerns that the identified solution for R&D search will be insufficient to align future prospects with past successes (Shen and Cannella, 2002; Zhang, 2006). In order to safeguard their powerful position, we argue that such CEOs become more inclined to shift attention away from goals related to collective improvements and problem-solving efforts to those related to their self-enhancing interests (Bunderson and Reagans, 2011).

In order to reduce complexity of decision making and weakening of their own position in the assessment of inconsistent feedback, structurally powerful CEOs would use their power to control the TMT's strategic agenda (Zhang, 2006). They may distort available information by putting counterfactual aspects on the agenda (Shen and Cannella, 2002). Also, they may monitor more closely discussion about issues such as future growth in demand or the impact of technological change, so that the resulting assessments of future prospects are compatible with their own self-enhancing interests (Jordan and Audia, 2012). Hence, by scheduling topics and

manipulating assessments, structurally powerful CEOs may protect their position by shifting the performance evaluation process from negative prospects to positive performance feedback. Overall, we suggest that structurally powerful CEOs prompt self-enhancing assessments of inconsistent feedback and avoid R&D investments.

Hypothesis 1: A greater inconsistency between positive performance feedback and negative performance prospects will result in less R&D search when the firm's CEO has more structural power.

CEO ownership power. Although CEO ownership has been associated with a greater alignment between the interests of the CEO and other shareholders (Hoskisson, Hitt, Johnson, and Grossman, 2002), significant levels of equity and voting rights of CEOs reduce the influence of the BOD and enables CEOs to exercise more discretion in decision making (Finkelstein, 1992; Finkelstein and D'Aveni, 1994). Additionally, significant ownership links the wealth, status, and career of CEOs more tightly to how firm performance is assessed by others (Gentry and Shen, 2013; Hoskisson *et al*., 2002). As such, ownership power bears higher risks on CEOs when their firm might fail (Lange, Boivie, and Westphal, 2015), suggesting that such CEOs might be prone to engage in self-enhancement as a way to avoid losses related to potential negative interpretations of the inconsistent feedback by the BODs and shareholders. Higher ownership, indeed, may provide CEOs with control over strategic actions that are compatible with their own interests (Johnson, Hoskisson, and Hitt, 1993) and ultimately distract the BODs from problem-solving attempts in order to deal with negative prospects.

When faced with inconsistencies between past success and negative prospects, we argue that CEOs with significant firm ownership try to ensure that outsiders interpret inconsistent feedback more positively in order to retain their authority in decision making. Having invested substantial time and effort in advancing the firm, CEOs can use their information advantage over outsiders to

self-enhance when receiving inconsistent feedback (Feldman and Montgomery, 2015; Kroll, Walters, and Le, 2007). For instance, they may present negative prospects to be temporary in nature and non-threatening to the future performance of the firm, thereby preventing investors from publicly voicing their concerns and dissatisfaction (Westphal and Bednar, 2008). Rather than signaling that something may be wrong and allocating more resources to R&D search, we argue that CEOs with higher ownership power tend to shift the BOD's attention to past successes of the firm and prevent their active involvement in decision making. They may emphasize the rightfulness of their previous choices by using tactics such as share buybacks (Benner and Ranganathan, 2012; Sanders and Carpenter, 2003) and demonstrate their confidence in current organizational strategies. Moreover, they could use their voting rights to enforce commitment to practices that have been shown to be successful, and persist with current R&D resource allocation decisions, since doing so could further enhance their authority (Haynes and Hillman, 2010). We argue therefore that CEOs with significant ownership power tend to self-enhance when confronted with inconsistent feedback and to prevent potential losses to their socio-economic wealth (George, Wiklund, and Zahra, 2005). They highlight past successes in order to shift attention to positive assessments of the inconsistent feedback and present current actions to be aligned with the shareholder interests at the expense of R&D search. As such, we expect:

> *Hypothesis 2: A greater inconsistency between positive performance feedback and negative performance prospects will result in less R&D search when the firm's CEO has more ownership power.*

CEO expert power. Expert power helps CEOs to safeguard support from important constituents in their task environment (Finkelstein, 1992), which makes inconsistent feedback less threatening for them and for the firm. Indeed, the more CEOs interact with other stakeholders, the less important performance signals

become in defining their relationship (Bunderson, 2003). This means that CEOs with a high level of expert power who have interacted extensively and have developed relationships with a variety of stakeholders are less dependent on positive assessment of firm performance in order to ensure mutual cooperation and commitment in the future (Choi and Wang, 2009). As such, CEOs with higher expert power may consider self-enhancement as less relevant or even counterproductive when dealing with inconsistent feedback because it may undermine established relationships with different stakeholders (Barney and Hansen, 1994). Using self-enhancement tendencies during evaluation processes could potentially damage stakeholder loyalty and put social relations, and thus the position of the CEO possessing expert power, at risk. We argue therefore that CEOs with high levels of expert power consider addressing problems and being transparent about R&D search as a way to negotiate a more favorable outcome for the firm by stressing that getting the firm back on track will be mutually beneficial.

Furthermore, expert power helps CEOs to ensure the quality of information used when assessing inconsistent feedback and enhances their confidence in addressing shortcomings when engaging in R&D search. Expert power enables CEOs to gain access to trustworthy and industry-specific information through ties with important stakeholders from the task environment (Dyer and Chu, 2003; Kor and Sundaramurthy, 2009). Therefore, CEOs with expert power feel more confident about resolving debates with stakeholders following inconsistent feedback, and will therefore engage more readily in R&D search in order to take advantage of specific opportunities which can address negative parts of the inconsistent feedback and reverse the future prospects. In addition, CEOs with expert power have more hands-on experience (McDonald, Westphal, and Graebner, 2008) and tend to possess a more holistic understanding of difficult problems, which allows them to better estimate both the costs and benefits involved when pursuing problemistic search and solving problems associated with negative prospects (Park and Tzabbar, 2016).

They feel better equipped to solve underlying problems associated with the inconsistent feedback because they have a better understanding of the potential of the opportunities identified. Thus, unlike CEOs with less expert power, whose firms invest less in R&D search to test the identified solution, those CEOs with expert power will have their firms to commit additional resources to R&D search in order to address the inconsistent feedback in a problem-solving way.

Hypothesis 3: A greater inconsistency between positive performance feedback and negative performance prospects will result in more R&D search when the firm's CEO has more expert power.

CEO prestige power. Prestige power is often seen as an asset for CEOs because it provides access to scarce resources, high-quality information and advice from prestigious peers (Chen, Hambrick, and Pollock, 2008; Flickinger, Wrage, Tuschke, and Bresser, 2016). These benefits may assure prestigious CEOs that they are in control over the outcomes of debates and diverging opinions during the assessment of inconsistent feedback. Such CEOs tend to perceive positive feedback and negative prospects as less challenging than less prestigious CEOs (Campbell and Sedikides, 1999; Sedikides and Strube, 1997), because they perceive the negative part of inconsistent feedback to be correctable. Suggestions about how to address inconsistent feedback made by CEOs with a high level of prestige power are also received more positively (Levine and Moreland, 1990), which provides prestigious CEOs with additional confirmation that the outcomes of R&D search will be regarded by others as useful and important to address negative prospects. They feel more capable to improve future performance by intensifying R&D search when confronted with inconsistent feedback than those with less prestige power.

Prestigious CEOs are also more strongly motivated to safeguard their prestige (Marr and Thau, 2014). When they are faced with inconsistent feedback in which past success is recognized but future failure is anticipated, their motivation to

protect their social standing is likely to be stronger because negative prospects reduce their status and prestige (Withers, Corley, and Hillman, 2012). More specifically, prestigious CEOs are part of an elite network, whose members want to preserve their exclusivity and status, which they do via monitoring and helping each other to ensure high standards of decision making (Acharya and Pollock, 2013; Davis, Yoo, and Baker, 2003). Constructing a favorable self-image in the event of inconsistent feedback can make CEOs seem dishonest or unreliable and may damage their social prestige (Cialdini and De Nicholas, 1989). We envision that such damage will be greater for prestigious CEOs because they are expected to demonstrate higher moral standards and to address potential drops in forward-looking prospects (Wang, Wezel, and Forgues, 2016). Thus, the higher the prestige power of CEOs, the more shifting attention away from future performance problems may put them at risk of losing their social standing. Rather, by addressing the problems underlying inconsistent feedback, they may protect their social standing (Krishnan and Kozhikode, 2015; Park and Podolny, 2000). Hence, we expect that decision makers at firms with prestigious CEOs will scrutinize inconsistent feedback, and intend to respond to it by increasing R&D search.

Hypothesis 4: A greater inconsistency between positive performance feedback and negative performance prospects will result in more R&D search when the firm's CEO has more prestige power.

2.3 METHODOLOGY

2.3.1 Sample and data

Our initial sample consisted of all S&P 500 firms between 2002 and 2014. Data on firms and industries were collected from COMPUSTAT, CRSP and KLD, the data on CEOs, TMTs, BODs and investors from Execucomp, BoardEx and ISS, and the data on financial analysts' forecasts, used to compute the performance

prospects, from I/B/E/S. Following previous studies, we excluded firms within industries (i.e., based on four-digit Standard Industrial Classification (SIC) codes) in which there were less than five competitors so as to limit the influence of a single firm on the computation of industry-level variables (Chen, 2008). Firms from financial services (SIC 60–69), utilities (SIC 40, 48 and 49) and unidentified industries (SIC 99) were also excluded. Finally, we left out firms whose R&D expenditure exceeded their sales, because such firms might be research firms and exhibit different investment behaviors (Chen, 2008). The final sample consisted of 241 firms and 1887 firm-year observations.

2.3.2 Measures

R&D search. Following earlier studies, we measured *R&D search* as the ratio of R&D spending to sales[2] (Chen, 2008). Since firms are not required to report R&D spending which is less than ten percent of sales and general administrative expenses, we replaced non reported, e.g. missing, values for R&D spending with zero and included a dummy variable for missing R&D in our analysis to control for such replacement (Benner and Ranganathan, 2012). To test the robustness of our measure, we employed alternative operationalizations of our dependent variable where R&D search was based only on non-missing values of R&D spending or captured by an index which also incorporated acquisition spending and capital expenditures (Iyer and Miller, 2008; Souder and Bromiley, 2012), and our results remained qualitatively the same. We elaborate on those robustness tests in the Results section.

[2]Scholars have raised concerns about using ratios as dependent variables (Certo, Busenbark, Kalm, and LePine, 2018). We decided, however, to stick to previous operationalizations of R&D search as a ratio for two reasons. First, R&D intensity and R&D spending are two different theoretical constructs (Bromiley, Rau, and Zhang, 2017) and performance feedback affects each of these activities in completely opposite ways (Bromiley and Washburn, 2011). Second, choosing R&D intensity allowed us to compare our results to many other studies concerned with the effect of performance feedback on R&D search (e.g., Chen, 2008; Lucas *et al*., 2018), and it was most closely aligned with the predictions of the BTOF (Bromiley and Washburn, 2011).

Inconsistency between performance feedback and performance prospects. We adopted the measures from Chen (2008) to compute performance *feedback* and performance *prospects*. Feedback was measured as the difference between past performance (*t*-1) and aspiration (*t*-1). We employed return on assets (ROA), i.e., the ratio of net income to total assets, as a measure of performance because it had been widely used in previous studies. Aspiration (*t*-1) was computed as a weighted combination of past performance at *t*-2 (weight of 0.6) and past performance at *t*-3 (weight of 0.4), because firms tend to rely more heavily on recent performance measures when forming their aspirations (Chen, 2008). Prospects was measured as the difference between performance expectations (*t*+1) and current target (*t*). Financial analysts provide performance forecasts for firms, which are based on careful examination of the focal firm, its competitors and industry trends (Wiersema and Zhang, 2011), and these forecasts have been used as an indicator of performance expectations (Chen, 2008). First, we took the average of the last earnings per share (EPS) forecast of each analyst who had issued forecasts for each firm for year *t*+1 in year *t*. We then computed the expected ROA *t*+1 by multiplying the average forecasted EPS *t*+1 by the shares outstanding and dividing it by the total assets. Target was computed in a way that reflected the notion that decision makers develop targets based on a historical time series of performance trends (Chen, 2008). As such, current target was the predicted ROA *t* after ROA *t* had been regressed on past ROA from time *t*-1 to *t*-3 (Chen, 2008).

We then separated the performance assessment effects into negative and positive (Chen, 2008). *Negative feedback* was the absolute difference between the firm's past performance and aspiration when the performance was below the aspiration, and zero otherwise. *Positive feedback* was the absolute difference between the firm's past performance and aspiration when the performance was above the aspiration, and zero otherwise. *Negative prospects* was the absolute difference between the firm's future performance expectation and current target when the performance expectations were below the target, and zero otherwise.

Positive prospects was the absolute difference between the firm's future performance expectation and current target when the performance expectations were above the target, and zero otherwise. As such, higher values for the negative feedback/prospects indicated more negative values and higher values for the positive feedback/prospects indicated more positive values. All four feedback and prospect variables were winsorized at the 0.5%-level to avoid some extreme outliers and enable us to still keep the observations as part of our sample. The effect of inconsistent feedback in the case of *negative prospects* and *positive feedback* was studied by including an interaction term between the two variables. We also controlled for the alternative scenario of inconsistency between *positive prospects* and *negative feedback* by including a second interaction term.

CEO structural power. We measured *CEO structural power* as an index of the sum of four standardized components, namely (1) CEO duality, measured as one if the CEO also served as the chair of the BOD, and zero otherwise, (2) the number of non-CEO TMT members, who sat on the BOD (reversed) (3), title inequality and (4) pay inequality (Daily and Johnson, 1997; Finkelstein, 1992; Patel and Cooper, 2014). Title was a count measure based on information available in Execucomp about the different titles that each TMT member held. Pay was the natural logarithm of total compensation received by each TMT member; tdc1 variable from Execucomp was used for total compensation. Inequality was measured as:

$$\left(\sum_{i=1}^{n}\frac{(S_i - S_j)^2}{n}\right)^{1/2}$$

where S_i was the CEO's titles/pay, S_j was the title/pay of non-CEO TMT member *j*, and *n* was the number of non-CEO TMT members. Following other studies, we considered TMT members, including the CEO, to be the five highest paid executives within the firm (e.g., Ridge, Aime, and White, 2015).

CEO ownership power. We measured *CEO ownership power* as an index of the sum of two standardized components, namely (1) whether the CEO was a founder of the firm, coded as one if the CEO was, and zero otherwise, and (2) the CEO ownership percentage as a proportion of the summed ownership percentage of outside directors and institutional block-holder investors, namely institutional investors who owned at least five percent of the total firm stock (Canella and Shen, 2001; Finkelstein, 1992).

CEO expert power. *CEO expert power* was measured as an index of the sum of three standardized components, namely (1) CEO tenure in the firm, (2) the number of roles that the CEO had in the firm, and (3) the number of functional areas in which the CEO had served the firm (Daily and Johnson, 1997; Finkelstein, 1992). We used previously identified functional areas: (a) production and operations, (b) R&D and engineering, (c) accounting and finance, (d) management and administration, (e) marketing and sales, (f) law, (g) personnel and labor relations (Patel and Cooper, 2014).

CEO prestige power. We measured *CEO prestige power* as an index of the sum of three standardized components, namely (1) the number of public boards the CEO sat on, (2) the number of non-profit boards the CEO sat on, and (3) whether the CEO had an elite education, which was coded as one if the CEO had a degree from an elite institution, and zero otherwise (Finkelstein, 1992). The list of elite institutions was adopted from Gomulya and Boeker (2014).

Control variables. We included several variables for firms, CEOs, BODs, industries and time that could have an effect on R&D search and/or the performance feedback and prospects variables. We included a *lagged R&D search*, which allowed us to capture the effects of routine planned investments (Benner and Ranganathan, 2012). It also helped us to cope with autocorrelation in the error term. Other firm control variables were *firm size*, which could affect the firm's capabilities and preferences for investments, and *firm growth*, based on sales growth over the past three years, which could shift perceptions regarding the benefits of

R&D intensity. We also included *financial slack*, measured by an index composed of two firm-standardized ratios: current assets to current liabilities, and working capital to sales (Chen, 2008).

We further controlled for alternative uses of cash such as firm dividends per share (*DPS*) and *share repurchases* (the natural logarithm of the value of purchase of common and preferred stock), which could affect decisions about R&D search (Benner and Ranganathan, 2012). We also included a measure of earnings management based on discretionary accruals, which could be used to boost short-term results (Zang, 2011). *Earnings management* was based on a modified Jones (1991) model run for each year-industry combination, and it was proxied by the residual from regressing total accruals (being the earnings before extraordinary items and discontinued operations minus operating cash flows) on the change in revenues from the preceding year and the gross value of property, plant and equipment, all scaled by firm total assets (Zang, 2011).

To allow us to better isolate the effect of CEO expert power and CEO prestige power, we also controlled for firm reputation among stakeholders and firm status. To compute *firm reputation with stakeholders* we used data from KLD. We standardized the number of strengths and concerns on six dimensions and subtracted the total number of concerns from the total number of strengths to derive the reputation with stakeholders index (Choi and Wang, 2009). The six dimensions were community relations, employee relations, diversity, human rights, environment, and product. To proxy for *firm status*, we used the residual from regressing analyst coverage, which was the natural logarithm of the number of financial analysts providing forecasts for the focal firm for a particular fiscal year, on established predictors from previous research. The predictors we used in the regression were firm size (natural logarithm of total assets), ROA, returns volatility (standard deviation of daily stock returns over the fiscal year) and cumulative stock returns of the firm over the fiscal year (Shen, Tang, and Chen, 2014).

We controlled for *CEO age* and *CEO gender*. We also included *CEO overconfidence* employing a measure based on CEO option exercise behavior. Research has shown that CEOs sell exercisable options when they are not confident about the future prospects of the firm (Devers, McNamara, Haleblian, and Yoder, 2013). We therefore classified CEOs as overconfident if they had kept their exercisable stock options when the stock price was at least 67% higher than the exercisable price at least twice in the period from the beginning of their tenure as CEO until the focal year (Chen *et al*., 2015; Malmendier and Tate, 2005). We also included the *CEO long-term pay mix*, being the proportion of total compensation paid in long-term forms such as long-term incentive plans, stock options and restricted stock (Sanders and Carpenter, 1998). Some important board-related variables, which could be consequential for board monitoring and thus for opportunities to self-enhance, were *board size* (the logarithm of the number of directors) and *board independence* (the proportion of independent directors) (Desai, 2016).

We also controlled for the *median industry R&D search* (Chen, 2008), industry-based managerial discretion (Chen, Crossland, and Luo, 2015) and environmental uncertainty (Arrfelt *et al*., 2013). *Managerial discretion* was an index of the sum of four standardized components based on four-digit industry SIC codes, namely (1), average industry capital intensity, being the net value of property, plant and equipment divided by the firm total assets (reversed) (2), average industry advertising intensity, being the advertising expenses divided by sales (3) industry munificence, and (4) industry concentration (reversed) (Chen *et al*., 2015). Industry munificence was operationalized by first regressing time against industry sales for a five-year period preceding the year of interest, and then scaling the regression coefficient by the average industry sales used in the regression. Industry competitiveness was measured via the Herfindahl index. Environmental uncertainty was measured by the standard error of the regression coefficient of time instead of the coefficient itself (Arrfelt *et al*., 2013).

Time effects, i.e., year dummies, were included to control for macroenvironmental changes that may affect the whole panel of firms. The estimation method also controlled for firm fixed effects. All independent, moderator and control variables were lagged one year, except for prospects, missing R&D, share repurchases, and earnings management. Moreover, all independent and moderator variables were centered to prevent multicollinearity.

2.3.3 Analysis

Due to the correlation between the unobserved fixed effects and the lagged dependent variable, the inclusion of past values of R&D search made standard estimators inconsistent. Arellano and Bond (1991) derived a consistent generalized method-of-moments estimator, appropriate for use in such cases. We therefore used the Arellano–Bond dynamic panel estimator. We treated all predictors in the model as endogenous and estimated them by means of instrumental variables, using past values of the regressors as instruments.

2.4 RESULTS

Table 2.1 presents the descriptive statistics and correlations for the study variables. Table 2.2 presents the results of the Arellano–Bond one-step estimator for R&D search. All variance inflation factors were less than 5.07, meaning that multicollinearity was not a problem for interpreting the results. In all models, the assumptions of the Arellano–Bond estimator were met. Namely, no second-order autocorrelation was present as indicated by the AR(2) tests. The instruments used were valid; they were correlated with the endogenous variables but not with the error terms, as indicated by the Hansen and the difference-in-Hansen tests.

Table 2.1 Descriptive statistics and correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.R&D search	0.05	0.09	1.00																
2.Negative feedback	0.02	0.04	0.19	1.00															
3.Positive feedback	0.02	0.04	0.16	-0.21	1.00														
4.Negative prospects	0.00	0.01	0.02	0.02	0.03	1.00													
5.Positive prospects	0.04	0.04	0.26	0.08	0.05	-0.40	1.00												
6.CEO structural power	0.91	§2	-0.01	-0.01	-0.03	-0.07	-0.01	1.00											
7.CEO ownership power	0.04	0.83	0.04	-0.01	-0.03	0.02	0.06	-0.05	1.00										
8.CEO expert power	0.22	2.35	-0.06	0.01	-0.01	0.00	-0.01	-0.02	-0.02	1.00									
9.CEO prestige power	0.58	1.62	0.07	0.00	0.02	0.01	0.00	0.18	0.07	0.08	1.00								
10.Firm size	8.99	1.21	-0.09	0.01	-0.06	-0.14	-0.06	0.22	0.05	0.23	0.16	1.00							
11.Firm growth	0.37	0.57	0.14	-0.02	0.10	0.06	0.02	-0.08	0.02	-0.13	0.01	-0.05	1.00						
12.Financial slack	-0.44	0.32	0.47	0.07	0.13	-0.08	0.35	-0.07	0.07	-0.06	-0.03	-0.29	0.20	1.00					
13.Firm DPS	0.63	0.68	-0.21	-0.08	-0.08	-0.09	0.01	0.18	-0.09	0.28	0.10	0.44	-0.22	-0.23	1.00				
14.Firm share repurchases	4.57	2.81	0.05	-0.14	-0.04	-0.27	0.28	0.10	0.04	0.09	0.07	0.37	-0.07	-0.01	0.20	1.00			
15.Firm earnings management	0.01	0.07	-0.14	-0.08	-0.07	-0.02	-0.05	0.01	-0.04	0.00	0.00	-0.07	-0.03	-0.02	0.07	-0.01	1.00		
16.Firm stakeholder reputation	0.42	4.62	0.24	0.05	-0.02	-0.09	0.13	0.11	-0.03	0.14	0.05	0.04	-0.10	0.11	0.11	0.18	-0.03	1.00	
17.Firm status	0.15	0.47	0.24	0.16	-0.02	0.05	0.07	-0.06	0.07	-0.06	-0.02	0.05	0.16	0.18	-0.20	-0.04	-0.22	0.06	1.00
18.CEO age	55.63	6.12	-0.11	-0.02	-0.02	-0.02	-0.02	0.04	0.09	0.02	0.19	0.14	-0.03	-0.09	0.14	0.03	0.02	-0.03	-0.05
19.CEO gender	0.01	0.11	0.00	-0.03	0.00	-0.03	0.04	0.02	-0.02	-0.01	0.01	0.03	0.04	0.01	0.00	0.07	0.00	0.05	-0.01
20.CEO overconfidence	0.46	0.50	0.01	0.01	-0.03	0.05	0.06	0.03	0.07	-0.09	0.07	-0.18	0.17	0.15	-0.19	-0.07	-0.05	-0.12	0.12
21.CEO long-term pay mix	0.76	0.20	0.08	0.05	0.00	-0.18	0.11	0.28	-0.04	0.06	0.13	0.19	-0.08	0.01	0.16	0.18	-0.01	0.15	0.00
22.Board size	2.26	0.23	-0.11	-0.04	-0.05	-0.11	-0.04	0.03	-0.02	0.18	0.08	0.48	-0.08	-0.28	0.32	0.24	0.01	0.05	-0.10
23.Board independence	91.46	8.10	0.00	-0.03	0.02	-0.03	-0.01	0.28	-0.16	0.03	0.04	0.20	-0.02	-0.15	0.17	0.08	-0.02	0.06	-0.08
24.Industry R&D search	0.04	0.07	0.74	0.16	0.14	-0.08	0.31	-0.02	0.08	-0.11	0.03	-0.04	0.11	0.47	-0.25	0.12	-0.14	0.28	0.22
25.Managerial discretion	-0.09	1.89	0.28	0.00	-0.01	-0.07	0.15	-0.05	0.08	0.01	0.05	0.04	0.08	0.13	-0.01	0.20	0.08	0.20	-0.03
26.Environmental uncertainty	0.02	0.02	-0.05	0.13	0.09	0.04	-0.09	0.02	-0.07	-0.03	-0.05	-0.05	0.01	0.06	0.00	-0.20	-0.07	-0.06	0.03

	18	19	20	21	22	23	24	25
19. CEO gender	-0.01	1.00						
20. CEO overconfidence	0.22	-0.01	1.00					
21. CEO long-term pay mix	0.03	0.02	0.00	1.00				
22. Board size	0.07	0.00	-0.24	0.11	1.00			
23. Board independence	0.04	0.04	-0.09	0.14	-0.01	1.00		
24. Industry R&D search	-0.16	-0.05	0.02	0.06	-0.13	-0.03	1.00	
25. Managerial discretion	-0.13	0.03	-0.11	0.04	0.05	-0.09	0.31	1.00
26. Environmental uncertainty	0.09	-0.03	0.07	-0.02	-0.10	-0.06	-0.04	-0.33

Note: $N = 1887$.

Model 1 in Table 2.2 presents the base model, which included the interaction term of negative prospects and positive feedback, representing the effect of inconsistent feedback on R&D search. It also included all the direct effects of prospects and feedback, the moderators and control variables, as well as the alternative interaction term of positive prospects and negative feedback, for which we controlled. In Model 1, CEO structural power (b = -0.003, p = 0.006), financial slack (b = 0.10, p = 0.045) and industry R&D search (b = 1.36, p = 0.000) precisely predicted R&D search. The interaction term of positive prospects and negative feedback, the alternative scenario of inconsistent feedback, was negatively associated to R&D search (b = -6.45, p = 0.028), which is consistent with the findings of Chen (2008). On average, the firms in our sample engaged in less R&D search when past performance was poor but future prospects seemed good, meaning that they engaged more in self-enhancement in this specific scenario. More negative feedback (by 1 SD = 0.04) resulted in 0.012 less R&D search when firms experienced more positive prospects (+1 SD = 0.04) and 0.008 more R&D search when they experienced less positive prospects (-1 SD = -0.04).

The interaction term of negative prospects and positive feedback, our main variable of inconsistent feedback, positively and precisely predicted to R&D search (b = 66.95, p = 0.005). This meant that on average, decision makers in our sample engaged in more problem-solving and invested more in R&D search when past performance was good but they anticipated performance shortfalls. More negative prospects (by 1 SD = 0.01) resulted in 0.057 more R&D search when firms experienced more positive feedback (+1 SD = 0.04) and only 0.004 more R&D search when they experienced less positive feedback (- 1 SD = -0.04). The difference of 0.053 in expected R&D search as a result of a change in the negativity of firm prospects when the past feedback was less versus more positive could serve as a baseline when studying the impact of our contingency variables.

Hypothesis testing. We added the three-way interactions and the required two-way interactions between negative prospects, positive feedback and the

moderators, i.e., CEO structural power, CEO ownership power, CEO expert power, and CEO prestige power in Models 2, 3, 4, and 5, respectively. We controlled for the effect of the alternative scenario of inconsistent feedback, i.e., positive prospects and negative feedback, which we further discuss in our supplementary analysis. Moreover, we present a full model with all three-way interactions for completeness in Model 6. Nevertheless, we use the partial models for testing our hypotheses because of inherent challenges of interpretation and statistical power as well as multicollinearity when all three- and two-way interaction terms are included in an estimation model.

The coefficient for the three-way interaction between negative prospects, positive feedback, and CEO structural power was negative and precisely estimated (Model 2, b = -23.30, p = 0.028), supporting Hypothesis 1. The coefficient for the three-way interaction between negative prospects, positive feedback, and CEO ownership power was also negative and precisely estimated (Model 3, b = -56.88, p = 0.044), supporting Hypothesis 2. The coefficient for the three-way interaction between negative prospects, positive feedback, and CEO expert power was precisely estimated but negative (Model 4, b = -15.29, p = 0.011), which indicated that more inconsistent positive feedback and negative prospects resulted in more R&D search when the firm's CEO had *less* rather than *more* expert power, which is the opposite of what we predicted. Hypothesis 3 was therefore rejected. The coefficient for the three-way interaction between negative prospects, positive feedback, and CEO prestige power was positive and precisely estimated (Model 5, b = 45.86, p = 0.004), supporting Hypothesis 4.

Interaction plots and effect sizes. Figures 2.2 to 2.5 depict the three-way interactions in which we plotted the slopes of negative prospects in the range of one SD below and above the mean.

Table 2.2 Arellano-Bond dynamic panel regression predicting R&D search

Variables		Model 1 Base Model	Model 2 CEO structural power	Model 3 CEO ownership power	Model 4 CEO expert power	Model 5 CEO prestige power	Model 6 Full Model
Negative prospects X Positive feedback X	**H1**		**-23.296**				**-10.308**
CEO structural power			**[10.625]**				**[10.879]**
Positive feedback X CEO structural power			-0.160				-0.105
			[0.104]				[0.092]
Negative prospects X CEO structural power			-0.212				-0.103
			[0.080]				[0.064]
Negative prospects X Positive feedback X	**H2**			**-56.875**			**-30.032**
CEO ownership power				**[28.211]**			**[25.058]**
Positive feedback X CEO ownership power				-0.592			-0.418
				[0.216]			[0.222]
Negative prospects X CEO ownership power				0.218			0.433
				[1.137]			[1.210]
Negative prospects X Positive feedback X	**H3**				**-15.287**		**-10.265**
CEO expert power					**[5.984]**		**[4.559]**
Positive feedback X CEO expert power					-0.124		-0.092
					[0.069]		[0.046]
Negative prospects X CEO expert power					-0.016		-0.155
					[0.162]		[0.184]
Negative prospects X Positive feedback X	**H4**					**45.862**	**37.627**
CEO prestige power						**[16.036]**	**[13.371]**
Positive feedback X CEO prestige power						0.489	0.408
						[0.162]	[0.133]
Negative prospects X CEO prestige power						0.339	0.243
						[0.346]	[0.281]
Negative prospects X Positive feedback		66.950	57.272	58.060	42.237	56.704	34.639
		[23.934]	[21.726]	[20.171]	[18.125]	[16.121]	[11.895]
CEO structural power		-0.003	-0.004	-0.003	-0.003	-0.002	-0.003
		[0.001]	[0.002]	[0.001]	[0.001]	[0.001]	[0.002]
CEO ownerhsip power		-0.001	-0.001	-0.002	-0.001	-0.003	-0.002
		[0.003]	[0.003]	[0.009]	[0.003]	[0.003]	[0.009]
CEO expert power		0.000	0.002	0.000	0.001	0.000	-0.001
		[0.005]	[0.004]	[0.004]	[0.004]	[0.004]	[0.003]
CEO prestige power		0.007	0.006	0.004	0.003	0.009	0.003
		[0.005]	[0.005]	[0.005]	[0.003]	[0.005]	[0.004]
Negative feedback X Positive prospects X			0.470				0.152
CEO structural power			[1.251]				[0.952]
Positive prospects X CEO structural power			-0.221				-0.171
			[0.073]				[0.061]
Negative feedback X CEO structural power			0.004				-0.025
			[0.062]				[0.034]
Negative feedback X Positive prospects X				1.466			0.590
CEO ownership power				[1.599]			[1.299]
Positive prospects X CEO ownership power				-0.022			0.024
				[0.043]			[0.039]

Table 2.2 (continued)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Negative feedback X CEO ownership power			-0.093			-0.043
			[0.166]			[0.132]
Negative feedback X Positive prospects X				-0.256		0.148
CEO expert power				[0.541]		[0.439]
Positive prospects X CEO expert power				0.132		0.086
				[0.046]		[0.039]
Negative feedback X CEO expert power				0.012		-0.032
				[0.048]		[0.032]
Negative feedback X Positive prospects X					1.428	0.755
CEO prestige power					[2.568]	[2.609]
Positive prospects X CEO prestige power					-0.016	-0.039
					[0.061]	[0.046]
Negative feedback X CEO prestige power					0.095	0.094
					[0.095]	[0.073]
Negative feedback X Positive prospects	-6.487	-4.939	-5.814	-4.691	-5.622	-3.433
	[2.961]	[2.702]	[2.789]	[2.818]	[2.454]	[2.275]
Negative feedback	-0.051	-0.092	-0.052	-0.095	-0.063	-0.032
	[0.173]	[0.146]	[0.148]	[0.140]	[0.142]	[0.100]
Positive feedback	0.278	0.132	0.207	0.033	0.204	0.007
	[0.256]	[0.201]	[0.209]	[0.191]	[0.175]	[0.122]
Negative prospects	3.069	2.600	2.281	2.599	2.277	1.350
	[0.995]	[0.871]	[0.738]	[0.922]	[0.920]	[0.580]
Positive prospects	-0.493	-0.587	-0.518	-0.518	-0.479	-0.542
	[0.159]	[0.161]	[0.150]	[0.157]	[0.141]	[0.148]
R&D intensity *t-1*	0.199	0.159	0.194	0.138	0.175	0.066
	[0.116]	[0.128]	[0.124]	[0.137]	[0.110]	[0.130]
Missing R&D dummy	0.099	0.051	0.051	0.072	0.086	0.016
	[0.057]	[0.044]	[0.039]	[0.046]	[0.043]	[0.020]
Firm size	0.031	0.022	0.024	0.030	0.001	-0.002
	[0.033]	[0.032]	[0.031]	[0.031]	[0.026]	[0.020]
Firm growth	-0.014	-0.006	-0.012	-0.010	-0.008	-0.004
	[0.016]	[0.014]	[0.015]	[0.013]	[0.010]	[0.007]
Financial slack	0.101	0.117	0.100	0.086	0.082	0.081
	[0.051]	[0.048]	[0.044]	[0.040]	[0.039]	[0.031]
Firm DPS	0.010	-0.004	0.007	-0.003	0.005	-0.002
	[0.012]	[0.009]	[0.009]	[0.010]	[0.010]	[0.007]
Firm share repurchases	-0.001	-0.001	0.000	0.000	-0.001	0.001
	[0.002]	[0.002]	[0.001]	[0.002]	[0.002]	[0.001]
Firm earnings management	0.005	0.016	-0.004	0.016	0.017	0.005
	[0.071]	[0.067]	[0.059]	[0.073]	[0.074]	[0.060]
Firm stakeholder reputation	0.000	-0.001	0.000	0.000	0.000	-0.001
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Firm status	0.007	0.007	0.009	0.004	-0.006	-0.001
	[0.008]	[0.007]	[0.007]	[0.008]	[0.006]	[0.005]
CEO age	0.000	0.000	-0.001	0.000	0.001	0.000
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
CEO gender	0.001	0.011	-0.003	0.038	-0.021	-0.003
	[0.041]	[0.047]	[0.031]	[0.046]	[0.038]	[0.031]
CEO overconfidence	0.002	0.007	0.007	0.007	0.001	0.012
	[0.012]	[0.011]	[0.011]	[0.010]	[0.010]	[0.008]

Table 2.2 (continued)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CEO long-term pay mix	0.045	0.035	0.025	0.011	0.013	0.006
	[0.032]	[0.026]	[0.024]	[0.020]	[0.018]	[0.013]
Board size	0.055	0.060	0.061	0.054	0.054	0.045
	[0.038]	[0.032]	[0.029]	[0.034]	[0.029]	[0.019]
Board independence	0.000	0.001	0.000	0.001	0.000	0.000
	[0.001]	[0.000]	[0.000]	[0.001]	[0.000]	[0.000]
Industry R&D search	1.363	1.293	1.180	1.060	1.017	0.623
	[0.383]	[0.366]	[0.354]	[0.340]	[0.330]	[0.249]
Managerial discretion	0.003	0.003	0.002	0.002	0.004	0.003
	[0.006]	[0.005]	[0.005]	[0.004]	[0.005]	[0.004]
Environmental uncertainty	0.268	0.118	0.238	0.166	0.289	0.005
	[0.230]	[0.211]	[0.207]	[0.218]	[0.208]	[0.170]
Intercept	-0.450	-0.343	-0.346	-0.442	-0.171	-0.075
	[0.334]	[0.319]	[0.304]	[0.316]	[0.223]	[0.199]
Time fixed effects	YES	YES	YES	YES	YES	YES
Firm fixed effects	YES	YES	YES	YES	YES	YES
Wald X	84.54	89.01	114.23	134.42	200.34	569.89
Arellano-Bond test for AR(2)	-0.71	-0.91	-0.86	-0.81	-0.70	-1.12
Hansen J test	168.62	139.58	149.06	172.34	149.27	153.78

Note: N = 1887 firm-year observations. Robust standard errors in bracket.

Figure 2.2 shows that CEOs with low structural power increased R&D search more when the negative prospects and positive feedback became more inconsistent, i.e., when the positive feedback shifted from less to more positive (simple slope difference t = 2.77, p = 0.006), compared to CEOs with high structural power for whom the shift did not make a difference (simple slope difference t = 1.10, p = 0.272). When negative prospects dropped by one SD, CEOs with low structural power increased R&D search by 0.065 if they faced more positive feedback (b = 6.48, p = 0.000) but made no significant changes if the feedback was less positive (b = -0.60, p = 0.673). In comparison to the baseline difference of 0.053 (as calculated before), 0.065 represented a 22.6% further increase in the expected R&D search as a result of the growing inconsistency between positive feedback and negative prospects when CEOs had little structural power. Even though the difference between slopes of negative prospects and less versus more positive feedback was not statistically different for structurally powerful CEOs, it is worth mentioning that the slope of negative prospects and more positive feedback was

positive and precisely estimated (b = 3.40, p = 0.003), while the slope of negative prospects and the less positive feedback was practically zero (b = 1.49, p = 0.202).

Figure 2.2 Three-way interaction:
Negative prospects x positive feedback x CEO structural power on R&D search

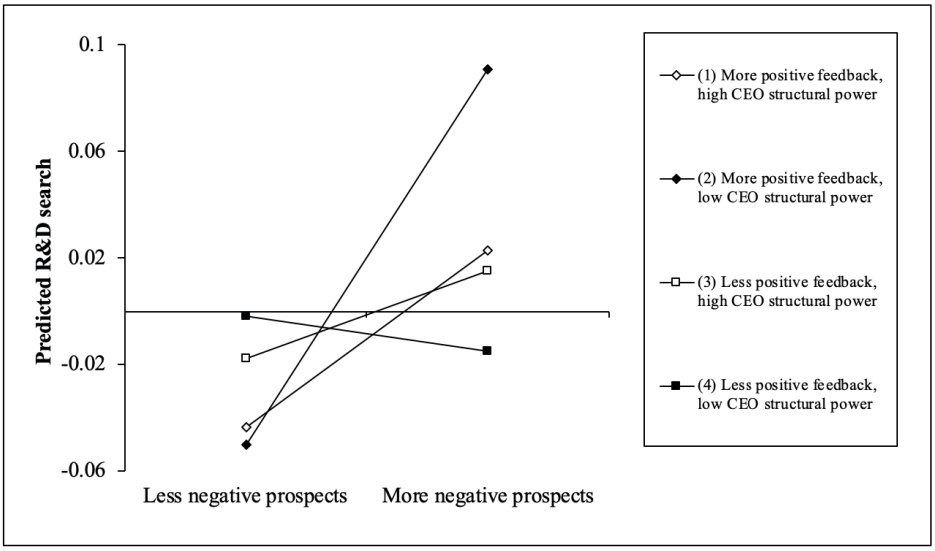


Figure 2.3 shows that CEOs with low ownership power invested more in R&D search when the negative prospects and positive feedback became more inconsistent (simple slope difference t = 2.73, p = 0.006) compared to CEOs with high ownership power for whom the shift did not make a difference (simple slope difference t = 0.52, p = 0.603.). When negative prospects dropped by one SD, CEOs with low ownership power increased R&D search by 0.061 if they faced more positive feedback (b = 6.07, p = 0.005) but practically made no changes if the feedback was less positive (b = -1.87, p = 0.167). In comparison to the baseline relationship, 0.061 represented 15.1% increase in the expected R&D search as a result of greater inconsistency between positive feedback and negative prospects when CEOs had less ownership power.

Figure 2.3 Three-way interaction:
Negative prospects x positive feedback x CEO ownership power on R&D search

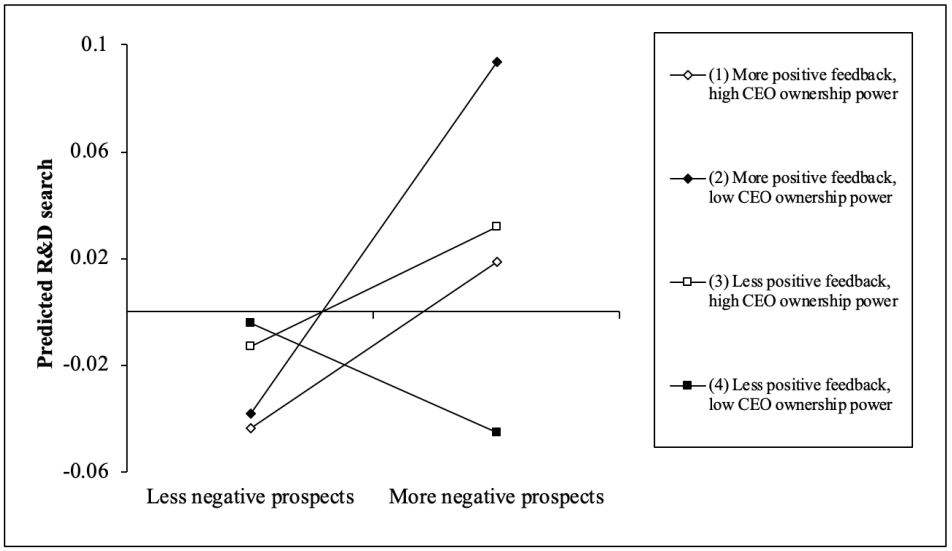
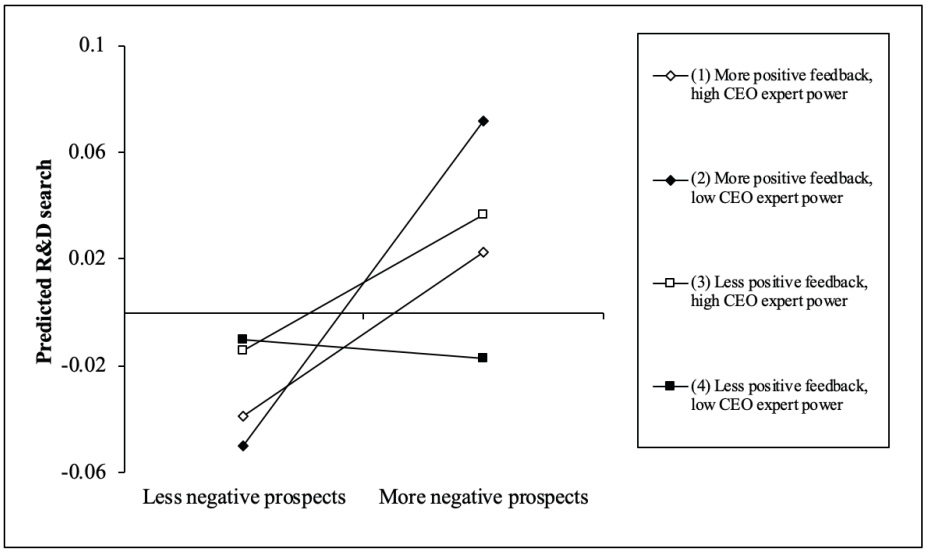


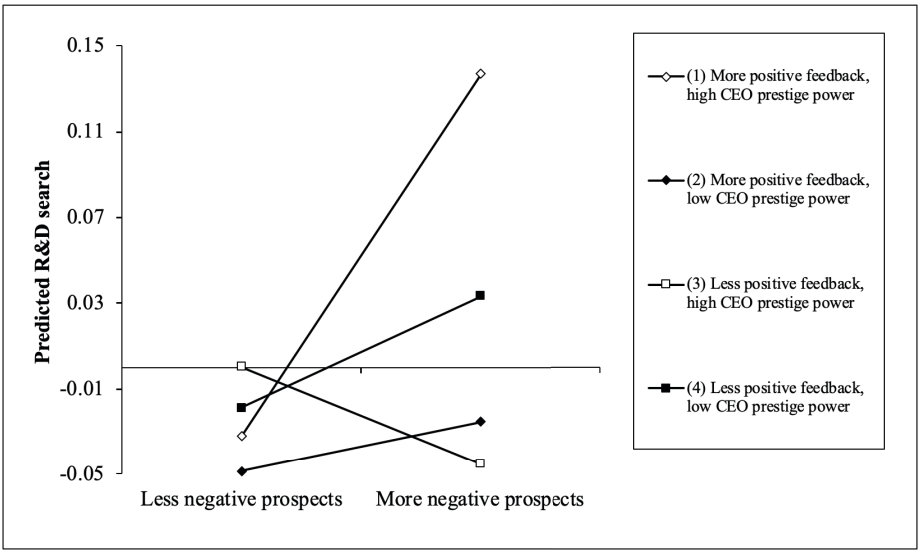
Figure 2.4 shows that CEOs with low expert power increased R&D search more when the negative prospects and positive feedback became more inconsistent (simple slope difference $t = 2.84$, $p = 0.004$) compared to CEOs with high expert power for whom the shift did not make a material difference (simple slope difference $t = 0.36$, $p = 0.718$). When negative prospects dropped by one SD, non-expert CEOs increased R&D search by 0.056 if they faced more positive feedback ($b = 5.58$, $p = 0.000$) but made no changes if the feedback was less positive ($b = -0.31$, $p = 0.848$). In comparison to the baseline effect, 0.056 represented 5.7% increase in the expected R&D search as a result of the rising inconsistency between positive feedback and negative prospects when CEOs had less expert power. When negative prospects dropped by one SD, CEOs with expert power increased R&D search by only 0.028 if they faced more positive feedback ($b = 2.80$, $p = 0.004$) and slightly less if the feedback was less positive ($b = 2.33$, $p = 0.060$), yet the difference was minimal.

Figure 2.4 Three-way interaction:
Negative prospects x positive feedback x CEO expert power on R&D search



Lastly, Figure 2.5 shows that CEOs with high prestige power invested more in R&D search when the negative prospects and positive feedback became more inconsistent (simple slope difference t = 3.80, p = 0.000) compared to CEOs with low prestige power for whom the shift was not discernible from zero (simple slope difference t = -0.68, p = 0.500). When negative prospects dropped by one SD, prestigious CEOs increased R&D search by 0.078 if they faced more positive feedback (b = 7.75, p = 0.000) but made no significant changes if the feedback was less positive (b = -2.10, p = 0.137). CEO prestige power thus boosted the baseline difference of the expected R&D search by 47.2% when the positive feedback and negative prospects became more inconsistent.

Figure 2.5 Three-way interaction:
Negative prospects x positive feedback x CEO prestige power on R&D search



2.4.1 Post-hoc analysis

We conducted a post-hoc analysis to test some alternative explanations with regards to the surprising finding that CEO expert power had affected the relationship between positive feedback, negative prospects, and R&D search in the opposite way to what we had expected. First, we tested whether the different components reflecting CEO expert power show diverging effects on the relationship between inconsistent feedback and R&D search. To do that, we tested the moderating effects of the three components of CEO expert power separately on the relationship of between inconsistent positive feedback and negative prospects, and R&D search. Our models, however, showed that the three components of CEO expert power demonstrated consistent moderation effects, namely the coefficients of the three-way interactions with CEO tenure in the firm (b = -4.39, p = 0.001), the number CEO functions in the firm (b = -26.23, p = 0.036) and the number CEO roles in the firm (b = -6.64, p = 0.080) were all negative and precisely estimated.

Second, we examined whether what shapes the CEO's expert power in dealing with inconsistent feedback and engaging in more R&D search is not associated with the number of close relationships with stakeholders in general but rather with specific groups of stakeholders in particular. For example, CEOs who have performed a sales and marketing function might have a better understanding of important customers and have developed trusting relationships with them, which could provide access to information about the market or competitive offerings (Buyl, Boone, Hendriks, and Matthyssens, 2011). To examine this alternative explanation, we created seven dummies corresponding to the seven functional domains of the CEO within the firm. Each dummy took the value of one if the CEO had performed it, and zero otherwise, except for the management and administration function, which was one when the CEO had performed only that function within the firm, and zero otherwise. Controlling for expert power, we ran seven different models in which we added to Model 1 the three-way interactions between negative prospects, positive feedback, and each of the dummy function variables. Only the three-way interaction with the marketing and sales dummy was positive and precisely estimated (b = 108.01, p = 0.000). The other three-way interactions were all negative and precisely estimated, i.e., the one with the management and administration only dummy (b = -94.77, p = 0.000), and the ones with the production-operations dummy (b = -99.30, p = 0.000), accounting and finance dummy (b = -76.93, p = 0.007), law function (b = -65.88, p = 0.014), personnel and labor relations dummy (b = -98.13, p = 0.001), and the R&D and engineering dummy (b = -46.69, p = 0.069). The post-hoc analysis suggests that only CEOs who have sales and marketing background invest more in R&D search when faced with more divergent negative prospects coupled with past success. Although these findings indicate the importance of considering specific functional domains in which CEOs have expert power, results should be regarded with caution because some functions were under-represented in our sample.

2.4.2 Robustness tests

We performed several robustness checks with an alternative configuration of inconsistent feedback, (sub)samples and a different dependent variable. The results are available on request.

Alternative configuration of inconsistent feedback. The interaction effects of the alternative configuration of inconsistent feedback, negative feedback and positive prospects, were not significant for the contingency variables in our study. That is, the three-way interactions with CEO structural power (Model 2, $b = 0.47$, $p = 0.707$), CEO ownership power (Model 3, $b = 1.47$, $p = 0.359$), CEO expert power (Model 4, $b = -0.26$, $p = 0.637$), and CEO prestige power (Model 5, $b = 1.43$, $p = 0.578$) were not precisely estimated. An interesting observation emerged though in terms of effect signs. CEO structural and ownership power had an opposite impact in terms of how the alternative configuration of inconsistent feedback – i.e., negative feedback but positive prospects – affected R&D search, because the signs of the three-way interactions were positive rather than negative. In addition, CEO expert and prestige power seemed to have a similar impact on the effect of both configurations of inconsistent firm's past feedback and future prospects on R&D search.

Alternative (sub)samples. First, although we restricted our main sample to firms within four-digit SIC industries with a minimum of five competitors, findings remained consistent when we included firms from industries with fewer than five competitors ($N = 1921$). Second, we assumed that missing values of R&D were zero, and replaced them accordingly. Including firms that explicitly reported their R&D spending and excluding ones that did not, produced the same results ($N = 1387$). Lastly, many studies that are based on the BTOF have considered only manufacturing firms (SIC 2000–3999). We did the same, running our analysis on a subsample of S&P 500 firms from manufacturing industries only and our results did not change ($N = 1057$).

Alternative dependent variable. Given the variety of industries represented in our sample, we allowed for the possibility that the firms might have engaged in problemistic search with different types of investment. Thus, we composed an index by standardizing and summing three types of search investment, which have been found relevant in previous studies – i.e., R&D spending, capital spending and acquisition spending (all scaled by sales) (Iyer and Miller, 2008; Sanders and Hambrick, 2007; Souder and Bromiley, 2012). Findings based on this alternative dependent variable show consistent results ($N = 1887$).

2.5 DISCUSSION

We built a contingent model to examine how CEOs acted upon a growing inconsistency between negative prospects and positive feedback. While firms on average increased R&D search when the positive backward-looking feedback and the negative forward-looking prospects became more inconsistent, different source of CEO power greatly affected such tendencies. We found that CEOs engaged in more self-enhancement and less R&D search when they had more structural power or ownership power. In contrast, CEOs with a high level of prestige power acted as problem-solvers and engaged in more R&D search after receiving more inconsistent feedback. Even though we anticipated that expert power would encourage CEOs to make more problem-solving attempts when dealing with inconsistent feedback, we found the opposite result. Our post-hoc analysis revealed that only CEOs who had developed expertise in marketing and sales within the firm increased R&D search when feedback became more inconsistent. Overall, these findings suggest important implications, and suggest avenues for future research.

2.5.1 Theoretical implications

Our theory advances research on how decision makers deal with inconsistent feedback (Audia and Brion, 2007; Joseph and Gaba, 2015). Although earlier

research has explicated two decision rules, i.e. self-enhancement and problem-solving (Audia and Brion, 2007; Baum *et al*., 2005; Hu *et al*., 2017; Joseph and Gaba, 2015; Lucas *et al*., 2018), empirical evidence about which decision rule prevails during the assessment of inconsistent feedback has been inconclusive. Our study provides an important first attempt to reconcile disparate theoretical perspectives by examining *when* problem-solving or self-enhancing tendencies surface when responding to inconsistent feedback. We provide important implications for our understanding about the conditions under which decision-makers may increase or reduce R&D search when receiving positive performance feedback and negative prospects.

Our findings forward research on the intersection between the BTOF and self-enhancement theory (Jordan and Audia, 2012) by revealing that different types of CEO power provoke specific dynamics between the CEO and different stakeholders during the assessment of inconsistent feedback. Importantly, we reveal that higher levels of structural and ownership power serve as a tool for promoting self-enhancing assessment of inconsistent feedback (Fang *et al*., 2014; Lim, 2015; Desai, 2016), yet our findings also suggest that CEO prestige power promotes problem-solving behaviors during the assessment of inconsistent feedback. Overall, thus, our findings imply that 'harsh' or 'control' categories of CEO power are not instrumental to resolve performance-related problems, because they shift the preferences of CEOs towards prioritizing their personal interests and self-enhancement. However, 'soft' or 'persuasive' categories of CEO power ensure support, loyalty and commitment from other stakeholders, which makes CEOs more confident to consider mutually beneficial outcomes when confronted with inconsistent feedback and show preference for problem-solving.

Our non-finding and post-hoc analysis with respect to the contingency effect of CEO expert power have important implications for research on decision making within the upper echelons (Bunderson, 2003; Buyl *et al*., 2011). First, only a few scholars have touched upon the implications of making a distinction between

generalist and specialist CEOs for strategic decision making, and even fewer have considered specific functional expertise (e.g., Kor and Misangyi, 2008; Merluzzi and Phillips, 2016). Our unexpected finding that CEOs' function-based expertise provides more useful insights about how firms respond to inconsistent feedback than more broadly defined firm-specific expertise, implies that scholars studying this phenomenon in the context of CEOs, TMTs and directors should pay closer attention to the former type of expertise rather than the latter. Second, our post-hoc findings imply that scholars interested in how TMT functional diversity affects decision making could benefit from understanding better which specific functions are over- or under-represented within TMTs, rather than focusing on the level of diversity per se.

Our empirical findings also advance research on the consequences of forward- and backward-looking performance assessments (Chen, 2008; Gavetti and Levinthal, 2000). For instance, scholars have suggested that forward- and backward-looking performance assessments might be equally important in driving search behavior and organizational change (Chen, 2008; Gavetti and Levinthal, 2000). Our findings that decision makers increased R&D search more when faced with positive feedback and negative prospects but decreased it when feedback was negative and prospects were positive imply that decision makers seem to pay greater attention to forward- rather than backward-looking performance assessments. This implies that scholars should pay greater attention to the consequences of performance expectations for strategic decision making. Finally, while scholars have suggested that the inconsistent feedback configuration might matter for how decision makers respond to it (Lucas *et al.*, 2018), most studies have focused on backward-looking feedback contradictions. Our findings extend previous knowledge and suggest that scholars interested in how decision makers respond to inconsistencies between forward- and backward-looking performance assessments should consider their configuration because responses in this specific context vary.

2.5.2 Practical implications

Our findings have important implications for corporate governance. Our results show that CEOs with less structural power invested 22.6% more in R&D search when the feedback became more inconsistent, and those with less ownership power, increased their investment by 15.1%. This implies that external monitoring bodies could pay more attention to CEOs' decisions about R&D search when the CEO has more structural or ownership power. In addition, if firms want to boost R&D search in response to more inconsistent feedback, our research advises hiring CEOs with degrees from prestigious universities or CEOs who sit on multiple boards since they invested 47.2% more upon higher feedback inconsistency. Alternatively, BODs could support less prestigious CEOs to ensure they will be more responsive to inconsistencies in feedback. Lastly, CEOs who lack expertise in sales and marketing could be an alarm bell for firms for which high levels of R&D search are essential. In such cases, other TMT members and directors could provide assistance to such CEOs so as to prevent insufficient resources being allocated to R&D search when forward- and backward-looking performance signals are inconsistent.

2.5.3 Limitations and directions for future research

Our study is not without its limitations, which though could provide fruitful directions for future research. First, a logical assumption which we did not draw on in our paper, is that multiple sources of power over the same stakeholder may coexist (Chatterjee and Pollock, 2017). Thus, future research could investigate how specific sources of power between the same coalition members combine to affect decision making. Second, we found expert power to have a negative effect on the CEO's propensity to problem-solve when dealing with inconsistent feedback, yet most studies have looked at the benefits of such a persuasive type of power for decision making (Peiró and Meliá, 2003). Thus it is important to determine which sources of soft power between different parties have a negative impact on decision

making, and under what circumstances. Third, we did not consider that the four sources of CEO power might work as substitutes or complements (Misangyi and Acharya, 2014), but we believe that using a configurational approach such as qualitative comparative case analysis could be very useful to advance the theory further. Lastly, our findings based on the two configurations of inconsistent feedback that CEO power shifts problem-solving but not self-enhancing tendencies when dealing with inconsistent feedback urges scholars to investigate how self-enhancing could be offset.

CHAPTER 3

WHO VIOLATES EXPECTATIONS WHEN? HOW FIRMS' GROWTH AND DIVIDEND REPUTATIONS AFFECT INVESTORS' REACTIONS TO ACQUISITIONS [3]

ABSTRACT

We investigate the role of a firm's dividend and growth reputations in shaping investors' interpretations of acquisitions as a negative or positive expectation violation. While our findings reveal that both an acquiring firm's dividend and growth reputations trigger positive investor reactions, they also show that investors react negatively to an acquisition of a target firm with a strong growth reputation when the acquiring firm has a strong dividend reputation. We also find that investors are inclined to give managers "the benefit of the doubt" to the extent that an acquiring firm strategically frames an acquisition announcement in such a way that it provides assurance to investors that the acquisition is meant to exceed investors' expectations about shareholder value creation.

[3] This study has been accepted for a publication. **Blagoeva RR**, Korcan K, Jansen JJP. Who violates expectations? How firm's growth and dividend reputations affect investors' reactions to acquisitions. *Strategic Management Journal*, https://doi.org/10.1002/smj.3155

3.1 INTRODUCTION

Global acquisition activity continues to surge, and in 2018 alone firms spent 3.35 trillion US dollars on acquisitions (Dealogic, 2019). Although acquisitions are intended to create value, investors typically react negatively to acquisition announcements (Haleblian, Devers, McNamara, Carpenter, and Davison, 2009). Drawing on the expectancy violation theory (EVT), Graffin and colleagues (2016) explain such reactions by investors' interpretations of acquisitions as a violation of their expectations regarding how firms should behave to create value. Given the widespread observation that most acquisitions fail to reach their objectives (e.g., Haleblian *et al*., 2009), it is plausible that investors are skeptical about the value-creation potential of acquisitions. These insights though do not readily explain why investors evaluate some acquisitions positively (Campbell, Sirmon, and Schijven, 2016). Interestingly, the positive reactions of investors to acquisitions imply that they perceive specific acquisitions from a subset of firms to be compatible with how they expect these firms to create value. However, we know little about how and under what circumstances the varied expectations of investors about acquiring firms influence when they perceive acquisitions to be a good or a bad deal.

One key explanation for investors' varied reactions to acquisitions is acquiring firms' reputation for creating shareholder value. These reputations shape investors' expectations of acquiring firms, influencing how they interpret an acquisition and react to it (Haleblian, Pfarrer, and Kiley, 2017). Scholars have argued that investors tend to punish high-reputation firms more severely for making acquisitions, because acquisitions are not generally perceived to be conducive to value creation (Graffin, Haleblian, and Kiley, 2016). However, firms can create shareholder value in multiple ways (Brealey, Myers, and Allen, 2014). Firms can thus develop distinct reputations originating from specific ways of creating shareholder value, which may give rise to different expectations (Mishina, Block, and Mannor, 2012; Parker, Krause, and Devers, 2019). Some of these expectations

may provide firms with a greater leeway to pursue specific strategic actions, such as acquisitions, to fulfill investors' expectations (e.g., Pfarrer, Pollock, and Rindova, 2010; Rindova, Williamson, Petkova, and Sever, 2005; Zavyalova, Pfarrer, Reger, and Hubbard, 2016). Therefore, even though investors may remain largely skeptical about the value-creation potential of acquisitions, we suggest that they might react differently to acquisitions, depending on acquiring firms' distinct reputation for creating shareholder value. By bringing together recent advances in research on reputation, expectancy violation theory (EVT), and impression management, we develop a contingency model explaining underlying reasons and consequences for varied expectations of investors about a firm's acquisition behavior. In so doing, we extent the literature in at least two important ways.

First, with few exceptions (e.g., Boivie, Graffin, and Gentry, 2016; Lange, Lee and Dai, 2011; Rindova *et al*., 2005), prior research has conceptualized a firm's reputation for value creation along a single dimension. Moving beyond this research, our framework builds on the notion that a firm can develop a reputation by being known for distinct ways of creating value (Lange *et al*., 2011), and suggests that firms may create shareholder value either by delivering growth or by paying out dividends (Brealey *et al*., 2014). Those firms that consistently deliver growth over time develop a growth reputation while those that consistently pay out dividends develop a dividend reputation (Parker *et al*., 2019). When a firm has a growth reputation, we argue that investors will perceive that its acquisition behavior will enable the firm to exceed their value-creation expectations, due to the anticipated contribution of acquisitions to accelerate future growth. Conversely, when a firm has a dividend reputation, investors will perceive its acquisition behavior to be falling short of their expectations, because it may compromise the ability of the firm to maintain dividend payments. By allowing investor expectations to vary depending on acquiring firms' dividend or growth reputations, our framework explains when investors will react more or less favorably to an acquisition announcement. Our theorizing thus demonstrates the underexploited

application of EVT's full spectrum of predictions, which allow acquisitions to be interpreted not only as negative but also as positive expectancy violations.

Second, building on the notion that investors seek additional sources of information when making sense of a perceived expectancy violation (Burgoon, 1993), our framework examines how substantive and symbolic information cues further shape the interpretative processes of investors when evaluating an acquisition. Whereas substantive cues refer to information regarding the nature of a firm's actions, symbolic information cues refer to firms' use of impression management to convey how managers intend to fulfill stakeholders' expectations (Cuypers, Koh, and Wang, 2016; Fiss and Zajac, 2004, 2006). Although scholars have shown that both types of cues are taken into account when investors assess expectancy violations (e.g., Elsbach, 1994; Gomulya and Mishina, 2017), we know very little about how substantive and symbolic cues may shape investors' interpretative processes and their subsequent reactions in different ways. Earlier research in this area has not only focused almost exclusively on the role of symbolic cues (Fiss and Zajac, 2006; Graffin *et al*., 2016; Rhee and Fiss, 2014; Zavyalova, Pfarrer, Reger, and Shapiro, 2012), it has also investigated reactions to negative expectancy violations in isolation. We provide a more comprehensive approach and show how investors' initial perceptions of an acquisition as a negative or a positive expectancy violation are shaped by substantive and symbolic information cues. In so doing, we develop a framework which identifies important boundary conditions of EVT, and offers novel insights about why investors' observed reactions do not consistently follow EVT's predictions.

Our analysis of 462 acquisitions by 227 S&P 500 firms largely support our predictions. We find that an acquirer's dividend and growth reputation both trigger favorable reactions from investors, yet the positive effect of firms' growth reputation on investor reactions is much more precisely estimated than that of the dividend reputation. We further reveal that when an acquiring firm has a dividend reputation, investors react unfavorably when a firm with a growth reputation is

targeted for acquisition. Finally, firms elicit more favorable reactions by framing acquisition announcements to assure investors that the acquisition is meant to exceed investors' expectations about particulars ways of creating shareholder value.

3.2 THEORY AND HYPOTHESES

3.2.1 Investors' reactions to acquisitions through the lens of expectancy violation theory

Given the strategic importance of acquisitions, a growing body of research has focused on identifying drivers of investors' reactions to acquisitions (Campbell *et al*., 2016; Schijven and Hitt, 2012). For instance, scholars have focused on examining the cognitive underpinnings of investors' evaluations of acquisitions through the lens of EVT (Graffin *et al*., 2016; Haleblian *et al*., 2017). EVT suggests that decision makers hold expectations of firms regarding how they should behave, and that they evaluate firms' actions in light of these expectations (Burgoon, 1993). Deviations from expected behaviors are seen as expectancy violations, which may be either positive or negative. Behaviors whose consequences are anticipated to exceed expectations are perceived as *positive* expectancy violations and are rewarded, whereas those whose consequences are anticipated to fall short of expectations are perceived as *negative* expectancy violations and are punished.

Despite the widespread use of acquisitions, research suggests that investors mostly react negatively to acquisition announcements (Haleblian *et al*., 2009), implying that they view acquisitions as failing to meet their expectations regarding how firms should create shareholder value (Graffin *et al*., 2016). For example, acquisitions are seen as complex activities whose value-creation potential is virtually impossible to determine in advance. Moreover, the outcomes of performance-enhancing actions such as acquisitions are typically ambiguous, and managers may even prioritize their own interests over those of the firm when undertaking acquisitions (Gamache *et al*., 2019). Despite such potential skepticism

regarding acquisitions, however, investors have also been shown to evaluate some acquisitions more positively (Campbell *et al*., 2016), implying that a subset of firms and their acquisitions are perceived to exceed rather than fall short of expectations regarding the creation of shareholder value. Although EVT may be applied to explain both unfavorable and favorable responses to organizational events, scholars have so far only invoked the theory to explain investors' negative reactions to acquisitions. Thus, both theoretical insights and empirical evidence are limited regarding the specific nature of investors' value-creation expectations, and how these may lead them to evaluate a given acquisition positively or negatively.

3.2.2 Firm reputation and investors' value-creation expectations

Scholars have suggested that a firm's reputation is an important source underlying the expectations of stakeholders regarding firms' future behavior (Pfarrer *et al*., 2010; Zavaylova *et al*., 2016). When a firm establishes a reputation by consistently delivering a valued outcome, stakeholders develop expectations that such outcomes will continue (Basdeo, Smith, Grimm, Rindova, and Derfus, 2006; Fasaei, Tempelaar, and Jansen, 2018; Parker *et al*., 2019). In this sense, a firm's reputation constitutes an interpretative scheme for stakeholders, based on which investors evaluate firm behaviors regarding their perceived likelihood to contribute to expected outcomes (Pfarrer *et al*., 2010). Following Haleblian and colleagues (2017), and consistent with the view of a firm's reputation as a reflection of its past actions and outcomes (Basdeo *et al*., 2006), we conceptualize a firm's reputation as a consistent track record of creating value for a specific group of stakeholders, investors[4]. Although Haleblian and colleagues (2017) have defined a firm's

[4] In their review of research on organizational reputation, Lange and colleagues (2011, p. 155) note that management scholars have conceptualized reputation in three different ways: "being known (generalized awareness or visibility of the firm; prominence of the firm in the collective perception), being known for something (perceived predictability of organizational outcomes and behavior relevant to specific audience interests), and generalized favorability (perceptions or judgments of the overall organization as good,

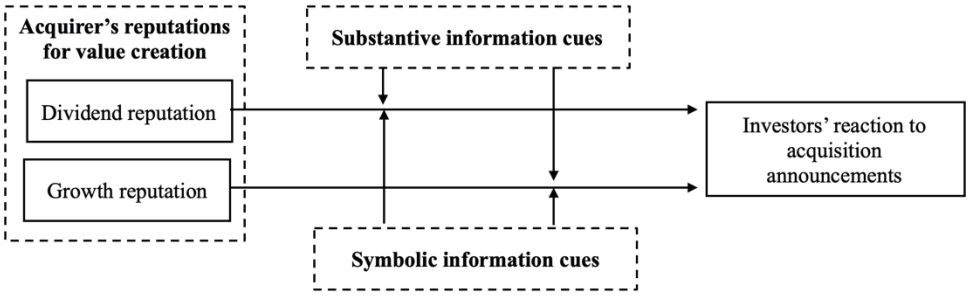
reputation as being known for creating shareholder value in general, our conceptualization suggests that firms may be known for a particular way in which they do this (Mishina *et al*., 2012; Parker *et al*., 2019). More specifically, we argue that firms may create shareholder value either by generating better-than-average capital gains (growth) and/or by paying dividends (Brealey *et al*., 2014). By doing so consistently over time, firms develop a growth and/or dividend reputation respectively (Aghion and Stein, 2008; Benner, 2007).

Because delivering growth and paying dividends are outcomes of deliberate strategic decisions (Brealey *et al*., 2014), we argue that these distinct types of reputation give rise to varied expectations among investors regarding the type of strategic activities that a firm should undertake (Parker *et al*., 2019). For instance, once a firm initiates a dividend payment, it implicitly commits to maintaining or increasing it in the future, because failure to do so has been shown to be punished by investors (Brav, Graham, Harvey, and Michaely, 2005). Since the ability of firms to pay dividends hinges on their profitability, investors evaluate the actions of firms with a dividend reputation based on their anticipated impact on future profitability (Benner and Ranganathan, 2013). For firms with a dividend reputation, therefore, strategic actions that are anticipated either to enhance or reduce profits are perceived respectively by investors as positive or negative expectancy violations. Conversely, when a firm has a growth reputation, investors are particularly sensitive to potential declines in future growth prospects (Kim, Haleblian, and Finkelstein, 2011; Pfarrer *et al*., 2010) and tend to evaluate the firm's actions based on how they may impact the delivery of growth (Benner and Ranganathan, 2013). Thus, actions that are anticipated to strengthen the firm's ability to seize new opportunities for growth are perceived as positive expectancy violations, while those that will curb growth are perceived as negative violations.

attractive, and appropriate)." Our conceptualization of reputation corresponds to "being known for something."

Although we examine how a firm's dividend and growth reputation can have different consequences, scholars have argued that firms can hold multiple reputations (Parker *et al*., 2019). Anecdotal evidence indicates that firms may pursue strategies that help them develop both dividend and growth reputations. For example, in 2016 prominent firms such as 3M, Johnson & Johnson, Leggett & Platt, and Sysco not only increased their dividend payouts but also generated higher-than-average growth compared to their peers, and explicitly communicated their commitment to both increasing dividends and achieving growth. For example, Leggett and Platt (2015) stressed in their annual letter to the shareholders that "…we have also been achieving better-than-market growth in several lines of business… We increased our annual dividend for the 43rd consecutive year, a record we plan to extend." Building on these insights, we next examine separately how investors' perceptions of acquisitions are shaped by the dividend and growth reputations of an acquiring firm. We then discuss how substantive and symbolic information cues shape the perceptions of investors about the extent to which the firm is able to meet their value-creation expectations by undertaking an acquisition. Our theoretical model is summarized in Figure 3.1.

Figure 3.1 The moderating effects of substantive and symbolic information cues on the relationship between acquirer's reputation and investors' reaction to acquisition announcements



3.2.3 Acquirer's dividend and growth reputation and investors' reactions to acquisitions

We expect investors to perceive an acquisition announcement made by a firm with a dividend reputation as a negative expectancy violation because of two reasons. First, when a firm has a dividend reputation, investors expect it to prioritize dividend payments over other strategic initiatives, and therefore to refrain from actions that might jeopardize its profitability (Brav *et al*., 2005). Acquisitions, however, absorb firm resources that could otherwise be allocated to accomplishing more immediate ways of increasing profitability, such as improving operational margins. In addition, although acquisitions require substantial investments in the short run, including, for example, acquisition premiums and integration costs, any eventual gains usually materialize only in the long run. Thus, if a firm diverts its resources away from improving short-term profits, and at the same time makes an immediate increase in capital spending, this is likely to cause concerns among its investors that the firm might be sacrificing dividend payments in order to prioritize the achievement of longer-term goals.

Second, a firm's dividend reputation prompts investors to prioritize a steady stream of dividend payments over potentially higher yet more uncertain gains (Graham and Kumar, 2006; Tihanyi, Johnson, Hoskisson, and Hitt, 2003). Investors appreciate firms with a dividend reputation because they offer the opportunity of increased dividends in the future without any threat of potential dividend cuts (Devers, Wiseman, and Holmes, 2007). Because of their risk aversion, these investors expect a firm to focus on improving cost-efficiency and increasing margins without increasing its exposure to risky and ambiguous situations. Rather than providing clear pathways to future profitability, however, potential gains from acquisitions as a result of operational synergies are often highly uncertain and fail to materialize (Barkema and Schijven, 2008; Cording, Christmann, and King, 2008). As a consequence, a firm with a dividend reputation may be perceived by investors as failing to meet their value-creation expectations when it makes an

acquisition. We thus argue that investors react negatively to an acquisition announcement, as evidenced by lower abnormal stock returns, depending on the extent that an acquirer has a dividend reputation.

Hypothesis 1a. The strength of the acquirer's dividend reputation is negatively associated with the abnormal stock returns associated with an acquisition announcement.

Conversely, we expect investors to perceive firms announcing an acquisition as positively violating their expectations to the extent that these firms hold a growth reputation. There are at least two reasons for this. First, investors of firms with a growth reputation generally prefer strategies that are likely to accelerate growth by pioneering new technologies, disrupting current markets or exploring nascent areas (Benner, 2007; Chan and Lakonishok, 2004). Acquisitions are widely perceived as conduits for rapid growth (Kim *et al*., 2011; McNamara, Haleblian, and Dykes, 2008; Villalonga and McGahan, 2005) as they allow firms to expand into new markets or to improve their market share in existing markets more rapidly than internal efforts (Lee and Lieberman, 2010). Moreover, acquisitions may also be used to gain access to new technologies that may help an acquirer to accelerate its growth (Ahuja and Katila, 2001; Kapoor and Lim, 2007). Therefore, investors of firms with a growth reputation are likely to evaluate an acquisition favorably because they perceive it as an appropriate vehicle that may enable these firms to exceed their expectations of future growth.

Second, a firm with a growth reputation has demonstrated better-than-average capital gains in the past and its investors may be willing to take risks to realize similar or even higher returns in the future (Pfarrer *et al*., 2010). Even though investors may understand that an acquisition is not without risks and costs (Baik, Farber, and Petroni, 2009; Benner and Ranganathan, 2013), they may react to it positively because they consider such bold competitive moves to be vital for

increasing market power, expanding market share, and achieving superior growth rates. Therefore, because acquisitions are seen as conduits for accelerating growth paths which induce positive sentiments about risky yet aggressive moves to create superior shareholder value, we suggest that investors will react more favorably to an acquisition made by a firm with a growth reputation.

Hypothesis 1b. The strength of the acquirer's growth reputation is positively associated with the abnormal stock returns associated with an acquisition announcement.

3.2.4 The role of substantive and symbolic information in shaping perceptions of expectancy violations

EVT suggests that perceived expectancy violations trigger an evaluation process whereby decision makers try to make sense of the event causing the violation (Burgoon, 1993). Because firm reputation constitutes an interpretative frame for investors when making decisions (Pfarrer *et al*., 2010), it may provide a causal explanation for expected events. However, since there is no causal explanation for unexpected events, decision makers seek additional information to make sense of such events (Pyszczynski and Greenberg, 1981). Given that an acquisition may be perceived as a negative or a positive expectation violation, we argue that investors rely on additional sources of information that could help them to reinforce or revise their initial perceptions of whether the acquisition will enable the firm to fulfill their expectations or prevent it from doing so.

Research in management has shown that, when evaluating organizational events, stakeholders use substantive as well as symbolic information cues (Cuypers *et al*., 2016; Goffman, 1974; Westphal and Zajac, 1998). Substantive information cues refer to information regarding a firm's tangible actions that require the use of firm resources. Since substantive cues constitute tangible and observable evidence of how a firm deploys its resources (Fiss and Zajac, 2006), they enable stakeholders

to gather additional evidence about the extent to which a firm is able to meet or exceed their expectations (Cuypers *et al*., 2016). Symbolic information cues refer to signals that convey how managers intend to fulfill stakeholders' expectations (Fiss and Zajac, 2004). Specifically, symbolic cues refer to a firm's use of impression management to convey information about how its actions are intended to serve stakeholder interests (Fiss and Zajac, 2004, 2006; Goffman, 1974). While symbolic cues do not constitute tangible evidence and may be based on "mere talk," they reduce the uncertainty regarding the managerial motives behind a firm's actions as well as concerns about the alignment between the interests of the firm and those of its stakeholders (Westphal and Zajac, 1998). Building on these insights, we focus on how substantive and symbolic cues shape the cognitive processes and initial interpretations of investors about the extent to which their expectations are positively or negatively violated as a result of an acquisition announcement.

3.2.5 Acquirer's reputations, target's reputations, and investors' reactions to acquisitions

Because the acquisition of a particular target firm involves the utilization of financial and managerial resources to internalize new capabilities, it represents a resource deployment choice by the acquiring firm (e.g., Capron and Mitchell, 2009). Thus, the organizational capabilities of the target firm, as reflected in its reputation for value creation, may be used by investors as substantive information cues to make sense of why the acquirer is engaging in a specific acquisition. Such sense-making efforts could enable investors to feel more confident in assessing whether the acquirer's intentions represent a divergence from their expectations. For instance, while the acquisition of a target firm with a growth reputation may be interpreted as an attempt to enhance future growth, the acquisition of a target firm with a dividend reputation may be perceived as a desire to improve cash flows.

Although a target firm's dividend and growth reputations may both be considered relevant substantive cues for investors, research in social psychology

suggests that when seeking new information to make sense of a perceived expectancy violation, people are prone to confirmation bias and tend to prioritize information that supports their initial interpretation of an event (Nickerson, 1998; Pyszczynski and Greenberg, 1987). Confirmation bias arises because people want to maintain positive self-esteem and to avoid negative consequences associated with an erroneous initial evaluation (Nickerson, 1998; Pyszczynski and Greenberg, 1987). We therefore argue that when investors perceive an acquisition as a negative expectancy violation, they focus selectively on information about the target firm's reputation that confirms their initial interpretation that the acquirer is failing to meet their expectations. Similarly, when investors perceive an acquisition as a positive expectancy violation, they focus selectively on information about the target firm's reputation that confirms their initial interpretation that the acquirer is exceeding their expectations. We therefore predict that investors will focus exclusively on the target firm's growth reputation when making sense of an acquisition because, depending on the acquirer's reputation, it may serve as confirmatory evidence for their initial evaluation of an acquisition as either a negative or a positive expectancy violation.

We argue that when investors observe that an acquirer with a dividend reputation has selected a target with a growth reputation, this amplifies their initial concerns about the acquirer's ability to maintain dividend payments in the future. First, the acquisition of a target with a growth reputation implies that the acquiring firm is internalizing new capabilities geared towards expanding into new markets or improving market share in existing markets. While such strategic moves may improve the acquiring firm's competitiveness in the long term, they are unlikely to increase profitability in the short term. This may in turn lead profit-maximizing investors to be concerned that the post-acquisition strain on short-term profitability is likely to be even greater than initially anticipated. Specifically, investors may perceive that short-term profitability is likely to be compromised not only by the acquisition costs but also by the growth-oriented strategic actions that the acquiring

firm is likely to take following the acquisition. Second, the growth reputation of a target may signal to investors that an acquirer with a dividend reputation intends to shift its strategic priorities from increasing dividend payments to accelerating growth. Such a perception will heighten investors' initial concerns that potential post-acquisition earnings will be allocated to more risky endeavors such as entering new markets, rather than paying dividends. Consequently we argue that, for investors of an acquiring firm with a dividend reputation, a target firm's growth reputation will intensify their initial evaluation that their expectations are being negatively violated.

> *Hypothesis 2a: A target firm's growth reputation will strengthen the negative association between the acquirer's dividend reputation and the abnormal stock returns associated with an acquisition announcement.*

Extending our argument that a firm's growth reputation leads investors to perceive its acquisitions as positive expectancy violations, we suggest that investors will focus selectively on the growth reputation of the target firm when evaluating an acquisition. That is because a substantive information cue of this kind provides evidence to confirm investors' initial perception of the acquisition as an attempt to exceed their expectations regarding future growth. First, the internalization of growth-oriented capabilities, as implied by the growth reputation of the target firm, will strengthen investors' perceptions that the acquirer is expanding its growth-oriented capabilities. This in turn is likely to be perceived as a signal that the firm takes its ambition to accelerate growth seriously. Such signaling reinforces the investors' perceptions that the firm is committed to pursuing value creation through growth. Second, although the acquisition of a high-growth target is a riskier strategic move, it also promises a higher potential payoff than pursuing growth organically (Kim *et al.*, 2011). The acquisition of a high-growth target therefore demonstrates the acquirer's willingness to embrace high-risk strategies in order to

go above and beyond what might be expected by investors to deliver shareholder value. This in turn amplifies the positive investor sentiments induced by the acquisition and leads to even higher abnormal returns.

Hypothesis 2b: A target firm's growth reputation will strengthen the positive association between the acquirer's growth reputation and the abnormal stock returns associated with an acquisition announcement.

3.2.6 Acquirer's reputation, strategic framing, and investors' reactions to acquisitions

Strategic framing refers to purposeful use of impression management by firms to shape audiences' interpretations of a situation more favorably by making specific aspects of reality more salient (Fiss and Zajac, 2006; Giorgi, 2017; Goffman, 1974; Rhee and Fiss, 2014). Strategic framing is a sense-giving attempt by managers to explain to investors how the acquisition is intended to fulfill stakeholders' expectations. It thus constitutes an important symbolic information cue that investors may use to supplement their sense-making about the acquisition. Acquisition announcements are the primary means through which managers communicate their views about an acquisition to investors. By making particular aspects of an acquisition more salient through framing in the acquisition announcement (Goffman, 1974), managers may align investors' sense making more closely with their own view of how the acquisition is intended to generate outcomes that exceed the investors' expectations.

Although we suggested that investors are susceptible to confirmation bias when processing substantive information cues, we argue that this bias is less effective when they are processing symbolic information cues. There is less likelihood of confirmation bias when people lack confidence in their initial evaluation of a situation (Schulz-Hardt, Frey, Lüthgens, and Moscovici, 2000; Yin, Mitra, and Zhang, 2016). It is likely that investors are less confident when making

sense of acquisitions because they have much less information than managers regarding the underlying motives for an acquisition and its potential for the firm to realize synergistic gains (Schijven and Hitt, 2012). Because of this information asymmetry, investors often "focus on signals that can serve as a proxy for management's informed perception of the focal acquisition's synergistic potential" (Schijven and Hitt, 2012, p. 1251). Taken together, these insights imply that lack of confidence in their own sense making of acquisitions may make investors more willing to embrace managers' sense giving regarding the intentions behind the acquisitions and their likely consequences, even when these do not confirm investors' initial interpretations.

The different expectations of investors with regard to acquirers with a dividend or growth reputation makes them sensitive to information in an acquisition announcement that highlights particular aspects of the acquisition that are relevant to dividend payments or growth. Thus, through framing, acquirers with a dividend reputation may offset investors' concerns that the acquisition will have a negative impact on dividend payments. Similarly, acquirers with a growth reputation may reinforce investors' interpretations of an acquisition as a strategic move enabling the firms to exceed their expectations about future growth.

Dividend framing refers to providing information in an acquisition announcement regarding how the acquisition is intended to enhance current and future dividend payments. We suggest that the use of dividend framing by acquirers with a dividend reputation can help mitigate the extent to which investors perceive an acquisition as a negative expectancy violation. Indeed, many acquisitions are made to improve margins through consolidation efforts and operational synergies (Harrison, Hitt, Hoskisson, and Ireland, 1991; Walter and Barney, 1990). Others are initiated to reduce risks by diversifying cash flow streams or gaining access to capital markets (Rabier, 2017). Highlighting such motives in an acquisition announcement may attenuate investors' concerns that the acquisition will put a strain on short-term profitability. Furthermore, providing explicit information about

how the acquisition is intended to improve or maintain future profitability may reduce investors' uncertainty regarding the consequences of the acquisition. In sum, we argue that, by using dividend framing in an acquisition announcement, an acquiring firm may encourage investors to embrace the importance and usefulness of the acquisition, despite its dividend reputation. This may then lead investors to revise their initial interpretations that the acquiring firm is committing a negative expectancy violation.

Hypothesis 3a: Dividend framing will weaken the negative association between the acquirer's dividend reputation and the abnormal stock returns associated with an acquisition announcement.

Growth framing refers to providing information in an acquisition announcement regarding how the acquisition is intended to accelerate future growth, for example, by expanding innovation capabilities, disrupting current markets or exploring new markets (Benner, 2007; Chan and Lakonishok, 2004). Although we have suggested that an acquirer's growth reputation will lead investors to evaluate acquisitions favorably, managers could use the opportunity to manage investors' expectations upwards in terms of the growth-creating potential of an acquisition. Specifically, managers could present the acquisition as a critical and non-substitutable element for their growth aspirations and their vision of rapid expansion. Indeed, managers could justify diverting scarce managerial attention away from alternative growth opportunities (Graham, Harvey, and Puri, 2015) by presenting the acquisition as a unique opportunity to take a big leap forward – for example, by establishing first-mover advantages, which would not have been possible by other means (Kim et al., 2011). Such interpretations of the acquisition cast it in a new and more positive light, presenting it as a means to exceed investors' expectations to an even greater extent.

Including in the acquisition announcement specific information about the necessary risk of making the acquisition could also boost investors' enthusiasm and help them to see the acquisition in a different light, as having a strategic intent that may exceed their expectations. For instance, stressing the innovative nature of the target firm and its potential to pioneer new markets rapidly could shape investors' perceptions of the necessity and urgency of engaging in a risky acquisition. Such growth ambitions might have been insufficiently appreciated by investors without the managers explaining this explicitly by the growth framing in the acquisition announcements. Growth framing therefore strengthens the investors' perceptions of the firm's commitment to pursuing value creation through growth, and this will heighten the positive sentiments induced by the acquisition.

Hypothesis 3b: Growth framing will strengthen the positive association between the acquirer's growth reputation and the abnormal stock returns associated with an acquisition announcement.

3.3 METHODOLOGY

3.3.1 Sample and data

We tested our hypotheses using a sample of acquisitions completed by S&P 500 firms between 2000 and 2015, all of which involved 100% ownership. We collected data relating to deals, acquirers and targets from the SDC Platinum database. We used Compustat to obtain industry-related data as well as the financial ratios used to compute the strength of the acquirer's and the target's dividend and growth reputations. Following earlier research, we used Fortune magazine and the Wall Street Journal to gather data on the acquirer's general reputation. We obtained stock price data from the CRSP database to construct our dependent variable. We collected acquisition announcements manually from Factiva, LexisNexis and the websites of the acquiring firms. Data on investor sentiment was obtained from

<http://www.stern.nyu.edu/~jwurgler>. After excluding observations with missing data, our final sample consisted of 462 acquisitions announced by 227 unique acquirers.

3.3.2 Measures

Abnormal stock returns. We measured our dependent variable using cumulative abnormal returns (*CAR)* associated with an acquisition announcement and used the standard event study methodology (Haleblian *et al.*, 2009). CAR represent unanticipated returns to a stock resulting from a certain event – in this case an acquisition. To calculate CAR, we first estimated the following asset-pricing model using historical data from a 250-day period preceding an acquisition announcement:

$$r_{it} = \alpha_i + \beta r_{mt} + \varepsilon_{it}$$

Here r_{it} denoted returns for firm *i* on day *t*, r_{mt} denoted corresponding daily returns on the CRSP value-weighted index, and ε_{it} was distributed i.i.d. We then used the estimates from the asset-pricing model to calculate predicted returns over a three-day period around the acquisition announcement date (-1, 1), *i.e*., the 'event window'. Using a short event window mitigated the risk of including confounding events within the event window (McWilliams and Siegel, 1997). Next, we calculated abnormal returns within the event window by subtracting the predicted returns from the actual returns. Finally, we calculated CAR as the sum of abnormal returns within the event window. We also tested our results with alternative event windows, e.g., (-2, 2) and (0, 1), and found that they remained largely consistent.

Dividend and growth reputation of the acquirer and the target firm. We measured the strength of the dividend and growth reputations using observable financial indicators. While a firm's reputations such as its dividend and growth reputation represent an intangible asset (Parker *et al*., 2019), they are rooted in investors' cautious and analytical evaluations of a firm's prior track record and its observable strategic choices (Basdeo *et al*., 2006; Ravasi, Rindova, Etter, and

Cornelissen, 2018). That is, a reputation originates from the extrapolation of observations from the recent past through which investors develop their perceptions and expectations of a firm (Chan and Lakonishok, 2004; Mishina *et al*., 2012), and managers seek to ensure that observable financial indicators remain path-dependent to signal a commitment to a particular means of creating value (Brav *et al*., 2005). Therefore, past values of financial indicators pertaining to value creation through the payment of dividends and achieving growth constitute appropriate proxies for a firm's dividend and growth reputation respectively. We measured the strength of an acquirer's or a target's *dividend reputation* by their dividends per share (DPS) paid in the year prior to a focal acquisition. Compared to other financial ratios relating to dividends – i.e*.,* dividend payout, growth in DPS, and dividend yield – DPS has been shown to provide the clearest indication to investors about a firm's commitment to dividend payments (Brav *et al*., 2005). We measured the strength of an acquirer's or target's *growth reputation* by their sales growth over three years preceding the year of a focal acquisition.

Dividend and growth framing. Dividend and growth framing measure the degree to which the information released in acquisition announcements pertains to how a focal acquisition is intended to enhance dividend payments and future growth, respectively. To measure the extent of dividend framing and growth framing used by acquirers, we conducted a quantitative content analysis of the acquisition announcements in our sample. Content analysis is an appropriate technique for capturing strategic framing, and has also been used previously to capture different types of framing targeted at investors (Fiss and Zajac, 2006). To measure both types of strategic framing, we first developed dividend and growth dictionaries that included specific words that could be interpreted by investors as related to ensuring dividend payments or realizing future growth. Our dividend dictionary consisted of the words *dividend*, *safe*, *stable*, *maintain, cash flow, steady*, and all of their forms and derivatives. Our growth dictionary consisted of the words *grow*, *expand, innovate, rise, pioneer, dynamic, rapid, fast*, and all of their forms

and derivatives. For example, forms and derivatives of the word 'grow' that were also included in our growth dictionary were "growing", "growth", "grows," etc. Then, we calculated the percentage of "dividend words" and "growth words" in each acquisition announcement. Thus:

Dividend framing = (number of "dividend words" in the acquisition announcement/ total number of words in the acquisition announcement) * 100

Growth framing = (number of "growth words" in the acquisition announcement/ total number of words in the acquisition announcement) * 100

The illustrative example provided below contains 6.25% dividend framing (= (3 ***dividend words***/ 49 *total words*)*100) and 4.17% growth framing (= (2 *growth words*/49 *total words*)*100) from our sample:

> *"We're pleased that this all-stock transaction offers NHP shareholders a premium and also the opportunity to participate in the combined company's future prospects for* ***dividends*** *and growth… The combined company will enjoy the* ***stability*** *of triple-net lease assets and higher growth apartment-like* ***cash flows*** *from seniors housing operating assets."* – Ventas Inc., 2011.

To ensure the validity of our two framing variables, we followed previously recommended procedures for content analysis when developing our dictionaries (Short, Broberg, Cogliser, and Brigham, 2010). First, we followed a deductive approach (Short *et al*., 2010) by identifying words commonly used in academic and practitioner literature to refer to investors' expectations about firms with growth and dividend reputations (e.g., Aghion and Stein, 2008; Benner, 2007; Benner and Ranganathan, 2013; Brealey *et al*., 2014). We also verified the terms included in the two dictionaries with 34 academics specializing in finance, most of whom invested in stocks and were very familiar with dividend and growth reputations. Only words that were verified by at least 70% of these experts as relating unambiguously and exclusively to ensuring dividend payments or firms' future growth were retained in the final dictionaries (Short *et al*., 2010). To ensure a high reliability for our measure, we undertook computerized text analysis using the

DICTION software, which produced a word count for our various dividend and growth words and a total word count for each announcement.

To further test the validity of our measures, we trained two PhD candidates to manually code a random subsample of 115 acquisition announcements, which represented approximately 25% of our final sample. The coders rated the extent of dividend and growth framing in each announcement on a three-point scale, where zero was "no framing," one was "framing was mentioned," and two was "framing was emphasized" (Uotila, Maula, Keil, and Zahra, 2009). The coders were provided with broad definitions for dividend framing and growth framing rather than the actual dictionaries in order to prevent manual replication of the DICTION-generated word counts used to compute our variables. The inter-rater reliability was high; 0.76 for dividend framing and 0.70 for growth framing. The manually coded variables had a positive and relatively strong correlation with the framing variables used in this study, namely 0.55 for the dividend framing measures and 0.67 for the growth framing measures.

Control variables. We controlled for a range of factors that might influence our results. Six variables controlled for acquirer characteristics. *Acquirer size* was measured by the logarithm of the number of employees. *Acquirer cash flow* was computed as: "(*operating income – taxes - interest expense – depreciation - common and preferred stock dividends*)/*common equity*" (Graffin *et al*., 2016: 243). We also controlled for *acquirer ROA* (return on assets) and *acquisition experience*, measured by the logarithm of the number of acquisitions made by the acquirer in the three years preceding a focal acquisition (Campbell *et al*., 2016). We further controlled for two acquirer characteristics which might shape the acquirer's reputation for specific strategic activities, and thus the investors' expectations of the acquirer; these characteristics were *acquirers' engagement in horizontal acquisitions* and *acquirers' restructuring efforts* (Bergh, Johnson, and Dewitt, 2008; Capron, Mitchell, and Swaminathan, 2001). We measured the first as the logarithm of the number of the number of firms acquired over the previous three

years that shared the same three-digit SIC code as the acquirer (Capron *et al*., 2001). We measured the second as the logarithm of the number of divestitures made by the acquirer in the three years preceding a focal acquisition (Bergh *et al*., 2008). Finally, *acquirer value creation reputation* was included as a dummy variable, which took the value of one if the acquirer was included in Fortune's Most Admired or the Wall Street Journal and Harris Interactive's corporate reputation rankings, and zero otherwise (Graffin *et al*., 2016).

We controlled for eight target firm characteristics that may affect abnormal stock returns to acquisitions (Campbell *et al*., 2016; Graffin *et al*., 2016). The first two of these are *target size*, measured by the logarithm of the number of employees, and *target ROA*. *Target relatedness* was the sum of primary relatedness and secondary relatedness. Primary relatedness took the value of six, four or two respectively if there was a match between the acquirer and target firm in terms of their primary SIC codes based on their four-, three-, and two-digit codes. Similarly, secondary relatedness took the value of three, two, or one if any of the secondary SIC codes matched based on the four-, three-, and two-digit SIC codes (Laamanen, Brauer, and Junna, 2014). Thus, target relatedness took values of between zero and nine. *Domestic target* was coded as one if the target was based in the US, and zero otherwise. *Private target* was coded as one for a private target firm, and zero otherwise. *High-tech target* took the value of one if the target's three-digit SIC code was 357, 365, 366, 367, 381, 382, 384, 386, 481, 482, 484, 489, or 737, and zero otherwise (Li *et al*., 2008). We also controlled for the characteristics of the industry in which the target was operating. We regressed time on industry sales, based on the three-digit SIC code of a target, for a period of five years, with the last year being the year before the acquisition. *Target industry dynamism* was the standard error of the regression coefficient used in the regression, and *target industry munificence* was the regression coefficient itself, both scaled by the average industry sales for the five years used in the regression (McNamara *et al*., 2008). *Target industry concentration* was the combined market share of the four largest

competitors in the target firm's industry.

We included four deal characteristics in our regression models following prior research, namely *deal value* (logarithmically transformed); *premium*, which was the percentage difference between the price per share paid by the acquirer for the target firm and the share price of the target one week prior to the acquisition announcement; *percentage of stock payment*; and *friendly acquisition*, coded as one if the acquisition was classified as friendly in SDC, and zero otherwise (Campbell *et al*., 2016).

We also controlled for two more types of framing that could signal shareholder value creation in acquisition announcements. First, we included *shareholder value framing*, measuring the number of references to "shareholder value" (or derived forms) relative to the total number of words in the announcement calculated as a percentage (Fiss and Zajac, 2006). Second, as the idea of strategic fit could shift investors' interpretation of the acquisition as "good" or "bad" (Campbell *et al*., 2016), we included *strategic fit framing*, this being measured as a percentage of the number of references to "strategic fit" relative to the total number of words in the announcement.

Lastly, we included the *announcement length*, measured as the logarithm of the number of words used in the announcement, *investor sentiment* for the month prior to the acquisition announcement, which we measured using an index developed and validated by Baker and Wurgler (2006), and *year dummies* to rule out year-specific effects. Several outliers in terms of the target firms' dividend and growth reputations and dividend and growth framing were winsorized, but using the original values instead did not change our results.

3.3.3 Analysis

When estimating our models we accounted for possible selection bias, which could affect our results for two reasons. First, there may be systemic differences between S&P 500 firms that made acquisitions and those that did not. Second, firms

with dividend or growth reputations may have systemically different tendencies to make acquisitions. To investigate whether our sample was affected by selection bias and to correct for it, we used a Heckman two-stage estimation procedure (Certo, Busenbark, Woo, and Semadeni, 2016). We constructed a sample of all S&P 500 companies for the period of our study and identified whether they had made at least one acquisition during that period, as recorded in the SDC Platinum database. In the first stage of the Heckman procedure, we ran a random-effects probit regression predicting the likelihood of an acquisition while controlling for firm and time effects. We used as an exclusion restriction the *industry acquisition activity* in the previous year, measured as the number of acquisitions made by firms within a specific three-digit SIC code. We also ran the analysis using industry acquisition activity within two- and four-digit SIC codes as instruments and obtained the same results. Results are presented in Table 3.1 below.

Table 3.1 Heckman first-stage model predicting the likelihood of an acquisition

riables		
ustry acquisition activity	0.0006	[0.0001]
m dividend reputation	0.0027	[0.0446]
m growth reputation	0.0677	[0.0291]
m size	0.1421	[0.0329]
m cash flow	0.0740	[0.0321]
m ROA	2.2178	[0.3677]
m restructuring efforts	0.0584	[0.0301]
m value-creation reputation	-0.0110	[0.1456]
estor sentiment	0.5355	[0.1291]
nstant	-1.2018	[0.1433]
ar dummies	Yes	
g Pseudolikelihood	-3836.94	
ld Chi-square (*p*-value)	139.60 (0.00)	

te: $N = 7071$ firm-year observations. $n = 614$
nber of firms. Standard errors clustered on the firm
given in brackets. All predictors are lagged by one

ndustry acquisition activity was an ppropriate exclusion restriction for easuring firms' tendencies to cquire, because firms tend to imitate eir competitors' acquisitions, as videnced, for example, by cquisition waves (Haleblian, Kim, nd Rajagopalan, 2006; McNamara *t al*., 2008). As shown in Table 3.1, our instrument was positively associated with the likelihood of an acquisition ($b = 0.001$, $p = 0.000$). The weak correlations between the computed *Inverse Mills ratio* and the two variables of interest – namely dividend reputation (*r*

= -0.11) and growth reputation (r = -0.03) – suggested that our exclusion restriction was of acceptable strength (Certo *et al*., 2016). In the second stage, we tested all our hypotheses using OLS regression and included the Inverse Mills ratio, which accounts for possible selection bias. We clustered standard errors by acquirers to account for multiple occurrences of some acquirers in our sample.

3.4 RESULTS

The descriptive statistics and correlations are presented in Table 3.2. Consistent with the widespread observation that acquisitions typically elicit lower abnormal stock returns for the acquirer, we observed an average negative CAR (-1, 1) of -0.8%. The dividend and growth reputations of acquirers (r = -0.22) and those of target firms (r = -0.07) were negatively and weakly correlated, which is consistent with our conceptualization that these two reputations are distinct from each other but may coexist. Also, it appears that acquirers did not always select targets with reputations similar to theirs, nor did they attempt to frame acquisitions as being consistent with their reputations. Indeed, the correlations between acquirer and target dividend reputations (r = 0.21) as well as between acquirer's dividend reputation and dividend framing (r = 0.26) were relatively weak. The correlations between acquirer's and target's growth reputations (r = 0.13), and between acquirer's growth reputation and growth framing (r = -0.03) were even weaker. Regarding strategic framing, dividend framing was used in 173 acquisition announcements and growth framing in 406; in 48 announcements neither type of framing was used. The averages are 0.126 % for dividend framing and 0.697 % for growth framing, suggesting that acquirers used growth framing about five times more than dividend framing.

The regression models predicting CAR (-1, 1) are presented in Table 3.3. The two independent variables and moderators were mean-centered. All the variance inflation factors were below 10, suggesting that multicollinearity did not affect our

Table 3.2 Descriptive statistics and correlations

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 CAR (-1, 1)	-0.008	0.045	1.00															
2 Acquirer dividend reputation	0.735	0.710	0.04	1.00														
3 Acquirer growth reputation	0.477	0.855	0.08	-0.22	1.00													
4 Target dividend reputation	0.216	0.472	-0.03	0.21	-0.02	1.00												
5 Target growth reputation	0.733	0.528	0.04	-0.02	0.13	-0.07	1.00											
6 Dividend framing	0.126	0.225	-0.11	0.26	-0.02	0.20	-0.06	1.00										
7 Growth framing	0.697	0.499	0.01	-0.01	-0.03	-0.08	0.15	0.07	1.00									
8 Acquirer size	3.395	1.342	0.12	0.26	-0.26	-0.06	0.08	-0.08	0.01	1.00								
9 Acquirer cash flow	0.438	0.783	0.01	0.01	-0.03	-0.02	0.00	-0.08	-0.05	0.04	1.00							
10 Acquirer ROA	0.069	0.062	0.09	-0.10	0.06	-0.11	0.14	-0.13	0.06	-0.02	-0.08	1.00						
11 Acquisition experience	2.224	1.028	0.13	0.02	0.01	-0.04	0.16	-0.20	-0.12	0.55	0.03	-0.01	1.00					
12 Engagement in horizontal acquisitions	0.865	0.787	0.09	-0.13	0.19	-0.06	0.10	-0.11	-0.08	0.11	0.00	0.17	0.46	1.00				
13 Acquirer restructuring efforts	1.275	0.990	0.03	0.29	-0.10	0.05	0.05	0.00	-0.09	0.57	0.00	-0.10	0.54	0.13	1.00			
14 Acquirer value-creation reputation	0.106	0.308	0.06	0.16	-0.08	-0.06	0.08	-0.12	0.00	0.44	0.03	0.13	0.36	0.07	0.40	1.00		
15 Target size	7.043	1.686	-0.07	0.17	-0.07	0.25	0.10	0.29	0.08	0.36	0.00	-0.10	0.09	-0.04	0.15	0.07	1.00	
16 Target ROA	0.859	0.732	0.05	-0.15	-0.05	-0.15	0.06	-0.02	0.06	0.18	-0.06	0.04	-0.05	-0.11	-0.06	-0.04	0.12	1.00
17 Target relatedness	5.491	3.237	-0.05	-0.08	0.15	0.14	-0.01	0.10	-0.12	-0.30	0.07	-0.03	-0.19	0.19	-0.17	-0.20	0.02	-0.18
18 Domestic target	0.920	0.272	-0.07	0.10	-0.01	0.05	0.08	0.05	0.17	-0.03	0.04	0.01	-0.04	0.07	-0.06	-0.08	0.03	-0.04
19 Private target	0.006	0.080	0.03	0.00	0.01	-0.01	-0.01	0.01	0.08	-0.03	0.00	0.02	-0.03	0.01	-0.07	-0.03	0.00	0.01
20 High-tech target	0.411	0.493	0.05	-0.16	-0.09	-0.27	0.02	-0.12	0.05	0.08	0.01	0.13	0.23	0.13	0.02	0.10	-0.14	0.03
21 Target industry dynamism	0.021	0.016	-0.03	0.05	0.05	0.09	-0.12	0.04	0.00	-0.11	0.00	-0.17	-0.04	0.01	0.02	0.05	-0.04	-0.04
22 Target industry munificence	0.057	0.059	-0.05	-0.03	0.19	-0.02	0.18	-0.05	-0.08	0.04	-0.03	0.06	0.11	0.03	0.10	0.03	-0.02	0.07
23 Target industry concentration	0.485	0.201	0.08	-0.06	-0.07	0.01	0.05	0.05	0.02	0.11	0.00	0.02	-0.07	-0.10	-0.03	0.05	0.23	0.44
24 Deal value	6.801	1.710	-0.13	0.20	0.04	0.28	0.14	0.27	0.18	0.13	0.07	0.05	-0.01	0.04	0.08	0.08	0.68	-0.21
25 Premium	0.351	0.347	-0.02	0.02	-0.05	-0.13	-0.03	-0.06	0.03	0.04	0.00	0.09	-0.07	0.01	0.02	0.01	-0.16	0.08
26 Percentage of stock payment	24.082	37.454	-0.24	0.08	0.11	0.22	0.04	0.22	-0.02	-0.14	0.01	-0.22	-0.05	-0.05	0.01	-0.06	0.22	-0.23
27 Friendly acquisition	0.989	0.104	0.02	0.01	0.01	0.02	-0.05	-0.10	0.12	0.01	0.01	-0.01	0.06	-0.01	0.00	0.04	-0.10	-0.02
28 Shareholder value framing	0.025	0.073	-0.06	0.06	-0.07	-0.02	0.00	0.17	0.11	0.00	-0.05	-0.01	-0.09	-0.04	0.05	-0.01	0.14	0.08
29 Strategic fit framing	0.016	0.060	-0.03	0.01	-0.01	-0.06	0.04	-0.06	0.01	-0.03	-0.03	0.09	-0.10	-0.03	-0.02	-0.02	0.01	-0.02
30 Announcement length	6.640	0.583	-0.04	0.01	0.03	0.07	0.01	0.14	0.15	-0.10	-0.03	-0.09	-0.17	-0.13	-0.07	-0.02	0.24	0.01
31 Investor sentiment	0.131	0.766	-0.06	-0.05	0.26	-0.03	0.14	-0.02	-0.12	-0.04	-0.07	-0.04	0.13	0.13	0.09	-0.04	-0.06	0.05

Note: $N = 462$. Independent and moderator variables are reported before centering.

Table 3.2 (continued)

Variables	17	18	19	20	21	22	23	24	25	26	27	28	29	3(
17 Target relatedness	0.10	1.00												
18 Domestic target	-0.02	0.02	1.00											
19 Private target	-0.10	0.00	0.10	1.00										
20 High-tech target	-0.11	0.06	-0.04	-0.24	1.00									
21 Target industry dynamism	0.08	0.03	0.01	-0.04	-0.20	1.00								
22 Target industry munificence	-0.22	-0.07	-0.05	-0.27	0.22	-0.12	1.00							
23 Target industry concentration	0.23	0.15	-0.04	-0.15	-0.04	-0.06	0.02	1.00						
24 Deal value	-0.05	-0.02	-0.04	-0.08	-0.03	-0.01	0.07	-0.07	1.00					
25 Premium	0.19	0.15	-0.02	-0.26	0.08	0.13	-0.15	0.30	-0.16	1.00				
26 Percentage of stock payment	-0.05	0.12	0.01	0.00	0.02	0.04	-0.07	-0.07	-0.05	0.02	1.00			
27 Friendly acquisition	-0.01	0.06	-0.03	-0.07	0.02	-0.09	0.12	0.10	0.03	-0.02	-0.05	1.00		
28 Shareholder value framing	-0.01	-0.02	-0.02	-0.06	-0.07	0.00	-0.02	0.03	0.07	0.03	0.03	-0.04	1.00	
29 Strategic fit framing	0.10	0.10	0.01	-0.08	0.00	-0.05	0.02	0.37	0.00	0.18	0.02	0.03	0.02	1.0(
30 Announcement length	0.03	0.07	-0.01	-0.10	0.00	0.27	-0.02	-0.16	-0.01	0.16	-0.02	0.00	0.00	-0.1(

results. The Inverse Mills ratio did not have a discernible effect on CAR in any of the models, indicating no evidence of potential sample selection bias (Certo *et al*., 2016). Model 1 included the control and moderator variables. Of those, deal value (b = -0.624, p = 0.010), percentage of stock payment (b = -0.015, p = 0.065) and investor sentiment (b = 1.801, p = 0.063) predicted abnormal stock returns to the acquisition announcement. Neither target reputations ($b_{\textit{target dividend reputation}}$ = 0.452, p = 0.341; $b_{\textit{target growth reputation}}$ = 0.534, p = 0.213) nor strategic framing ($b_{\textit{dividend framing}}$ = -0.287, p = 0.837; $b_{\textit{growth framing}}$ = 0.194, p = 0.602) had any material effect on CAR by themselves, which is consistent with our theorizing that the way in which substantive and symbolic cues are interpreted by investors depends on the reputation of the acquiring firm.

In Model 2 the acquirer's dividend and growth reputations were added to test Hypotheses 1a and 1b. Contrary to our predictions, the acquirer's dividend reputation was positively, not negatively, associated with CAR (b = 0.707, p = 0.060). When an acquiring firm's dividend reputation was strengthened by one standard deviation (SD = 0.710), CAR increased by 0.50%, which represented an increase of more than $240 million in monetary terms, given the $48.3 billion average market capitalization of our sample firms. Consistent with our predictions, the acquirer's growth reputation was positively associated with CAR

Table 3.3 OLS regression predicting CAR (-1, 1)

Variables	Model 1 Base model		Model 2 Direct effect of acquirer's reputation		Model 3 Moderation effect of substantive cues		Model 4 Moderation effect of symbolic cues		Model 5 Full model	
Acquirer dividend reputation X Dividend framing							**3.729**	**[1.481]**	**3.500**	**[1.515]**
Acquirer growth reputation X Growth framing							**1.142**	**[0.464]**	**0.907**	**[0.541]**
Acquirer dividend reputation X Target growth reputation					**-1.464**	**[0.479]**			**-1.340**	**[0.512]**
Acquirer growth reputation X Target growth reputation					**0.641**	**[0.554]**			**0.368**	**[0.617]**
Acquirer dividend reputation			**0.707**	**[0.375]**	0.629	[0.377]	0.491	[0.344]	0.438	[0.345]
Acquirer growth reputation			**1.083**	**[0.336]**	1.037	[0.283]	1.042	[0.314]	1.010	[0.282]
Target dividend reputation	0.452	[0.474]	0.483	[0.455]	0.674	[0.459]	0.444	[0.436]	0.622	[0.434]
Target growth reputation	0.534	[0.427]	0.371	[0.429]	0.463	[0.407]	0.341	[0.424]	0.397	[0.406]
Dividend framing	-0.287	[1.393]	-0.814	[1.381]	-0.718	[1.399]	-2.334	[1.469]	-2.157	[1.471]
Growth framing	0.194	[0.371]	0.283	[0.375]	0.288	[0.367]	0.304	[0.377]	0.302	[0.369]
Acquirer size	0.123	[0.281]	0.313	[0.279]	0.421	[0.270]	0.435	[0.280]	0.511	[0.274]
Acquirer cash flow	-0.188	[0.243]	-0.102	[0.242]	-0.074	[0.231]	-0.105	[0.250]	-0.074	[0.238]
Acquirer ROA	-0.132	[5.163]	2.151	[5.090]	2.181	[4.968]	1.838	[5.113]	1.686	[4.955]
Acquisition experience	0.341	[0.295]	0.340	[0.295]	0.312	[0.294]	0.304	[0.295]	0.270	[0.292]
Engagement in horizontal acquisitions	0.347	[0.290]	0.301	[0.286]	0.388	[0.285]	0.295	[0.281]	0.365	[0.282]
Acquirer restructuring efforts	-0.094	[0.295]	-0.101	[0.288]	-0.109	[0.281]	-0.115	[0.288]	-0.122	[0.282]
Acquirer value-creation reputation	0.017	[0.879]	-0.007	[0.921]	-0.064	[0.859]	0.143	[0.885]	0.096	[0.836]
Target size	0.117	[0.217]	0.178	[0.217]	0.146	[0.216]	0.200	[0.218]	0.162	[0.215]
Target ROA	-0.459	[0.323]	-0.468	[0.330]	-0.562	[0.339]	-0.562	[0.331]	-0.613	[0.343]
Target relatedness	0.039	[0.076]	0.054	[0.074]	0.035	[0.073]	0.050	[0.072]	0.035	[0.073]
Domestic target	-0.421	[0.639]	-0.408	[0.607]	-0.512	[0.608]	-0.162	[0.630]	-0.308	[0.628]
Private target	1.107	[0.709]	0.539	[0.657]	0.128	[0.604]	0.838	[0.695]	0.437	[0.634]
High-tech target	-0.597	[0.487]	-0.206	[0.506]	-0.257	[0.490]	-0.463	[0.503]	-0.471	[0.484]
Target industry dynamism	-1.599	[16.338]	-5.115	[15.442]	-7.614	[14.799]	-2.659	[14.716]	-4.573	[14.215]
Target industry munificence	-0.795	[4.734]	-2.382	[4.797]	-0.840	[4.877]	-1.423	[4.784]	-0.424	[4.881]

Table 3.3 (continued)

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
Target industry concentration	1.879	[1.398]	2.282	[1.401]	2.874	[1.391]	2.212	[1.351]	2.698	[1.357]
Deal value	-0.624	[0.239]	-0.761	[0.234]	-0.791	[0.230]	-0.769	[0.235]	-0.782	[0.232]
Premium	-0.713	[0.561]	-0.650	[0.562]	-0.695	[0.538]	-0.586	[0.560]	-0.645	[0.542]
Percentage of stock payment	-0.015	[0.008]	-0.014	[0.008]	-0.015	[0.008]	-0.015	[0.008]	-0.016	[0.008]
Friendly acquisition	0.689	[1.806]	0.183	[1.651]	0.165	[1.692]	0.270	[1.352]	0.278	[1.413]
Shareholder value framing	-3.076	[3.557]	-2.360	[3.594]	-2.492	[3.538]	-1.864	[3.509]	-2.003	[3.465]
Strategic fit framing	-0.817	[2.922]	-0.783	[3.024]	-0.814	[3.224]	-0.265	[3.049]	-0.325	[3.186]
Announcement length	0.201	[0.387]	0.214	[0.386]	0.260	[0.363]	0.390	[0.366]	0.379	[0.348]
Investor sentiment	1.801	[0.964]	2.107	[0.932]	2.294	[0.935]	2.254	[0.938]	2.392	[0.927]
Inverse Mills ratio	-1.952	[2.068]	-0.526	[1.915]	-0.097	[1.810]	-0.436	[1.871]	-0.089	[1.802]
Constant	-3.396	[4.081]	-4.971	[3.980]	-5.794	[3.900]	-6.957	[3.660]	-7.185	[3.671]
Year dummies	Yes		Yes		Yes		Yes		Yes	
F (*p*-value)	3.05 (0.00)		4.06 (0.00)		5.84 (0.00)		4.02 (0.00)		5.10 (0.00)	
R-squared	0.19		0.23		0.25		0.25		0.27	

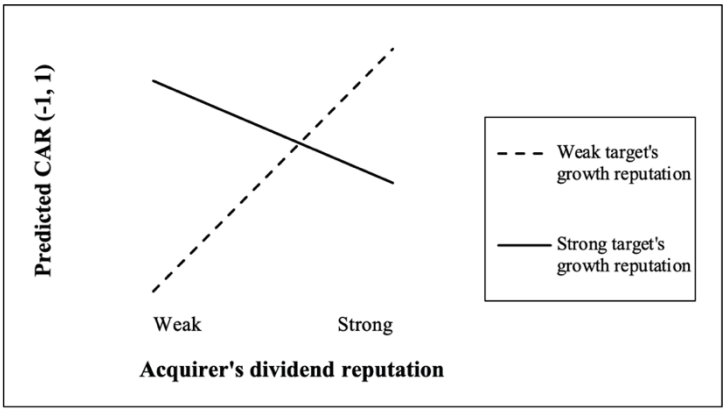
Note: $N = 462$. Standard errors clustered on the acquirer are given in brackets. The dependent variable CAR (-1, 1) is multiplied by 100. The independent and moderator variables are centered.

(b = 1.083, p = 0.001). An increase of one standard deviation in the strength of the acquirer's growth reputation (SD = 0.855) resulted in 0.93% increase in CAR, which for the firms in our sample represented a boost of almost $450 million on the announcement of an acquisition. Overall, we found empirical support for Hypothesis 1b but not for Hypothesis 1a.

To test Hypotheses 2a and 2b we added to Model 3 the interaction terms between acquirer's dividend reputation and target's growth reputation, and also between acquirer's growth reputation and target's growth reputation. The coefficient for the interaction term between acquirer's dividend reputation and target's growth reputation was negative and precisely estimated (b = -1.464, p = 0.003). The coefficient for the interaction term between acquirer's growth reputation and target's growth reputation was indistinguishable from zero (b = 0.641, p = 0.249).

To illustrate the moderation effect of target's growth reputation on the relationship between acquirer's dividend reputation and CAR, in Figure 3.2 we plotted the corresponding slopes of acquirer's dividend reputation (between two SD below and above the mean) for strong (2 SD above the mean) and weak (2 SD below the mean) values of the target's growth reputation.

Figure 3.2 Interaction effect of acquirer's dividend reputation and target's growth reputation on CAR

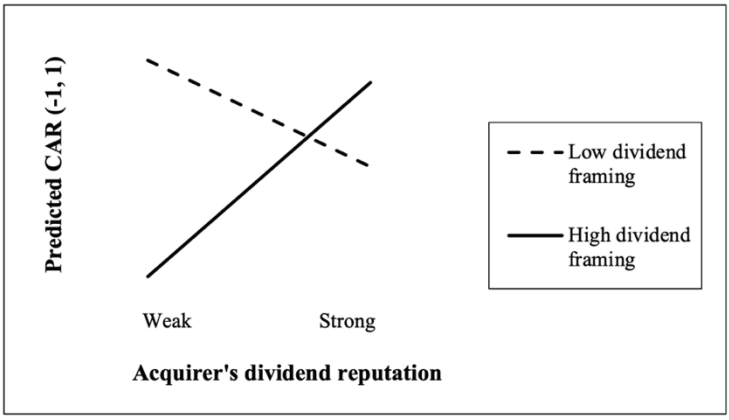


The plot in Figure 3.2 provides valuable insights into the relationship between acquirer's dividend reputation and CAR as predicted in Hypothesis 1a. Although the test of this hypothesis revealed that on average there was not a negative association between acquirer's dividend reputation and CAR, the plot in Figure 1 indicates such a negative association conditional to high levels of target growth reputation. More specifically, the plot shows that acquirer's dividend reputation and CAR were negatively associated, as predicted by Hypothesis 1a, when target's growth reputation was strong, but positively associated when target's growth reputation was weak. The point of intersection for the two slopes was 0.445 SD above the mean of the acquirer's dividend reputation. This means that acquirers with a relatively strong dividend reputation (in our sample, acquirers who paid more

than 1.05 dollars DPS) would generate higher stock market returns upon announcing an acquisition if they selected a target with a weaker growth reputation. Overall, these findings provide partial support for Hypothesis 2a and no support for Hypothesis 2b.

We added in Model 4 the interaction terms between acquirer's dividend reputation and dividend framing, as well as between acquirer's growth reputation and growth framing to test Hypotheses 3a and 3b. The coefficient for the interaction term between acquirer's dividend reputation and dividend framing was positive and precisely estimated ($b = 3.729$, $p = 0.012$), as was the coefficient between acquirer's growth reputation and growth framing ($b = 1.142$, $p = 0.015$). To illustrate our findings, we plotted the moderating effects in Figures 3.3 and 3.4. In each figure, we presented the corresponding slopes for acquirers' growth and dividend reputations for high (2 SD above the mean) and low (2 SD below the mean) values of the corresponding framing variables.

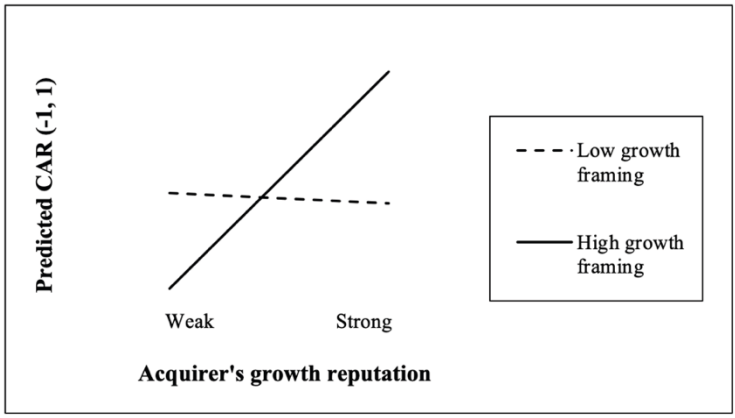
Figure 3.3 Interaction effect of acquirer's dividend reputation and dividend framing on CAR



The plot in Figure 3.3 revealed that acquirer's dividend reputation and CAR were negatively associated, as predicted by Hypothesis 1a, when dividend framing

was weak, but positively associated when dividend framing was strong. This suggests that the negative association between that acquirer's dividend reputation and CAR as predicted in Hypothesis 1a is conditional to low levels of dividend framing. The point of intersection between the two slopes was 0.882 SD above the mean of acquirers' dividend reputation. This means that acquirers with a relatively strong dividend reputation (in our sample, acquirers who paid more than 1.36 dollars DPS) would generate higher abnormal stock returns if they used high rather than low levels of dividend framing in their acquisition announcements. These findings provided partial support to Hypothesis 3a.

Figure 3.4 Interaction effect of acquirer's growth reputation and growth framing on CAR



The plot in Figure 3.4 showed a slight negative association between acquirer's growth reputation and CARs when acquirers used low levels of growth framing in acquisition announcements, and a strong positive association when they used high levels of growth framing. The point of intersection between the two slopes was 0.311 SD below the mean of the acquirer's growth reputation. This means that even acquirers with a relatively weak growth reputation (in our sample, acquirers with sales growth of at least 20% over the three years preceding a focal acquisition)

would generate abnormal stock returns by using high rather than low levels of growth framing in their announcements. These findings provided support for Hypothesis 3b. Overall, our results indicated that once acquirers' growth or dividend reputations had reached a certain point, they could expect lower stock returns if they neglected to frame acquisition announcements in line with their reputations.

3.4.1 Robustness tests

We performed several robustness checks for alternative measurements of dividend and growth framing as well as for the exogeneity of dividend and growth framing. Results concerning the alternative measures of dividend and growth framing are available on request.

Robustness tests for alternative measurements of dividend and growth framing. We ran several robustness tests with alternative operationalizations of our dividend and growth framing variables. First, we allowed for the possibility that words used in dividend and growth framing might carry different weights with investors. The most salient words, which were "dividend" for dividend framing and "growth" for growth framing, were given a weight of 1. The rest of the words from the dividend and growth dictionaries were given a weight of 0.5. Using these weighted framing measures yielded consistent results about the interaction effect between acquirer's reputations and framing ($b_{\textit{acquirer dividend reputation x weighted dividend framing}} = 5.226$, $p = 0.019$; $b_{\textit{acquirer growth reputation x weighted growth framing}} = 1.380$, $p = 0.009$).

Second, we created dividend and growth framing indices, which incorporated the depth and breadth of dividend and growth framing. The depth was captured by our original measure. The breadth was meant to capture the variety of dividend- and growth-related topics covered in each announcement, and was measured as the proportion of words from the dividend and growth dictionaries used in each announcement to the total number of words in the dividend and growth dictionaries respectively. The framing breadth and depth measures were standardized and added

together to create overall growth and dividend framing indexes. Using these measures also yielded consistent conclusions about the moderating effect framing on the association between acquirer's reputation and abnormal stock returns to acquisition announcements ($b_{\text{acquirer dividend reputation x dividend framing index}} = 0.402$, $p = 0.031$; $b_{\text{acquirer growth reputation x growth framing index}} = 0.252$, $p = 0.044$).

Robustness tests for the exogeneity of dividend and growth framing. A potential concern for our hypothesis tests was whether our framing variables were exogenous. To address this, we used a two-stage least squares (2SLS) regression (Semadeni, Withers, and Certo, 2014). In the first stage we estimated dividend and growth framing in separate regressions, using all control variables and carefully selected instruments. As an instrument for dividend framing, we used the percentage of dividend-paying firms within the acquirer's three-digit SIC code that cut their dividends per share in the year preceding the acquisition. A survey among executives revealed that firms were particularly attentive to their industry peers and used the opportunity to shift the focus away from dividends when their peers did so (Brav *et al*., 2005). Therefore, dividend cuts by industry peers are likely to predict decreases in the use of dividend framing. As an instrument for growth framing, we used the one-year sales growth rate for firms within the S&P 500 index for the quarter preceding the acquisition, because S&P 500 firms pay more attention to each other than to their industry peers (Denis, McConnell, and Ovtchinnikov, 2003). We expected that higher sales growth among firms within the S&P 500 index would predict increases in the use of growth framing. We reported our results in Table 3.4.

Our instruments for dividend framing (Model 1: $b = -0.018$, $p = 0.047$) and growth framing (Model 2: $b = 2.625$, $p = 0.006$) were strong predictors of the respective framing variables, and thus satisfied the selection criteria. In the second stage of our 2SLS regression, we predicted CAR using all the control variables, the framing variable of interest, and the corresponding framing residual from the first-stage regression. We performed the Durbin–Wu–Hausman (DWH) test to assess the precision of the coefficient of the first-stage framing residuals in the second-stage

Table 3.4 First-stage 2SLS models testing for endogeneity of dividend and growth framing

Dependent variable:	**Dividend framing**		**Growth framing**	
Variables	**Model 1**		**Model 2**	
Percentage of dividend-cutting firms in acquirer's industry	-0.0184	[0.0092]		
One-year sales growth rate for firms within the S&P 500			2.6253	[0.9374]
Acquirer dividend reputation	0.0757	[0.0205]	-0.0434	[0.0350]
Acquirer growth reputation	0.0077	[0.0123]	-0.0095	[0.0259]
Target dividend reputation	0.0107	[0.0306]	-0.1201	[0.0479]
Target growth reputation	-0.0221	[0.0200]	0.1455	[0.0442]
Acquirer size	-0.0265	[0.0161]	-0.0013	[0.0312]
Acquirer cash flow	-0.0182	[0.0102]	-0.0475	[0.0344]
Acquirer ROA	-0.2386	[0.2091]	-0.3266	[0.5219]
Acquisition experience	-0.0426	[0.0177]	-0.0685	[0.0327]
Engagement in horizontal acquisitions	0.0086	[0.0153]	-0.0149	[0.0345]
Acquirer restructuring efforts	0.0216	[0.0117]	-0.0194	[0.0305]
Acquirer value-creation reputation	-0.0552	[0.0299]	-0.0188	[0.0784]
Target size	0.0260	[0.0103]	-0.0188	[0.0250]
Target ROA	0.0086	[0.0149]	0.0399	[0.0384]
Related target	-0.0001	[0.0035]	-0.0290	[0.0078]
Domestic target	-0.0175	[0.0355]	0.2205	[0.0690]
Private target	-0.0126	[0.0796]	0.4418	[0.2764]
High-tech target	0.0347	[0.0262]	0.0157	[0.0550]
Target industry dynamism	0.0554	[0.7188]	1.1287	[1.6047]
Target industry munificence	-0.1289	[0.1898]	0.0621	[0.4040]
Target industry concentration	0.0357	[0.0676]	-0.1190	[0.1451]
Deal value	0.0124	[0.0116]	0.0774	[0.0242]
Premium	-0.0177	[0.0241]	0.0042	[0.0706]
Percentage of stock payment	0.0006	[0.0003]	-0.0001	[0.0007]
Friendly acquisition	-0.0939	[0.1865]	0.5302	[0.1045]
Shareholder value framing	0.3112	[0.1483]	0.3965	[0.2955]
Strategic fit framing	-0.2014	[0.1165]	-0.1141	[0.4900]
Announcement length	-0.0026	[0.0220]	0.0225	[0.0405]
Investor sentiment	0.0396	[0.0347]	-0.1231	[0.0902]
Inverse Mills ratio	-0.0169	[0.0835]	-0.1437	[0.2019]
Constant	0.0146	[0.2715]	-1.2298	[0.3651]
Year dummies	Yes		Yes	
R-squared	0.30		0.25	
F-test for excluded instruments (*p*-value)	3.99 (0.05)		7.84 (0.01)	
DWH endogeneity test (*p*-value)	1.12 (0.26)		-0.70 (0.47)	

Note: $N = 462$. Standard errors clustered on the acquirer are given in brackets. Variables relating to framing and to the acquiring and target firms' growth and dividend reputations are centered.

regression, and to check therefore whether dividend and growth framing were in fact exogenous. If the coefficient for the residuals was indistinguishable from zero, the estimates from OLS could be deemed consistent and we should not correct any further for endogeneity because that could distort our results (Semadeni *et al*., 2014). We did not find evidence of endogeneity regarding dividend (DWH = 1.122, $p = 0.263$) or growth framing (DWH = -0.699, $p = 0.486$), meaning that the results in Table 2 are unbiased and consistent.

3.5 DISCUSSION

We built a contingency model to better understand why and under what circumstances investors may react positively or negatively to an acquisition announcement. We not only distinguished between an acquirer's dividend and growth reputation and showed how these drove different perceptions, but also suggested how substantive and symbolic information cues shape the interpretative processes of investors. Interestingly, we found that an acquisition generates more positive abnormal stock returns not only when an acquirer has a growth reputation, but also when it has a dividend reputation. In addition, we showed that substantive and symbolic cues influence the interpretative processes of investors in such a way that investors ultimately reinforce or revise their initial opinions about an acquisition by a firm with a dividend or a growth reputation. Overall, our findings have important implications for research on investors' reactions to acquisitions and on EVT and impression management.

3.5.1 Theoretical implications

First, our work provides important implications for our understanding of investors' varied reactions to acquisitions (Campbell *et al*., 2016; Schijven and Hitt, 2012). Although earlier studies have argued almost exclusively that acquisitions violate the expectations of investors, and have therefore suggested that investors

typically react negatively to acquisition announcements (Graffin *et al*., 2016), few have examined the underlying reasons why investors may react positively to acquisitions, and the circumstances in which they do so (Campbell *et al*., 2016). Moreover, earlier work on investors' reactions to acquisitions has assumed that their perceptions of the value of acquisitions are similar for particular groups of firms, such as those with a high reputation (Haleblian *et al.*, 2017). Our framework, however, offers a more nuanced perspective on investors' expectations and their reactions to acquisitions by showing that investors do not universally perceive acquisitions as negative expectancy violations because of their ambiguous outcomes (Haleblian *et al.*, 2009). Rather, perceived expectancy violations arising from acquisitions may vary because the specific ways in which an acquirer has created shareholder value in the past give rise to different expectations. More specifically, when firms are known for distinct ways of creating shareholder value, this shapes the evaluative processes of investors in such a way that, for some acquiring firms, they may not only consider an acquisition to be a superior vehicle for generating value over time but may also downplay the potential downside of allocating resources to acquisitions. This implies that varied expectations about subsets of firms need to be taken into account in order to bring together both negative as well as positive predictions of EVT in the context of acquisitions.

While our results show that, on average, firms' dividend reputation leads to positive reactions from investors, rather than to the negative reactions we predicted, we found that the positive effect of firms' growth reputation on investor reactions is much more precisely estimated than that of dividend reputation. Our findings also reveal that investors' reactions become negative when the target firm has a growth reputation, and when dividend framing is not used strongly in the acquisition announcement. Taken together, these results are consistent with our conceptual framework as well as with prior research on reputation. More specifically, these findings suggest that, as any type of reputation, dividend reputation leads investors to give managers "the benefit of the doubt" (Zavyalova *et al*., 2016), but only up to

a certain point. That is, despite the potential negative impact of acquisitions on dividends, investors do not perceive all acquisitions of firms with a dividend reputation as a negative expectancy violation. Rather, the perception of a negative expectancy violation is contingent on the nature of substantive and symbolic information cues that investors process in conjunction with an acquirer's dividend reputation. Specifically, such perception manifests itself when investors observe acquiring firms internalizing new capabilities that they perceive to be incompatible with the perpetuation of dividends, as implied by the growth reputation of target firms, and when acquirers fail to explain to investors how the acquisition is intended to enhance dividends. Overall, these findings and support our contention that firms' growth and dividend reputations give rise to different expectations from investors by revealing important boundary conditions of EVT.

Second, by examining how both substantive and symbolic information cues shape the evaluative processes underlying investors' reactions to acquisitions, we contribute to newly emerging work on the intersection between EVT and research on impression management (Graffin *et al*., 2016; Rhee and Fiss, 2014). While earlier studies have focused only on how firms may offset negative expectancy violations by providing symbolic cues to stakeholders, we show that both substantive and symbolic cues influence investors' perceptions of expectancy violations, albeit in different ways. Specifically, while symbolic cues in terms of dividend and growth framing influence investors' interpretations of an acquisition as either a positive or a negative expectancy violation, substantive cues regarding a target's growth reputation only affect perceptions of negative expectancy violations. This suggests that investors take much less account of substantive cues when interpreting an acquisition as a positive expectancy violation – for example, when both the acquiring and the target firm have a growth reputation. This implies that, to better understand the boundary conditions of EVT in explaining reactions to negative and positive expectancy violations, scholars should differentiate between the influence of substantive and symbolic cues. Specifically, insights about the role

of substantive cues in the context of negative expectancy violations may not be readily extendable to situations in which the goal is to explain their influence on interpretative processes pertaining to positive expectancy violations.

Moreover, most research on strategic framing has been done in contexts that involve unambiguously negative events (e.g., Elsbach, 1994; Zavyalova *et al*., 2012). This exclusive focus on negative events has limited our understanding of how framing affects a broader range of perceived expectancy violations. By focusing on acquisitions, which can be interpreted both positively and negatively, we are able to demonstrate that framing can be effectively used not only to attenuate perceptions of negative expectancy violations, but also to reinforce perceptions of positive expectancy violations. This suggests that framing could be a more powerful impression management tool for mangers than indicated by earlier research.

Our findings also have implications for broader research impression management. Even though scholars have examined how firm characteristics may encourage the use of impression management (Gamache *et al*., 2019; Graffin *et al*., 2016), they have not considered the implications of such characteristics for the effectiveness of the impression management per se. Instead, they have focused on identifying impression management techniques and the usage of frames in general (Fiss and Zajac, 2006; Pan *et al*., 2017). Our findings, however, show that growth and dividend framing do not have a direct effect on how investors evaluate acquisitions, but rather shape the interpretative processes of investors in conjunction with the acquirer's specific reputation for value creation.

3.5.2 Practical implications

Our findings have important implications for investors and managers. We found that investors evaluated acquisitions differently, depending on the way a company created shareholder value – either through dividends (dividend reputation) or through capital gains (growth reputation). Investors seemed to favor acquisitions made by acquirers with a growth reputation, and rewarded them almost twice as

much as acquisitions made by those with a dividend reputation, likely due to their past success in generating exponential growth. However, past success does not necessarily guarantee that all decisions will bring similar success in the future (Chan and Lakonishok, 2004). We therefore urge investors to be aware of such biases and to evaluate acquisitions by high-growth firms on their own merits.

Our findings also underscore the importance of the framing being consistent with the acquirer's dividend or growth reputation. Hence, we encourage firms that are announcing an acquisition to provide explicit information to investors regarding how the acquisition is intended to create additional value for shareholders, taking into account the current dividend and/or growth reputation of their firm. In addition, our findings reveal that investors might penalize firms with a dividend reputation when they acquire a target with a growth reputation. As such, we urge firms with a dividend reputation to weigh up the potential benefits and drawbacks before deciding to acquire a high-growth target. Growth firms could also avoid selecting a target with a reputation similar to theirs in an attempt to generate higher returns, because investors do not appear to respond positively to such a selection.

3.5.3 Limitations and directions for future research

Our findings provide valuable opportunities for future research. For instance we have shown that looking at firms' growth and dividend reputations has the potential to enrich our understanding of how external audiences interpret firms' actions. However, firms can have multiple reputations, including for being diversified, environmentally friendly, or high-technology oriented. Those multiple reputations might lead to fuzziness in the minds of audiences as to what might be expected of the firm (Parker *et al*., 2019). Therefore, a fruitful next step would be to study how audiences integrate and prioritize their expectations when they evaluate firms' initiatives. In addition, future research could study the spillover effect on other unintended audiences of framing targeted at a single audience.

Due to the nature of our research question, we focused on the consequences rather than the antecedents of framing. Specifically, we were not able to differentiate between framing that was used as an impression management technique, and framing that was the product of managerial sense-making efforts. Given that research has suggested both of these are possible (Kaplan, 2008), a useful venue for future research would be to differentiate between the two, and to investigate the implications of this distinction for the effectiveness of framing. We hope our theory will stimulate further research on how investors form their perceptions about acquisitions and on contingencies that shape these perceptions.

CHAPTER 4

IMPRESSION MANAGEMENT WENT WRONG: CEO STATUS, CEO USE OF POWERFUL LANGUAGE AND INVESTORS' EVALUATIONS OF FIRMS

ABSTRACT

In this study, we provide a sociolinguistic perspective on the consequences of attaining (or not) CEO status with means of CEO awards. We propose that non-high-status CEOs, who were not able to win an award in a context where a fellow CEO did, attempt to strategically use language to boost their relative standing in the eyes of important firm stakeholders, i.e. investors. Using a matched sample of S&P 1500 CEOs, we show that non-high-status CEOs use higher levels of powerful language when communicating to investors in comparison to high-status CEOs. This effect is stronger when CEOs are overconfident, and weaker when CEOs have high compensation. Our findings also reveal that firms suffer when their CEOs use very high levels of powerful language in their communications, because investors evaluate those firms lower.

4.1 INTRODUCTION

The desire for status, which refers to "an actor's position in a hierarchical order" (Podolny, 2005, p. 13), is a fundamental human motive (Anderson, Hildreth, and Howland, 2015). A practice that has recently started to become increasingly common is the use of CEO awards, which substantially boosts a CEO's status and social recognition (Hayward, Rindova, and Pollock, 2004), has made the notion of status even more salient to CEOs and a firm's stakeholders. As CEOs are main drivers of a firm's strategic decision making, scholars have looked into the consequences of winning an award for the winner CEOs and their firms (e.g., Boivie, Graffin, and Gentry, 2016; Graffin, Wade, Porac, and McNamee, 2008; Wade, Porac, Pollock, and Graffin, 2006). Insights regarding the effect of award contests on the behavior of non-winning CEOs though is relatively scarce even though those CEOs are many more than the winners (Ammann, Horsch, and Oesch, 2016; Shi, Zhang, and Hoskisson, 2017). We extend the line of research on CEO awards by delving deeper into how and under what conditions non-winning CEOs strategically react when an industry peer CEO wins an award, and what are the consequences of such reactions for the firm. We refer to award-winning CEOs as *high-status CEOs*; those who do not win an award when a competitor CEO with similar characteristics does so we refer to as *non-high-status CEOs*.

Change in relative status standing among CEOs could give rise to upward social comparisons, which motivates CEOs in an inferior position to take immediate actions to improve it (e.g., Seo, Gamache, Devers, and Carpenter, 2015). Non-high-status CEOs, for example, engage in strategic activities such as acquisitions and innovation, which they believe could boost their status and visibility relatively quickly (Ammann *et al*., 2016; Shi *et al.*, 2017). There might be, however, other more immediate and cheaper options, which still have the potential to positively affect one's status (Crane, Thomas-Hunt, and Kesebir, 2019). Research in sociolinguistics points towards the use of *powerful language*, which is considered

to have a high rhetorical status, and could potentially have a positive impact on the status of individuals, who use it (Logue and Miller, 1995). Powerful language refers to a linguistic style, which is associated with higher levels of certainty, lower levels of tentativeness, and lack of powerless speech indicators such as hedges ("kind of", "I guess") and hesitations ("um", "well") (O'Barr, 1982). Considering how CEOs use powerful language is important not only because it could prove to be an alternative way for non-high-status CEOs to react when a peer CEO wins an award, but also because different linguistic styles could affect how important external audiences perceive firm-related information (Pan, McNamara, Lee, Haleblian, and Devers, 2017). By bringing together recent advances in research on social comparison theory in upper echelons and on sociolinguistics, we develop a contingency model explaining underlying motivations of non-high-status CEOs to use powerful language and its consequences for firms' valuation. In so doing, we extent the literature in at least three important ways.

First, we move beyond prior research, which looks into the substantive actions that non-high-status CEOs take due to upward social comparisons with better-off peers (Ammann *et al*., 2016; Shi *et al.*, 2017), and consider CEOs' strategic use of powerful language instead. As social recognition and status are granted to CEOs with superior abilities (Hayward *et al*., 2004), we propose that non-high-status CEOs try to appear more competent to get closer to their high-status peers in the eyes of important firms' stakeholders, i.e. investors. Consequently, we predict that non-high-status CEOs use higher levels of powerful language, because doing so could create the impression that those CEOs are in control and that they know what they are doing. In other words, our theory suggests that upward social comparison by non-high-status CEOs leads to specific language choices that CEOs make, which is consistent with the use of impression management (Pan *et al*., 2017). As such, our theorizing demonstrates the underexploited potential of integrating insights from social comparison theory and impression management to shed new light on the consequences of upward social comparisons in upper echelons.

Second, with few exceptions (e.g., Fong, Misangyi, and Tosi, 2010; Ridge, Aime, and White, 2015; Shi *et al.*, 2017), prior research has paid little attention to the boundary conditions of social comparison theory in the context of upper echelons (Wowak, Gomez-Mejia, and Steinbach, 2017). By considering that individuals integrate one's own opinion and the opinion of others when estimating the gap in their relative standing, which motivates action (Festinger, 1954), we identify two relevant contingency factors that may moderate the relationship between CEO status and the use of powerful language by CEOs. More specifically, when non-high-status CEOs have an elevated opinion of themselves, their perceptions of the gap in relative standing that needs to be closed increases. We, therefore, predict that CEO overconfidence, which is associated with elevated self-perceptions of one's abilities (Chen, Crossland, and Luo, 2015), would make non-high status CEOs use even higher levels of powerful language in their communications. On the contrary, when non-high-status CEOs have been granted social recognition by others with an alternative means (than awards), CEOs' perceptions of the gap in relative standing that needs to be closed decreases. CEO compensation, which is indicative of the recognition of others of CEOs' quality (Seo *et al*., 2015) would thus make non-high-status CEOs use less powerful language in their communications. As such, our theory provides a new explanation of when upward social comparisons would lead to intensified efforts to close the gap in relative standing that goes beyond previously identified factors such as CEO discretion and the level of social comparison.

Third, we investigate how a specific audience, namely investors, react to the use of powerful language in CEOs' communications, which is indicative of the effectiveness of powerful language as an impression management technique (Pan *et al*., 2017). While previous research has mainly explored the possibility that impression management is more or less effective in ensuring better outcomes for their users (Busenbark, Lange, and Certo, 2017; Graffin, Carpenter, and Boivie, 2011; Graffin, Haleblian, and Kiley, 2016), we know little about impression

management techniques which backfire. We propose that the use of high levels of powerful language in CEOs' communications would have a negative effect on firms' evaluations by investors. Indeed, when CEOs use high levels of powerful language, investors would perceive them as less likable, less trustworthy and less able to accurately assess the complexity of the firm's environment. Those perceptions would then raise concerns among investors regarding the future prospects of the firm, which would be reflected in their lower evaluations of the firm. By demonstrating the negative effect of powerful language used by CEOs on investors' evaluations of the firm, we identify a previously unanticipated consequence of impression management, which is that it could harm its user.

We test our predictions on a matched sample of 1902 non-high-status and high-status S&P1500 CEOs in the context of earnings announcements for the period 2010-2018. Results largely support our predictions. More specifically, we find that non-high-status CEOs use higher levels of powerful language in their communications than high-status CEOs. This effect is enhanced when CEOs are overconfident and reduced when CEOs have higher compensation. Finally, we find that excessively high levels of powerful language in CEOs' communications result in lower investors' evaluations of the firm.

4.2 THEORY AND HYPOTHESES

Social comparison theory proposes that individuals have innate desire to evaluate their own abilities (and opinions) and that they do that by comparing those to the ones of relevant others (Festinger, 1954). When choosing referents for comparison, individuals choose similar-to-themselves others, because doing so reduces the complexity of comparison and increases its informational accuracy in assessing oneself (Kulik and Ambrose, 1992). Individuals could engage in upward social comparison by comparing themselves to someone superior, which aims at self-improvement (Smith, 2000), or downward social comparison by benchmarking

themselves to someone inferior as to boost one's self-esteem (Wills, 1981). Understanding upward social comparison is important not only because it is more prevalent, but also because it gives rise to leveling-up motivation to minimize the gap between one's own abilities and the superior abilities of referents (Festinger, 1954; Van de Ven, Zeelenberg, and Pieters, 2009).

As CEOs are very accomplished and highly competitive individuals (Park and Westphal, 2013), they often engage in upward social comparisons with peer CEOs (Shi *et al.*, 2017). Most research looking into social comparisons among CEOs has focused on the motivational properties of CEO relative pay standing (e.g., Seo *et al*., 2015; Wowak *et al*., 2017). CEOs tend to compare themselves to other better-paid CEOs, because they see differences in pay as reflective of differences in how others perceive the abilities, competence and worth of the CEO (Mitchell and Mickel, 1999; Seo *et al*., 2015). Apart from compensation though, social status and recognition achieved by winning an award or being highly ranked by prominent media outlets could be equally indicative of the opinion of others regarding CEOs' competence and worth (Graffin *et al*., 2008). CEOs, in fact, weight the symbolic value of status gained through an award more than financial remuneration (Siming, 2015). Even though it seems that CEO status gained through an award could be another attribute that gives rise to CEO upward social comparison, very few studies have started to look into such possibility (Ammann *et al*., 2016; Shi *et al*., 2017). Given the recent proliferation of CEO awards (Love, Lim, and Bednar, 2017) and yet limited theoretical and empirical insights regarding their effect on a CEO's motivation, we next examine the outcomes of upward social comparison processes related to CEO status gained through winning a prestigious award.

4.2.1 The motivational properties of status-based upward social comparison for CEOs to manage the impressions of others

High status is associated with multiple benefits for individuals and organizations, which could be appealing to CEOs, who do not possess high status.

On the one hand, high-status CEOs are perceived by others as more competent, having better abilities, and making higher quality decisions (Graffin *et al*., 2008). As such, high status CEOs are less questioned by others, and their opinion could even weight more than the opinion of other experts such as financial analysis, or to be more relevant than the status of the firm attained through winning an award (Boivie *et al*., 2016; Park, Westphal, and Stern, 2011). High-status CEOs also have higher power and discretion, which results in higher compensation than lower status CEOs, who generate similar levels of performance (Graffin *et al*., 2008; Malmendier and Tate, 2009). On the other hand, CEO status could also have positive spill-over effects on the firms that those high-status CEOs manage (Wade *et at*., 2006). Indeed, having a high status leader boosts stakeholder's confidence in the firm's prospects (Fombrun, 1996), and results in better performance and easier access to capital (Podolny, 1994; Rao, 1994; Wade *et al*., 2006). That is why firms are interested in hiring high-status CEOs as a way to obtain some of those benefits (Chen, Hambrick, and Pollock, 2008), which boosts the career opportunities for high-status CEOs and disadvantages non-high-status CEOs.

Non-high-status CEOs have been shown to engage in multiple actions in an attempt to close the relative status standing gap between themselves and their high-status peers. Some of those non-high-status CEOs become risk taking, which results in higher innovation activity and stock volatility in terms of idiosyncratic risk (Ammann *et al*., 2016). Other non-high-status CEOs engage in higher levels of acquisition activity as to increase the size of the firm in hope of increased visibility, which would hopefully enhance CEO status (Shi *et al*., 2017). As it seems, the previously considered responses of non-high-status CEOs to their lower relative standing in comparison to high-status CEOs have been primarily substantive in nature, meaning that they require considerable organizational skills or funds, which might not be available to all CEOs. Symbolic strategies such as impression management, however, are more immediate, cheaper and still have the potential to positively affect external audience evaluations (e.g., Bolino, Kacmar, Turnley, and

Gilstrap, 2008; Graffin *et al*., 2011). Indeed, scholars have suggested that individuals of lower status, such as women when being compared to men, could release status-disconfirming information to enhance their status (Phillips, Rothbard, and Dumas, 2009). As non-high-status CEOs similarly aim to enhance their social recognition in the eyes of others (Shi *et al*., 2017), and impression management techniques have the potential to do so, we propose that non-high status CEOs could see impression management as an instrument to close the gap between themselves and high-status CEOs.

Despite the vast use of impression management by corporate leaders (Bolino *et al*., 2008), no theoretical and empirical insights link them to upward social comparison processes. We undertake this task in our study by explaining whether, how and what impression management techniques non-high-status CEOs might use to improve their relative standing in the eyes of others, and more specifically investors. We anticipate that CEOs would prioritize investors above other stakeholders (Brauer and Wiersema, 2018; Sanders and Carpenter, 2003) because lack of support from investors have numerous negative consequences for CEOs. Those include limited flexibility with regards to financial resources from the financial markets, increased scrutiny over corporate strategy, and even CEO dismissal (Boivie *et al*., 2016; Washburn and Bromiley, 2014; Wiersema and Zhang, 2011). We focus on the use of powerful language by CEOs during earnings conference calls as a relevant impression management technique to influence investors' opinion. The context of earnings calls is particularly relevant to our study because they give CEOs an opportunity to convince investors that their firms are capably managed (Pan *et al*., 2017), and because investors are motivated to attend those to gain insights into insiders' superior information (Graffin *et al*., 2011). Specifically, we examine how non-high-status CEOs use powerful language in their communications to investors as a result of upward social comparison processes. We also identify two boundary conditions to this effect. Finally, we theorize about the

consequences of the use of powerful language by CEOs for firms with respect to how investors evaluate those firms.

4.2.2 CEO status and the use of powerful language in CEOs' communications to investors

We propose that upward social comparison with high-status CEOs would motivate non-high-status CEOs to use higher levels of powerful language in their communication, which they believe could elevate their relative standing in the eyes of investors. CEOs often use language to manage firm's reputation and to create a positive impression regarding firm's prospects (e.g., König, Mammen, Luger, Fehn, and Enders, 2018; Patelli and Pedrini, 2014). This means that CEOs could also use language for their personal benefits such as to create a positive impression to investors regarding their own abilities. Research in sociolinguistics points to the instrumental value of powerful language, which is more assertive, dominant and certain in its style, to serve that purpose (Grob, Meyers, and Schuh, 1997). Lack of speech indicators of powerless language such as hedges and hesitations, make powerful language less tentative and more definite (O'Barr, 1982). Individuals who use more powerful language are generally perceived as more competent, intelligent, confident and persuasive (Blankenship and Craig, 2007; Ng and Bradac, 1993; Tiedens, 2001). Moreover, audiences hold expectations that high-status individuals use powerful language (Erickson, Lind, Johnson, and O'Barr, 1978). That is why the use of powerful language might potentially result in status gains even when used by individuals of lower status (Logue and Miller, 1995). Overall, we expect non-high-status CEOs to use higher levels of powerful language in their communications to investors for two reasons.

In a context of a competent CEO, such as a high-status CEO, non-high-status CEOs might be judges as disproportionately less competent (Graffin, Boivie, and Carpenter, 2013; Morse and Gergen, 1970). This would boost their motivation to do what it takes to convince investors in their competence. High-status CEOs reduce

investors' uncertainty regarding the future of their firms (Finkelstein, 1992; Fombrun, 1996; Wade *et al.*, 2006). As such, non-high-status CEOs might use powerful language to try to similarly reduce such uncertainty. Non-high-status CEOs might, therefore, try to give the impression that they have thought of and that they are prepared to deal with different uncertainties in the firm's environment. They could do that by using less hesitations and dominating the discussion when handling questions regarding the future of the firm, which eventually increases the level of powerful language used by non-high-status CEOs. They would also try to convey their own confidence in the goodness of their decisions to investors, which could have a spill-over effect on investors' confidence (Davis, Ge, Matsumoto, and Zhang, 2015), by using more definite claims when communicating to investors. Non-high-status CEOs might even demonstrate their superior abilities by aiming to raise investors' expectations regarding firm's prospects. For example, non-high-status CEOs could be overly certain in the way they speak and could dismiss investors' concerns, which are also features of powerful language. Indeed, non-high-status CEOs might have room to manage investors' expectations upwards and they might be less constrained by attributional biases related to poor performance (Wade *et al.*, 2006). This could increase the willing on non-high-status CEOs to use powerful language to optimistically predisposition investors. To sum, we anticipate that non-high-status CEOs would try to appear more competent in the eyes of investors and use more powerful language to achieve their goal.

Second, non-high-status CEOs might be able to compensate for observable differences in the way others communicate to high- versus non-high-status CEOs (Parhankangas and Renko, 2017), by communicating to others in a way that a high-status CEO would be expected to communicate. For example, because high-status CEOs are less often questioned by others (e.g., Boivie *et al.*, 2016), non-high-status CEOs could avoid using tentative language, which could soften their claims and open room for questioning during earnings calls. In addition, as seeking advice and publicly conforming to the opinion of others could potentially lower one's status

(Anderson *et al*., 2015; Henrich and Gil-White, 2001), non-high-status CEOs would likely be more confronting and dismissive when talking to investors in the hope of boosting their own status. Overall, we propose that non-high-status CEOs would avoid ways of communication associated with lower status, while displaying communication style associated with higher status, leading to the use of higher levels of powerful language than what high-status CEOs would have used.

Hypothesis 1: There is a positive relationship between non-high status of CEOs and the level of powerful language in CEOs' communications to investors.

4.2.3 Heterogeneity in the effect of CEO status on the use of powerful language in CEOs' communications to investors

While previous studies have greatly advanced our understanding regarding social comparison processes that shape the behavior of top executives (e.g., Ammann *et al*., 2016; Seo *et al*., 2015), some scholars have started to advocate for more attention being paid to unveiling nuances in the motivational properties of upward social comparisons (Wowak *et al*., 2017). Few studies have shown that change in executives' behavior due to social comparisons might be affected by the opportunity of those executives to act depending on their power or the firm's ownership structure (Fong *et al*., 2010; Wade *et al*., 2006). Others proposed that managers' tendency to react to upward social comparisons might be intensified by social comparisons with more similar referents (Shi *et al*., 2017) or to depend on the potential for comparison to multiple referents (Ridge, Hill, and Aime, 2017). Research is sociolinguistics is similarly suggestive of likely differences in how individuals use a language style when they are disadvantaged by their social attributes, such as having lower social status, but they do not identify factors that could explain such differences (Logue and Miller, 1995).

We explore a new possibility that the heterogeneity in CEOs' response to upward social comparisons could originate from the size of the perceived gap that CEOs, who find themselves in an inferior position when comparing themselves to high-status CEOs, aspire to close. Given that social comparisons is useful when objective, non-social means for evaluating one's ability are not available (Festinger, 1954), understanding individuals' subjective interpretations of reality becomes key. When it comes to CEO status, it is indicative of the opinion of others with regards to how a focal CEO compares to other CEOs. And as we have previously explained, non-high-status CEOs try to elevate their status by closing the gap in the way their own competence and the one of high-status CEOs are perceived by investors. We propose that non-high status CEOs would change the intensity with which they use powerful language based on how big they perceive this gap to be. To estimate such gap, CEOs likely consider their own opinion of their competence, or other sources of information, which reveal the opinion of others regarding the CEOs' abilities apart from CEO status (Higgins, 1987; Ridge *et al.*, 2017).

We propose that a factor, which could affect a CEO's perceptions of his or her competencies is CEO overconfidence (Chen, Crossland, and Luo, 2015). CEO compensation could be another indicator of the opinions of others of a CEO's quality (Seo *et al.*, 2015). That is why we next study how CEO overconfidence and CEO compensation shape the relationship between CEO status and the use of powerful language in a CEO's communications to investors. To outline our logic briefly, we anticipate that non-high-status CEOs, who are overconfident, would perceive the gap that needs to be closed as bigger. This is the case because their own opinion departs substantially from the opinion of others regarding the difference in quality between non-high- and high-status CEOs. On the contrary, non-high-status CEOs, who receive generous compensation, would perceive the gap that needs to be closed as smaller. This would be because those CEOs receive mixed signals regarding the opinion of others regarding their own quality and the quality of a high-status CEO, which would soften the negativity of not being granted an award.

Finally, the bigger the perceive gap that non-high-status CEOs aspire to minimize, the more powerful language they would use when communicating to investors.

The moderating effect of CEO overconfidence. Overconfident CEOs more easily dismiss negative feedback or attribute it to external factors (Chen, Crossland, and Luo, 2015). This suggests that overconfident non-high-status CEOs would likely believe that the external assessment of others, which resulted in the lack of award for the CEO, is wrong and due to their lack of knowledge regarding the true abilities of the focal CEO. Then such overconfident non-high status CEOs would use even higher levels of powerful language to more easily convinced investors in their superior abilities that others could not see. As we have previously explained, non-high-status CEOs would use powerful language to reduce investors' uncertainty and boost their expectations regarding the firm's prospects, and convey their own confidence to investors in the firm's strategy. Overconfident CEOs are in general more optimistic about the future of the firm and more certain in the rightfulness of their decisions (Li and Tang, 2010; Malmendier and Tate, 2005). That is why non-high-status CEOs, who are overconfident, would more convincingly embrace their mission to boos investors' certainty and expectations of the firm's prospects than non-overconfident CEOs, which would naturally intensify the level of powerful language that they use when communicating to investors.

We have also proposed that non-high-status CEOs would use more powerful language when communicating to investors as to replicate the expected communication style of higher status CEOs and to "force" investors to treat them as being of higher status. When it comes to overconfident CEOs, they usually believe that they are better than other CEOs (Larkin, Pierce, and Gino, 2012). Therefore, when non-high status CEOs are overconfident, they might feel entitled to use powerful language and to be treated as high-status CEOs even if they do not have the external recognition. This is unlikely to be the case when those CEOs are less confident, since they might feel that they did not attain an award because of lower abilities (Chen, Crossland, and Luo, 2015), which would make them unlikely

to use powerful language towards investors as to compensate for the lack of status. Moreover, overconfident CEOs tend to expect more positive outcomes of their initiatives (Hayward and Hambrick, 1997). Thus, they might more readily use powerful language when communicating to investors, because they would believe that doing so would be successful in changing investors' way to talk to them as they talk to high-status CEOs.

Hypothesis 2: CEO overconfidence strengthens the positive relationship between the non-high status of CEOs and the level of powerful language in CEOs' communications to investors.

The moderating effect of CEO compensation. High compensation is usually awarded to CEOs by the board of directors for their managerial talent, and human and social capital, which can contribute to the prosperity of the firm (Combs and Skill, 2003; Geletkanycz, Boyd, and Finkelstein, 2001). As CEO compensation is publicly available information, it could serve as a signal to investors regarding board's perceptions of CEOs' quality (Finkelstein, Hambrick DC, and Cannella Jr., 2009). That is why non-high-status CEOs would need to use less certain and powerful language to reduce investors' uncertainty and boost their expectations regarding the firm's prospects. Because the high CEO compensation already boosts investors' expectations that those CEOs should perform better (Ridge *et al.*, 2015). Moreover, boards of directors often need to justify their decision of a set level of CEO compensation to investors, which they usually do by either stressing an advise from consultants or the alignment of the interests of the CEO with those of investors (Wade, Porac, and Pollock, 1997). As doing so could elevate the relative standing of non-high-status CEOs in the eyes of investors even more convincingly than if the CEOs try to do it themselves, they might decide to refrain from using excessively high levels of powerful language to boost further investors' impressions.

Research has shown that individuals, who gain relatively high level of achieved status, might be buffered from status concerns regarding their lower ascribed status based on some personal characteristics (Phillips *et al*., 2009). Similarly, non-high-status CEOs might be less concerned to make sure that they talk as a CEO of superior status position with means of more powerful language when their relative position with regards to pay is superior to other fellow CEOs. Non-high-status CEOs would indeed be less motivated to elevate their relative status standing, when they have another dimension for social comparison, such as compensation, on which they overperform (Van Knippenberg, Wilke, and De Vries, 1981). Moreover, as highly paid executives are more attractive on the labor market (Ridge *et al.*, 2017), investors might already be aware of the attractiveness of highly paid CEOs and treat them more favorably even when those CEOs do not win an award. As such, non-high status CEOs, who perceive that they are already treated as if they were of higher status by their investors due to the benefits that come with being highly paid, would be less defensive and would use less powerful language when communicating to them.

Hypothesis 3: CEO compensation weakens the positive relationship between the non-high status of CEOs and the level of powerful language in CEOs' communications to investors.

4.3.4 The consequences of the use of powerful language in CEOs' communications for investors' evaluations of firms

We further propose that powerful language in CEOs' communications to investors would impact the way investors perceive CEOs and consequently the future prospects of their firms. Language styles could reveal new information about the speaker and the subject of discussion to external audiences, which then affects their evaluation of the message and their response (Pennebaker and Francis, 1996; Pennebaker and King, 1999). While we know that other language styles in firm's

communication such as optimistic language or concrete language affect investors' perceptions of firms (Davis *et al*., 2015; Pan *et al*., 2017), our knowledge regarding the implications of using powerful language for firms is limited. Earlier research in sociolinguistics indicated that using powerful language predominantly benefited its users (O'Barr, 1982). However, more recent insights suggest that its effect on audiences' perceptions might be more complex than previously thought (Blankenship and Holtgraves, 2005; Fragale, 2006). For example, in some cases using high levels of powerful language could produce unfavorable audiences' judgement such as judgement of ineffective communication or negative personality attributions (Bradac, and Mulac, 1984). To disentangle such complexities and accurately predict how investors interpret the use of powerful language by CEOs, one needs to consider the audience and context in which it is used (Cornelissen, Durand, Fiss, Lammers, and Vaara, 2015; Giorgi, 2017). In doing so, we come to predict that higher levels of powerful language in CEOs' communications would result in lower investors' evaluations of firms for two reasons.

First, we have argued that some CEOs would use more powerful language to appear more competent in the eyes of investors, however we next explain that it would be perceived in the exact opposite way by investors. More specifically, a language style, which resonates with investors' beliefs, is more likely to result in better evaluations (Giorgi, 2017). Because of information asymmetry, which investors face, they likely cannot immediately understand all choices made by insiders. Investors' inability to assess whether CEO's strategic choices would result in future gains for the firm raises their uncertainty regarding firm's prospects. When the CEO of the firm uses high levels of powerful language to communicate to investors, it suggests that the CEO has more certain beliefs regarding firm's prospects, which fails to resonate with investors' own beliefs. Given that individuals often rely on their own assessment in case of discrepant beliefs (e.g., Giorgi, 2017), investors likely discredit the information provided by the CEO with means of more powerful language as less reliable. As conveying assertive versions of reality could

be perceived as simplistic, one-sided and inaccurate (Winter, Krämer, Rösner, and Neubaum, 2015), investors might think that the use of powerful language by the CEO is provoked by the CEO's lack of proper analysis of the firm's environment. In contexts in which uncertainty is inherent, such as when investors interpret the prospects of the firm, using powerless language to convey information about the firm could be better perceived by them (Popper, 1968). Using some indicators of less powerful language like hedges, which softens the certainty of CEO claims, could indeed be perceived by investors as better capturing the probabilistic nature of reality (Toulmin, 2003) in which the firm operates. As such, investors would perceive CEOs, who use more powerful instead of less powerful language, as less competent, which would undermine investors' confidence in the future prospects of the firm and result in lower firm's evaluations.

Second, as individuals who use less powerful language are viewed as nicer, more likable and good-natured (e.g., Fragale, 2006; Lee, 1999), CEOs who refrain from overexploiting powerful language when talking to investors might be able to stimulate positive investors' affect. Also, if an individual is liked, audiences might look for confirmatory evidence of the competencies of that individual, or dismiss information which points towards lack of such competencies (Casciaro and Lobo, 2005). This is to suggest that when investors like the firm's CEO, i.e. when the CEO communicates in more favorable way to them with means of less powerful language, investors would be more positively predisposition to the firm. On the contrary, investors might become disappointed in CEOs who use powerful language because doing so might create the impression that those CEOs do not value investors' views (Tost, Gino, and Larrick, 2013), which could reflect negatively on the firm. Additionally, audiences perceive speech without hesitations and fillers as more planned and less truthful (e.g., DePaulo, Lindsay, Malone, and Muhlenbruck, 2003). Indeed, often times the more simpler structures associated with the use of powerful language (Newman, Pennebaker, Berry, and Richards, 2003) and more grandiose claims and exaggerations could be seen as deceitful (Bond and DePaulo,

2006; Crilly, Hansen, and Zollo, 2016). CEOs who use more powerful language to talk to investors during conference calls, could therefore be perceived as hiding or misrepresenting information, which could raise suspicion among investors of the intentions of the CEO. This would in turn undermine investors' confidence that CEOs who use more powerful language are acting in the best interest of the firm and its shareholders, which would be reflected in their lower evaluations of the firm. Overall, we predict that investors would perceive CEOs who use more powerful language in their communication as less likable and trustworthy, and that such perceptions would have a negative spill-over effect on their evaluations of the firms that those CEOs manage.

Hypothesis 4: The level of powerful language in the CEOs' communications to investors is negatively related to investors' evaluations of firms.

4.3 METHODOLOGY

4.3.1 Sample and data

We tested our hypotheses using a matched sample of S&P1500 CEOs of high and non-high status between 2010 and 2018. To construct our sample, we first identified which S&P1500 CEOs between 2010 and 2018 won an award from the Chief Executive Magazine, Forbes, Harvard Business Review, Institutional Investor, Morningstar, and Worth Magazine in a focal year (Boivie *et al*., 2016; Graffin *et al*., 2013; Malmendier and Tate, 2009; Shi *et al*., 2017). All those awards were issued from prominent enough outlets as to create social recognition and status differential between CEO who won and did not win an award. Since winning an award is not a random process and could introduce endogeneity, we created an appropriate empirical setting to test our hypotheses using a propensity score matching to identify CEOs who did not win an award but who were observationally

equivalent to award winners (Malmendier and Tate, 2009). We performed this matching in two steps.

First, we constructed a panel of all S&P 1500 CEOs for the period 2010-2018 and identified whether they won at least one award for a given year. Then we ran a logit regression to predict the likelihood of a CEO to win an award. As predictors we used variables, which have been previously shown to affect CEO's likelihood to win an award, namely *CEO age*, *CEO tenure*, whether it was a *female CEO, firm market capitalization* (log transformed), *firm financial performance* (return on assets), *firm book-to-market ratio*, *firm advertising intensity* (the ratio of advertising spending to sales), whether it was a *high-status firm* (one if the firm was included in Fortune's Most Admired or the Wall Street Journal and Harris Interactive's corporate reputation rankings, and zero otherwise (Graffin *et al*., 2016) and year fixed effects (Ammann *et al*., 2016; Malmendier and Tate, 2009; Shi *et al*., 2017). CEO data was gathered from Execucomp and firm data was gathered from Compustat. All predictors were lagged by one year. Results are presented in Table 4.1.

Table 4.1 Logit regression predicting the likelihood of a CEO to win an award

ɔ tenure	0.033	[0.008]
ıale CEO	-0.251	[0.219]
n market capitalization	1.242	[0.039]
n financial performance	-0.871	[0.666]
n book-to-market ratio	-0.418	[0.136]
n advertising intensity	2.650	[1.154]
h-status firm	-0.059	[0.225]
ıstant	-12.596	[0.533]
ır dummies	Yes	
udo R-square	0.35	

e: N = 8,043 CEO-year observations. Standard ɔrs are in brackets. All predictors are lagged by

Table 4.1 shows that awards tend ; given to CEOs with longer tenure).033, p = 0.000), and CEOs of firms larger market capitalization (b = 2, p = 0.000), higher advertising sity (b = 2.650, p = 0.022) or lower -to-market ratio (b = -0.418, p = 0.002).

Second, the predicted values from the regression were used for the propensity score matching. More specifically, an award-winning CEO was matched to a CEO

who did not win an award in the past three years, and who had the closed propensity score within the same year and four-digit SIC code. When a CEO was not available for the same year in the same four-digit SIC code, then three-, two-, or one-digit SIC codes were used. The matching was done within the same industry and year because social comparison intensifies as the non-winning CEO becomes more aware of the fact that a peer CEO won an award, and it is likely that such awareness is higher within the same industry and around the time of winning the award (Shi *et al*., 2017). Our final sample comprises of 1902 observations.

Table 4.2 summarizes the number of CEOs in our sample who won an award from each outlet. Most high-status CEOs in our sample (n = 829) won only one award in a given year, while 101 CEOs won two and 19 CEOs won three awards in a given year. No CEO won more than four awards in a given year.

Table 4.2 Summary of CEOs in our sample who won an award from each outlet

Award's outlet	Number of awards
Chief Executive Magazine	6
Forbes	38
Harvard Business Review	137
Institutional Investor	859
Morningstar	5
Worth Magazine	52

The rest of the data regarding CEO-, board-, and firm- characteristics is gathered from Compustat, Execucomp and Boardex. IBES database is used for data related to analysts' forecasts of earnings per share (EPS). CEO speech is gathered from conference call transcripts made available in Thomson Eikon.

4.3.2 Measures

The level of powerful language in CEOs' communications. The level of powerful language in a CEO's communications measures the degree to which a CEO speech is more certain, less tentative, and lacks powerless speech indicators

such as hedges and hesitations. Insights from sociolinguistics and psychology guide the development of our measure of powerful language. According to this work, powerful language could be best understood as the opposite of powerless language. Powerless language is typically defined as speech marked by hesitancy and tentativeness (Hosman, 1989). As such, the use of more hesitations and hedges make the language more powerless, and respectively less powerful. Research in sociolinguistics indeed suggests that hedges contain little or no meaning, but they are assumed to convey moderation and soften the message (Blankenship and Holtgraves, 2005; Hyland, 1998).

Using those guidelines, we derived our measure through content analysts using LIWC 2015 (Linguistic Inquiry and Word Count) software. Content analysis is an appropriate technique for capturing language-related constructs (e.g., Gamache, McNamara, Mannor, and Johnson, 2015) and LIWC specifically has been used to measure other language styles such as language concreteness (Pan *et al*., 2017). LIWC provides several build-in dictionaries, which are internally reliable and externally valid (Pennebaker, Booth, and Francis, 2007). Some of those resonate well with the components of powerful language, and thus could be used to operationalize it. Those are the dictionaries "certainty", "tentative", "nonfluencies" and "fillers". The dictionary "certainty" contains words that capture the level of certainty in a language and includes words such as absolutely, always, perfectly, totally, undeniably, etc. (a total of 113 words). The dictionary "tentative" contains words that capture the level of tentativeness in a language and includes words such as almost, seem, depend, unsure, possibly, etc. (a total of 178 words). The dictionary "nonfluencies" capture speech hesitations such as er, hm, and umm, etc. (a total of 19 words). Finally, the dictionary "fillers" captures hedges such as "I mean", "you know", etc. (a total of 14 words). As such, the level of powerful language in CEOs' communications would be higher when CEOs use more "certainty" words and when they use less "tentative", ""nunfluencies, and "fillers" words.

We used yearly earnings conference call transcripts to capture the level of powerful language in CEOs' communications. As we have previously discussed, the context of earnings calls is especially suited to test how CEOs use specific linguistic styles to manage impression of external stakeholders (Pan *et al*., 2017). Because the presentation preceding the Questions and Answers (Q&A) section is usually pre-scripted and the language used there might not be in the full discretion of CEOs, we used only the speech of CEOs in the Q&A section, which was genuine and spontaneous. As such, we measured the level of powerful language in CEOs' communication in each earnings conference call transcript based on the CEO speech in the Q&A section as follows:

> *Powerful language* = ((number of "certainty" words – number of "tentative" words – number of "nonfluencies" words – number of "fillers" words)/ total number of words) * 100

Most CEO speech extracts, which we analyzed in our sample, contained words from the "certain" (n = 1882), "tentative" (n = 1888), and "nonfluencies" (n = 1763) dictionaries. Only 162 extracts contained words from the "fillers" dictionary. Overall, powerful language had a mean of -1.66, which means that CEOs used 1.66% less "powerful" language indicators in their communication than "powerless" language indicators. We next provide two examples to illustrate different levels of powerful language in CEOs' communications.

This extract of CEO speech contains high level of powerful language (words in **bold** make the language more powerful). "*And what you're seeing here today is a tremendous* ***proof*** *point, because we put a plan in place three years ago to focus on the Ford brand, to have a robust* ***complete*** *balanced product portfolio, to be* ***absolutely*** *best in class in* ***every*** *vehicle that we put out, to have a financing plan, to fund the transformation and then continually improve our balance sheet, and* ***clearly*** *to use our fabulous Ford resources worldwide. And I think what you're seeing is* ***absolutely*** *the results of an* ***absolutely*** *focus attention on that plan*."

This extract of CEO speech contains low level of powerful language (underlined words make the language less powerful). "*We have only built in the cost savings that have sort of been achieved at this point. And there is at least another $250 million and maybe another $500 million in savings just from the suppliers if prices continue to be low, because we basically, for a lot of them, we have indexed how much we are paying to the oil price. So I don't really know exactly what it would be, but I would guess if you used -- if it is 60, we are covering everything at the end of the year.*"

Investors' evaluations of firms. We used cumulative abnormal returns (*CAR)* associated with the end-of-year earnings announcement and the standard event study methodology (Pan *et al*., 2017) to measure our dependent variable. In the past, CAR was thought to be reflective of all available information in the market and as such was considered to be an objective measure of firm performance (Fama, 1970). However, recently scholars have recognized that investors are boundedly rational, and that even though their decisions with regards to buying and selling shares, which are reflected in CAR, might be "efficient" in terms of speed, they may be seriously biased (Schijven and Hitt, 2012). As such, scholars have started to revise their view of what CAR represent, and have concluded that CAR reflect investors' perceptions of firms future value, which is consistent with our construct investors' evaluations of firms and is a valid measure for it.

CAR represented the unanticipated returns to a stock resulting from the announcement of the end-of-year earnings. To calculate CAR, we first estimated the following asset-pricing model using historical data from a 250-day period preceding an earnings announcement:

$$r_{it} = \alpha_i + \beta r_{mt} + \varepsilon_{it}$$

Here r_{it} denoted returns for firm i on day t, r_{mt} denoted corresponding daily returns on the CRSP value-weighted index, and ε_{it} was distributed i.i.d. We then used the estimates from the asset-pricing model to calculate predicted returns over a two-day window around the earnings announcement date (0, 1). Using a short

event window mitigated the risk of including confounding events within the event window (McWilliams and Siegel, 1997). Next, we calculated abnormal returns within the event window by subtracting the predicted returns from the actual returns. Finally, we calculated CAR as the sum of abnormal returns within the event window. We also tested our results with alternative event windows, e.g., three-day window (0, 2) and one-day window (0), and found that they remained similar.

Non-high-status CEO. *Non-high-status CEO* was a dummy variable, which took the value of one if a CEO who did not win an award for the past three years was matched to a CEO who won an award in the same year and industry via the propensity score matching procedure described above. The award-winning CEOs in the matched sample took a value of zero.

CEO overconfidence. We employed a measure for CEO overconfidence based on CEOs' option-exercise behavior. We chose this measure over other measures based on CEO language or the release of management forecasts because research has shown that managers use those strategically to manage the impressions of external stakeholders (Hayward and Fitza, 2017; Rogers, Van Buskirk, and Zechman, 2011). As option-exercise behavior could have implications for the wealth of CEOs, it is unlikely that CEOs might keep their options for impression management purposes. Indeed, research has shown that when CEOs are uncertain about some risky strategic investment that they make such as acquisition, they tend to sell their exercisable options (Devers, McNamara, Haleblian, and Yoder, 2013). We therefore classified CEOs as overconfident if they had kept their exercisable stock options when the stock price was at least 100% higher than the exercisable price at least twice during their tenure in the firm (Chen, Crossland, and Luo, 2015; Malmendier and Tate, 2005).

CEO compensation. To operationalize *CEO compensation* we used the logarithm of tdc1 variable in Execucomp, which represented CEO total compensation. As CEOs are likely to compare their pay package to the ones of peer CEOs, we adjusted CEO compensation by the median value of CEO compensation

among S&P1500 CEOs for the focal year. Using the mean value instead did not change our results.

Control variables for the models predicting the level of powerful language in CEOs' communications. We included several variables for CEOs, board of directors (BODs), firms, industries and time that could have an effect on the level of powerful language that CEOs use in their communication. We did not include the predictors for the estimation of the likelihood of a CEO to win an award since those were partially captures in the propensity score, which we used in the second step of the matching procedure. We included however the propensity score of each CEO in our analysis, i.e. *CEO's likelihood to win an award*.

First, as powerful language could be related to different sorts of power that CEOs have, we controlled for those. We included CEO prestige, expert and structural power (Finkelstein, 1992). *CEO prestige power* was measured as an index of the sum of three standardized components, namely (1) the number of public boards the CEO sat on, (2) the number of non-profit boards the CEO sat on, and (3) whether the CEO had an elite education (Finkelstein, 1992; Gomulya and Boeker, 2014). *CEO expert power* was measured as an index of the sum of three standardized components, namely (1) CEO tenure in the firm, (2) the number of roles that the CEO had in the firm, and (3) the number of functional areas in which the CEO had served the firm (Daily and Johnson, 1997; Finkelstein, 1992; Patel and Cooper, 2014). *CEO structural power* was measured as an index of the sum of four standardized components, namely (1) CEO duality, (2) the number of non-CEO TMT members, who sat on the BOD (reversed) (3), CEO-TMT title inequality (based on number of titles listed in Execucomp) and (4) CEO-TMT pay inequality (based on the natural logarithm of total pay (tdc1) in Execucomp) (Daily and Johnson, 1997; Finkelstein, 1992; Patel and Cooper, 2014). We considered non-CEO TMT members to be the four highest paid non-CEO executives within the firm (e.g., Ridge, Aime, and White, 2015). We further controlled for *CEO ownership*,

which could also give CEOs voting power, and we measured it as the percent of shares owned by the CEO (Canella and Shen, 2001).

Second, as powerful language could be related to the power that the BODs have over CEOs, we also controlled for two board-related factors. Those were *board independence*, which was measured as the proportion of independent directors, and *independent directors' ownership*, which was the percent of shares owned by independent directors (Canella and Shen, 2001).

Third, we included several firm-level variables. Some firm-level variables, which could make CEOs more prominent and affect their motivation to use powerful language, and which we included in our analysts, were *firm size* (logarithm of total assets) and *Tobin's Q*, which is reflective of the firm's future potential. Some firm-level variables, which could put pressure on CEOs and also affect the extent to which CEOs use powerful language to deal with those pressures from external stakeholders were *firm's financial risk* (debt-to-equity ratio) and firm's earnings surprise (Pan *et al*., 2017). Firm's earnings surprise was the difference between firm's actual earnings per share (EPS) and analysts' consensus EPS for a given fiscal year, scaled by the share price in the beginning of the year (Pan *et al*., 2017). Following previous studies, we split the measure into *positive earnings surprise* and *negative earnings surprise* to better capture its asymmetric effect. In addition, we also controlled for *analysts' coverage*, which was the number of analysts following a focal firm, and *analysts' EPS forecast dispersion*, which reflected analysts' uncertainty regarding the firm's future potential.

At industry level, we included *industry discretion*, which was an index of the sum of five standardized components based on four-digit industry SIC codes, namely (1), average industry capital intensity, being the net value of property, plant and equipment divided by the firm total assets (reversed) (2), average industry advertising intensity, being the advertising expenses divided by sales (3) industry munificence, and (4) industry concentration (reversed) (5) average industry R&D intensity, being the R&D expenses divided by sales (Chen, Crossland, and Luo,

2015). We also controlled for *competitiveness of external CEO labor market*, measured by the logarithm of total number of firms in a firm's four-digit SIC code, whose sales at were equal to or larger than half of the focal firm's sales (Chen, Luo, Tang, and Tong, 2015). The greater the number of such firms, the more CEOs might be motivated to use more powerful language to look competent and secure their position (Zhang and Rajagopalan, 2003). Finally, we also controlled for variations regarding language use across industries and time by including industry dummies (based on two-digit SIC codes) and year dummies.

Control variables for the models predicting investors' evaluations of firms. We modified the set of controls for the models estimating investors' evaluations of firms to better reflect relevant predictors. As such, we kept all the previously mentioned controls but industry discretion and the competitiveness of external CEO labor market since those were unlikely to affect how investors evaluated the future potential of firms. We also added some important firm-level controls, namely *firm financial performance*, *high-status firm*, *firm advertising intensity* and dividends per share (*DPS*) that the firm was paying to its shareholders.

We also controlled for two more types of language attributes that could impact investors' evaluations of firms. First, we included the level of *concrete language* in CEOs' communications, measuring the number of verbs, numbers and past-focused words used by the CEO in each Q&A section of the earnings conference transcript minus the number of adjectives, nonspecific quantifiers, and future-focused words, scaled by the total number of words (Pan *et al*., 2017). Second, as the valence of the communication content could affect how investors evaluate and react to news released by management (e.g., Davis, Piger, and Sedor, 2012; Feldman, Govindaraj, Livnat, and Segal, 2010), we included the level of *optimistic language* in CEOs' communications, this being measured as the number of positive words used by the CEO in each Q&A section of the earnings conference transcript minus the number of negative words, scaled by the total number of words.

Several outliers in terms of the level of powerful language in CEOs'

communications, positive and negative earnings surprise, analysts' EPS forecast dispersion, firm advertising intensity and firm DPS were detected. Those variables were winsorized so that extreme values do not distort the results, but using the original values instead produced qualitatively similar results.

4.3.3 Analysis

We tested our hypotheses using OLS regression. We clustered standard errors by CEO to account for multiple occurrences of some CEOs in our sample when testing the first three hypotheses. We clustered standard errors by firm to account for multiple occurrences of some firms in our sample when testing Hypothesis 4.

4.4 RESULTS

The descriptive statistics and correlations are presented in Table 4.3.

Models predicting the level of powerful language in CEOs' communications. The regression models predicting the level of powerful language in CEOs' communications are presented in Table 4.4. In those models, CEO compensation was mean-centered. All the variance inflation factors were below 10, suggesting that multicollinearity did not affect our results. Model 1 included the control and moderator variables. Of those, CEO expert power (b = -0.025, p = 0.071), Tobin's Q (b = 0.048, p = 0.067) positive earnings surprise (b = 9.982, p = 0.051) and negative earnings surprise (b = -9.928, p = 0.016) predicted the level of powerful language in CEOs' communications.

In Model 2 non-high-status CEO variable was added to test Hypotheses 1. Aligned with our predictions, non-high-status CEO used 0.13 percent more powerful language in their communication than high-status CEOs (b = 0.130, p = 0.047), which provided empirical support for Hypothesis 1. To test Hypotheses 2 and 3, we added to Model 2 the interaction term between CEO overconfidence and

Table 4.3 Descriptive statistics and correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Powerful language	-1.661	1.063	1.00																
2. Investors' evaluation of firms	0.005	0.061	-0.02	1.00															
3. Non-high-status CEO	0.500	0.500	-0.05	0.02	1.00														
4. CEO overconfidence	0.589	0.492	-0.04	0.03	-0.05	1.00													
5. CEO compensation	0.537	1.097	0.09	0.00	-0.26	0.05	1.00												
6. CEO likelihood to win an award	0.289	0.259	0.14	-0.03	-0.44	-0.06	0.40	1.00											
7. CEO prestige power	0.437	1.714	0.07	-0.01	-0.15	-0.11	0.24	0.35	1.00										
8. CEO expert power	0.005	2.460	-0.04	-0.05	-0.07	0.06	0.08	0.20	0.01	1.00									
9. CEO structural power	0.595	1.727	0.04	0.03	-0.08	-0.01	0.29	0.25	0.17	0.01	1.00								
10. CEO ownership	1.658	4.872	-0.03	0.07	0.14	0.01	-0.26	-0.13	-0.12	-0.06	-0.09	1.00							
11. Board independence	0.907	0.081	0.08	0.01	-0.19	-0.03	0.27	0.29	0.18	0.06	0.26	-0.31	1.00						
12. Independent directors' ownershi	1.071	5.513	0.01	0.04	0.10	0.04	-0.07	-0.08	0.03	-0.08	-0.07	0.06	-0.09	1.00					
13. Firm size	9.453	1.743	0.11	-0.07	-0.38	-0.13	0.39	0.72	0.39	0.09	0.23	-0.26	0.40	-0.09	1.00				
14. Tobin's Q	2.234	1.578	0.08	0.06	-0.05	0.13	0.01	0.10	-0.10	0.01	0.05	0.10	-0.06	0.03	-0.34	1.00			
15. Firm financial risk	1.478	3.066	0.00	-0.04	-0.02	-0.15	0.02	0.02	0.11	-0.13	0.08	-0.09	0.11	-0.01	0.48	-0.30	1.00		
16. Positive earnins surprise	0.001	0.005	0.00	0.04	0.05	-0.06	-0.02	-0.11	0.00	-0.06	-0.05	0.00	-0.01	0.01	-0.04	-0.11	0.11	1.00	
17. Negative earnings surprise	-0.001	0.006	-0.01	0.01	-0.04	0.05	0.16	0.06	0.01	0.04	0.04	0.01	-0.01	-0.06	-0.03	0.11	-0.16	0.06	1.00
18. Analyst coverage	22.883	10.588	0.12	0.03	-0.34	0.05	0.31	0.56	0.17	0.07	0.22	-0.09	0.24	-0.04	0.47	0.12	0.03	-0.06	0.07
19. Analyst EPS forecast dispersion	0.197	0.360	-0.04	-0.03	-0.03	0.01	0.07	0.01	0.02	-0.05	0.04	-0.02	0.05	0.04	0.09	-0.05	0.14	0.20	-0.26
20. Industry discretion	0.017	2.496	-0.02	0.04	0.03	0.00	0.04	0.15	0.11	-0.11	0.06	0.02	0.00	0.00	0.07	0.16	0.04	0.01	0.07
21. Competitiveness of external CEO labor market	1.962	1.215	-0.14	0.01	0.27	-0.01	-0.17	-0.31	-0.04	-0.20	0.01	0.04	-0.10	0.03	-0.13	-0.02	0.17	0.08	-0.01
22. Firm financial performance	0.062	0.077	0.04	0.00	-0.08	0.10	0.01	0.14	-0.09	0.10	-0.02	0.04	-0.08	-0.07	-0.19	0.48	-0.28	-0.06	0.14
23. High-status firm	0.064	0.244	0.09	0.01	-0.17	0.00	0.12	0.43	0.12	0.16	0.17	-0.06	0.14	-0.03	0.27	0.03	-0.03	-0.05	0.04
24. Firm advertising intensity	0.017	0.038	0.12	0.07	-0.01	0.01	-0.03	0.10	-0.02	-0.05	0.05	0.17	-0.12	0.04	-0.12	0.26	-0.09	-0.03	0.02
25. DPS	1.007	1.421	-0.03	-0.08	-0.14	-0.09	0.17	0.29	0.16	0.13	0.05	-0.07	0.16	-0.04	0.23	-0.01	-0.04	0.00	0.07
26. Concrete language	13.073	3.198	-0.08	-0.06	-0.01	-0.07	0.00	-0.04	0.01	0.00	-0.01	-0.01	0.02	0.02	0.06	-0.12	0.09	-0.01	-0.02
27. Optimistic language	2.961	1.739	0.17	0.01	0.00	0.04	-0.01	0.03	0.02	0.03	0.01	-0.02	0.01	-0.01	0.00	0.03	-0.06	0.00	0.01

Note: $N = 1902$

Variable	18	19	20	21	22	23	24	25	26
19. Analyst EPS forecast dispersion	0.00	1.00							
20. Industry discretion	0.04	0.06	1.00						
21. Competitiveness of external CEO labor market	-0.15	0.12	0.33	1.00					
22. Firm financial performance	0.02	-0.10	0.06	-0.18	1.00				
23. High-status firm	0.22	-0.05	-0.04	-0.23	0.09	1.00			
24. Firm advertising intensity	0.03	-0.10	0.09	-0.08	0.16	0.10	1.00		
25. DPS	-0.03	0.20	0.01	-0.04	0.08	0.10	-0.06	1.00	
26. Concrete language	-0.08	0.00	-0.06	0.03	-0.08	-0.06	-0.13	0.05	1.00
27. Optimistic language	0.01	-0.05	0.01	-0.05	0.02	0.02	0.05	-0.04	-0.01

Table 4.4 OLS regression predicting the level of powerful language in CEOs' communications to investors

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
	Base mode		Direct effect of non-high-status CEO		Moderation effect of CEO overconfidence		Modelration effect of CEO compensation		Full model	
Non-high-status CEO X CEO compensation							**-0.084**	**[0.043]**	**-0.089**	**[0.043]**
Non-high-status CEO X CEO overconfidence					**0.243**	**[0.120]**			**0.250**	**[0.120]**
Non-high-status CEO			**0.130**	**[0.065]**	-0.014	[0.090]	0.139	[0.065]	-0.009	[0.090]
CEO overconfidence	-0.105	[0.070]	-0.095	[0.070]	-0.219	[0.091]	-0.091	[0.071]	-0.218	[0.091]
CEO compensation	0.041	[0.027]	0.043	[0.028]	0.042	[0.029]	0.086	[0.029]	0.087	[0.030]
CEO likelihood to win an award	0.154	[0.278]	0.204	[0.277]	0.213	[0.277]	0.128	[0.283]	0.133	[0.282]
CEO prestige power	0.009	[0.020]	0.008	[0.020]	0.009	[0.020]	0.009	[0.020]	0.011	[0.020]
CEO expert power	-0.025	[0.014]	-0.026	[0.014]	-0.028	[0.014]	-0.027	[0.014]	-0.029	[0.014]
CEO structural power	0.004	[0.018]	0.002	[0.018]	0.001	[0.018]	0.000	[0.018]	-0.001	[0.018]
CEO ownership	-0.002	[0.008]	-0.003	[0.008]	-0.003	[0.008]	-0.004	[0.008]	-0.005	[0.008]
Board independence	0.138	[0.418]	0.135	[0.418]	0.155	[0.422]	0.153	[0.417]	0.175	[0.421]
Independent directors' ownership	0.006	[0.004]	0.005	[0.004]	0.005	[0.004]	0.005	[0.004]	0.005	[0.004]
Firm size	0.050	[0.049]	0.059	[0.049]	0.056	[0.049]	0.072	[0.050]	0.069	[0.050]
Tobin's Q	0.048	[0.026]	0.052	[0.026]	0.052	[0.026]	0.056	[0.026]	0.056	[0.026]
Firm financial risk	-0.006	[0.011]	-0.007	[0.011]	-0.007	[0.012]	-0.008	[0.011]	-0.009	[0.012]
Positive earnins surprise	9.982	[5.102]	10.124	[5.092]	10.262	[5.159]	10.177	[5.148]	10.322	[5.216]
Negative earnings surprise	-9.928	[4.123]	-9.741	[4.117]	-9.575	[4.160]	-10.903	[3.986]	-10.799	[3.992]
Analyst coverage	0.006	[0.005]	0.007	[0.005]	0.007	[0.004]	0.008	[0.005]	0.008	[0.005]
Analyst EPS forecast dispersion	-0.119	[0.079]	-0.114	[0.080]	-0.116	[0.081]	-0.120	[0.079]	-0.123	[0.080]
Industry discretion	-0.023	[0.018]	-0.025	[0.018]	-0.025	[0.018]	-0.025	[0.018]	-0.025	[0.018]
Competitiveness of external CEO labor market	-0.057	[0.043]	-0.065	[0.043]	-0.067	[0.043]	-0.065	[0.043]	-0.067	[0.043]
Constant	-2.071	[0.599]	-2.242	[0.623]	-2.179	[0.612]	-2.402	[0.632]	-2.345	[0.622]
Time fixed effects	Yes		Yes		Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes		Yes		Yes	
F (*p*-value)	3.36 (0.000)		3.44 (0.000)		3.43 (0.000)		3.53 (0.000)		3.53 (0.000)	
R-squared	0.105		0.107		0.110		0.109		0.112	

Note: N = 1902. Standard errors clustered on the CEO are given in brackets. CEO compensation is centered.

non-high-status CEO in Model 3, and the interaction term between CEO compensation and non-high-status CEO in Model 4. Model 5 presented the full model. The coefficient for the interaction term between CEO overconfidence and non-high-status CEO was positive and precisely estimated (Model 3: $b = 0.243$, $p = 0.043$; Model 5: $b = 0.250$, $p = 0.037$). The coefficient for the interaction term between CEO compensation and non-high-status CEO was negative and precisely estimated (Model 4: $b = -0.084$, $p = 0.052$; Model 5: $b = -0.089$, $p = 0.041$).

To illustrate the moderation effect of CEO overconfidence on the relationship between CEO status and the level of powerful language used by CEOs in their communications, in Figure 4.1 we plotted the corresponding slopes of CEO status (high-status CEO vs non-high-status CEO) for overconfident CEOs (CEO overconfidence = 1) and non-overconfident CEOs (CEO overconfidence = 0). Hypothesis 2 stated that CEO overconfidence would strengthen the positive relationship between non-high CEO status and the level of powerful language in CEOs' communications. Figure 4.1 illustrates that for non-overconfident CEOs the level of powerful language in CEOs' communications did not differ substantially between high- and non-high-status CEOs ($b = -0.009$, $p = 0.922$). However, when CEOs were overconfident, non-high-status CEOs used *more* powerful language than high-status CEOs in their communications ($b = 0.241$, $p = 0.005$). These findings provided support to Hypothesis 2.

To illustrate the moderation effect of CEO compensation on the relationship between CEO status and the level of powerful language used by CEOs in their communications, we plotted the corresponding slopes of CEO status (high-status CEO vs non-high-status CEO) for high (2 SD above the mean) and low (2 SD below the mean) values of CEO compensation in Figure 4.2. We proposed in Hypothesis 3 that CEO compensation would weaken the positive relationship between non-high CEO status and the level of powerful language in CEOs' communications. Figure 4.2 shows that when CEO compensation was *low*, non-high-status CEOs used *more* powerful language than high-status CEOs in their communication ($b = 0.333$, $p =$

0.003). However, when CEOs compensation was *high*, non-high-status CEOs used similar level of powerful language to high-status CEOs (b = -0.056, p = 0.634). These findings provided support to Hypothesis 3.

Figure 4.1 Interaction effect of CEO status and CEO overconfidence on the level of powerful language in CEOs' communications

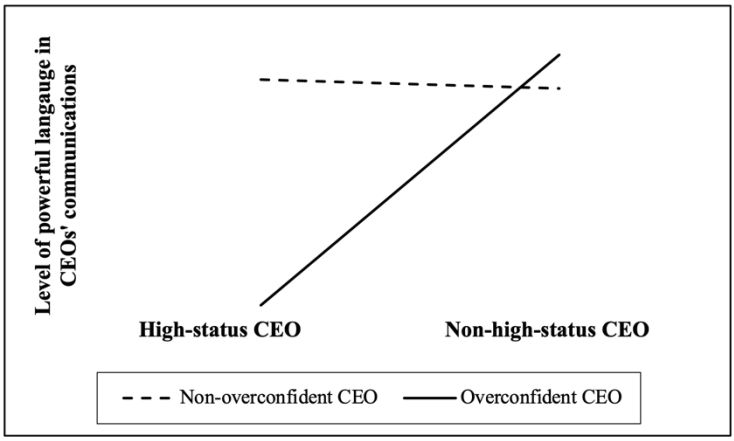
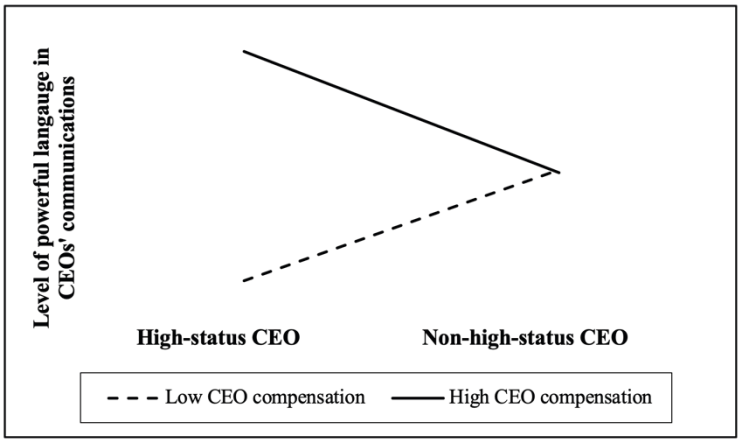


Figure 4.2 Interaction effect of CEO status and CEO compensation on the level of powerful language in CEOs' communications



Models predicting investors' evaluations of firms. The regression models predicting CAR (0, 1) are presented in Table 4.5. All the variance inflation factors were below 10, suggesting that multicollinearity did not affect our results. Model 1 included only the control variables. Of those, board independence (b = 4.231, p = 0.046), firm advertising intensity (b = 9.520, p = 0.011), and DPS (b = -0.231, p = 0.014) predicted investors' evaluation of firms after the release of yearly earnings results. Interestingly, whether the CEO of the firm was high-status or non-high-status did not make a difference for how investors evaluated firms (b = 0.092, p = 0.754). This is consistent with the finding that benefits associated with winning an award with respect to boosts in firms' share price are relatively short-lived (Wade *et al*., 2006).

In Model 2 the powerful language variable was added to test Hypotheses 4. The coefficient for powerful language was negative but not very precisely estimated (b = -0.237, p = 0.099). Nevertheless, it showed that when the level of powerful language in CEOs' communications increased by one standard deviation (SD = 1.063), CAR decreased by 0.25%, which represented a drop of almost $ 90 million in monetary terms, given the $35.3 billion average market capitalization of our sample firms. Such findings provided only weak support for Hypothesis 4. To investigate this further, we performed a post-hoc analysis, which revealed some interesting findings.

4.4.1 Post-hoc analysis

As we did not find strong empirical support for the effect of powerful language on investors' evaluations of firms, we conducted a post-hoc analysis to test an alternative model specification. That is, while we assumed in our theory that the relationship between the level of powerful language and CAR was linear, it could be that it was curvilinear. A curvilinear relationship would imply that investors appreciate when CEOs have more balanced approach in presenting information with respect to the level of powerful language that they use in their

Table 4.5 OLS regression predicting CAR (0, 1)

Variables	Model 1		Model 2		Model 3	
	Base model		Effect of powerful language		Post-hoc model	
Powerful language squared					-0.127	[0.050]
Powerful language			**-0.237**	**[0.144]**	-0.750	[0.291]
Non-high-status CEO	0.092	[0.293]	0.112	[0.296]	0.132	[0.297]
CEO overconfidence	0.019	[0.336]	-0.009	[0.335]	0.011	[0.335]
CEO compensation	0.129	[0.144]	0.142	[0.143]	0.144	[0.142]
CEO likelihood to win an award	-0.412	[1.472]	-0.367	[1.471]	-0.380	[1.469]
CEO prestige power	0.012	[0.086]	0.013	[0.086]	0.031	[0.086]
CEO expert power	-0.064	[0.063]	-0.069	[0.063]	-0.070	[0.063]
CEO structural power	0.045	[0.088]	0.044	[0.087]	0.035	[0.087]
CEO ownership	0.013	[0.040]	0.012	[0.040]	0.014	[0.040]
Board independence	4.231	[2.113]	4.294	[2.116]	4.196	[2.117]
ownership	0.029	[3.549]	0.030	[0.035]	0.032	[0.035]
Firm size	-0.232	[0.035]	-0.213	[0.320]	-0.207	[0.319]
Tobin's Q	0.069	[0.147]	0.079	[0.148]	0.089	[0.148]
Firm financial risk	-0.038	[0.124]	-0.040	[0.125]	-0.038	[0.126]
Positive earnins surprise	62.207	[43.544]	64.022	[43.562]	66.469	[44.190]
Negative earnings surprise	-5.512	[70.159]	-7.479	[69.956]	-8.447	[69.605]
Analyst coverage	0.016	[0.025]	0.017	[0.025]	0.017	[0.025]
Analyst EPS forecast dispersion	-0.263	[0.505]	-0.278	[0.505]	-0.277	[0.510]
Firm financial performance	-2.368	[2.733]	-2.397	[2.753]	-2.277	[2.731]
High-status firm	0.702	[0.520]	0.719	[0.519]	0.715	[0.518]
Firm advertising intensity	9.520	[3.746]	9.988	[3.704]	10.022	[3.698]
DPS	-0.231	[0.094]	-0.244	[0.094]	-0.245	[0.094]
Concrete language	-0.075	[0.051]	-0.079	[0.052]	-0.077	[0.052]
Optimistic language	0.008	[0.055]	0.030	[0.055]	0.057	[0.055]
Constant	-2.575	[2.953]	-3.190	[3.042]	-3.706	[3.056]
Time fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
F (*p*-value)	2.41 (0.000)		2.58 (0.000)		2.44 (0.000)	
R-squared	0.080		0.082		0.084	

Note: $N = 1902$. Standard errors clustered on the firm are given in brackets. The dependent variable CAR(0, 1) is multiplied by 100.

communication, and they devalue firms when their CEOs use too low or too high levels of powerful language. To test this possibility, we added to Model 2 (Table 4.5) a square term of powerful language. The results are presented in Model 3 of Table 4.5. We followed a three-stop procedure as outlined by Haans and colleagues (2016) to check whether the relationship between the level of powerful language in CEOs' communications and investors' evaluations of firms was indeed inverted U-shaped. First, the coefficient for the square term of powerful language had to be negative and precisely estimated, which was the case, as shown in Model 3 (b = -0.127, p = 0.011). Second, the slope of powerful language had to be positive at the

lowest and negative at the highest data point in our sample. The slope at the lowest point was indeed positive (b = 1.543, p = 0.018), and the slope at the highest point was negative (b = -1.420, p = 0.009). Third, the turning point had to be well within the data range of *powerful language*. The turning point ($-\beta_{powerful\ language}/2*\beta_{powerful\ language^2}$) in our sample was -2.95 with a 95% *CI* [-3.00, -2.91], which was within our data range for *powerful language*, i.e. [-9.00, 2.63]. Such findings provide empirical support for an inverted U-shape relationship between the level of powerful language in CEOs' communications and investors' evaluations of firms.

4.5 DISCUSSION

We built a contingency model to better understand why and under what conditions non-high-status CEOs used powerful language to communicate to investors, and how investors reacted to it. We found that non-high-status CEOs used more powerful language when talking to investors than high-status CEOs. Such difference in language use was stronger when CEOs were overconfident and weaker when CEOs received higher compensation. Interestingly, even though we anticipated that investors perceived negatively only higher levels of powerful language in CEOs' communications, we found that their attitude towards lower levels of powerful language were equally negative. This is to say that investors prfered it and evaluated higher firms, whose CEOs used moderate levels of powerful language. Overall, our findings have important implications for research on social comparison theory in the context of upper echelons and on impression management.

4.5.1 Theoretical implications

Our theory advances research on how CEOs react to upward social comparisons with peer CEOs (Ammann *et al*., 2016; Shi *et al*., 2017). Although earlier research has shown that CEOs who find themselves in an inferior position try to improve it by engaging in certain strategic initiatives (e.g., Seo *et al*., 2015),

it has paid little attention to whether CEOs also pursue such improvements by embracing a specific linguistic style. Our study provides an important first attempt to study how non-high-status CEOs use powerful language in their communication to elevate their relative standing in the eyes of investors. Our theory implies that impression management techniques such as the choice of a specific linguistic style could be as attractive to CEOs who find themselves in an inferior position when comparing themselves to better-off CEOs as substantive actions.

Our findings forward the scarce research on identifying boundary conditions to the predictions of social comparison theory in the context of upper echelons (Wowak *et al*., 2017) in two important ways. First, most research in that field has focused on situational factors, which either impact the discretion of top executives to act upon upward social comparisons (Fong *et al*., 2010; Wade *et al*., 2006), or the strength of social comparisons due to similarity with relevant peers (Ridge *et al*., 2015; Shi *et al*., 2017). We revealed that non-high-status CEOs used more powerful language to improve their relative standing in the eyes of investors than high-status CEOs when they were overconfident but not when they were not. Such insight suggests that dispositional factors such as CEO personality traits, CEO regulatory focus, and CEO temporal orientation, etc., could be equally important in explaining when would actions of top executives more accurately follow the predictions of social comparison theory.

Second, although earlier research has started to explore how top executives integrate information regarding their relative standing in comparison to different referents (Ridge *et al*., 2017), those multiple social comparisons have been along the same dimension, which is executive pay. Our study showed that non-high-status CEOs were *less* motivated to manage investors' impressions with means of powerful language when they received higher compensation than that of peer CEOs. This suggests that the superior CEOs' relative standing on one dimension, i.e. pay, partially compensated for the inferior CEOs' relative standing on another dimension, i.e. status. We, therefore provide important implications for how top

executives integrate insights regarding their relative standing on different important-to-them dimensions along which social comparisons could be made, which then shapes behavior.

Our findings also have implications for broader research on impression management. Even though scholars have examined the consequences of different impression management techniques for their users (Busenbark *et al*., 2017; Graffin *et al*., 2011; Graffin *et al*., 2016), they have implicitly assumed that impression management shapes more or less positively audience's perceptions. Thus, the possibility that impression management could negatively shape audiences' perceptions remains relatively unexplored. We demonstrated that the use of a specific impression management technique by CEOs to boost their status, namely high levels of powerful language, was disliked by investors and results in lower investors' evaluations of firms whose CEOs used it. Such finding stresses the importance of investigating a broader range of outcomes associated with impression management, and the need to provide a better understanding of which impression management techniques and when might backfire.

Jointly, our theory and findings regarding the effect of CEO relative status standing on the use of powerful language by CEOs, and the effect of CEO's use of powerful language on investors' evaluations of firms could potentially shed new light on previous finding. For example, some scholars have shown that CEOs in an inferior position acquire more, but those acquisitions generate negative market returns (Shi *et al*., 2017). However, as language could shape audiences' perceptions (Pan *et al*., 2017), it might be that the market reaction to those acquisitions was driven by the language used to convey information regarding the acquisition, than to the decision to acquire per se. Therefore, scholars could benefit from further integrating social comparison theory with sociolinguistics and more broadly impression management to better understand the consequences of upward social comparison for CEOs and their firms.

4.5.2 Practical implications

Our findings have important implications for managers and investors. We found that CEOs who did not win a prestigious CEO award in an industry where a peer CEO did, used higher levels of powerful language in their communications. As we found that investors did not favor the use of excessively powerful language by CEOs, we advise CEOs to be more conscious when choosing to use powerful language. In addition, some factors such as CEO compensation affected such tendencies. Non-winning CEOs used even more powerful language when they were overconfident, and less powerful language when they had higher compensation. As such, we urge boards of directors to provide comparable compensation packages for CEOs, especially in industries where CEO awards are more prevalent. Compensating well CEOs who did not enjoy the benefits of winning an award could potentially prevent CEOs from engaging in harmful practices as to compensate for their inferior position due to lack of social recognition.

Our findings further underscore the importance of devaluing the language style of the CEO, and more specifically the use of powerful language by CEOs, when investors evaluate firms. Our findings revealed that, ceteris paribus, some firms were evaluated less favorably because their CEOs used very high or very low levels of powerful language when communicating to investors. Such extreme cases of use of low or high levels of powerful language by CEOs were observed when overconfident CEOs did not win an award or when CEOs, who were not overconfident, won an award. As we suggested that the use of powerful language by CEOs might be motivated by factors, which were not related to actual performance and firm value, we urge investors to be couscous of it when evaluating firms.

4.5.3 Limitations and directions for future research

Our findings provide valuable opportunities for future research. For instance we have shown that certain impression management techniques such as the use of

excessive levels of powerful language by CEOs might have unintendedly negative consequences for investors' evaluations. However, different firm's stakeholders, who are also exposed to the speech of the CEO, might react differently to the use of a specific language style (König *et al.*, 2018). That is, while using powerful language might not garner the support of investors and possibly financial analysts, it might well resonate with journalists or firm's employees. Therefore, a fruitful next step would be to study how different audiences interpret and react to the same impression management technique with respect to language style used by the CEO.

Due to the nature of our research question, we primarily focused on whether the use of powerful language by CEOs was effective to positively shape investors' reactions to earnings' announcements. Specifically, we showed that its use backfired rather than helped CEOs. Such finding does not readily explain why would some CEOs still persistently use such language. Several potential explanations could provide fruitful ground for future research. For example, some CEOs might learn over time and limit their use of powerful language. Thus, future research could investigate whether such learning takes place, and which CEOs are better able to learn and adjust their linguistic style to the preferences of the audience. Alternatively, even though the use of powerful language by CEOs seem to be costly for firms, it might have some benefits for CEOs (Logue and Miller, 1995), for example with regards to their compensation, career prospects, attracting media attention, etc. Looking into the various consequences of powerful language might reveal some trade-offs that CEOs face with regards to firm's versus CEO's interests and how are those prioritized by CEOs. We hope that our theory will stimulate further research on the antecedents and consequences of different linguistic styles used by corporate leaders when communicating to stakeholders.

CHAPTER 5

CONCLUSION

The main goal of this dissertation was to identify how to prevent the mutual influence of firms and financial markets from having potentially counterproductive outcomes. Two aspects of such mutual influence were considered, namely how evaluations by financial markets affected firms' decision making and how strategic decisions were evaluated by financial markets. Those questions were answered by means of three empirical studies. In those studies unique theories were developed by integrating insights from macro theories in management and micro theories in social psychology and sociolinguistics. The theories drawn on in the three studies were then tested empirically on a longitudinal panel of the biggest US public firms. This chapter discusses the main findings of each of the studies, which answer the three research questions posed in this dissertation. It provides an overview of the hypotheses in each study and whether they received empirical support. It also explores the implications for scholars, corporate executives, boards of directors, and investors. It concludes by discussing the limitations of the research and directions for future research.

5.1 SUMMARY OF FINDINGS

Study 1, presented in Chapter 2, set out to answer the question of how CEO harsh and soft power affects firms' responsiveness to inconsistent feedback. The findings of this study suggested that firms' responses to inconsistent feedback could be understood by looking at the type of power held by their CEO. Harsh CEO power, in the form of structural and ownership power, led to more self-enhancement and less responsiveness to inconsistent feedback. Soft CEO power was hypothesized to lead to less self-enhancement and more responsiveness to inconsistent feedback. However, the empirical findings revealed that some sources of soft CEO power, such as expert power, in fact led to *more* self-enhancement and others, namely prestige power, to more problem-solving. This means that further research is needed to identify precisely what properties of soft power make decision makers either more responsive or less responsive to inconsistent feedback. Table 5.1 summarizes the hypotheses of Study 1, and whether empirical support was found for each of these.

Table 5.1 Summary of hypotheses and findings of Study 1, Chapter 2

Hypothesis 1: *A greater inconsistency between positive performance feedback and negative performance prospects will result in less R&D search when the firm's CEO has more structural power.*	✓
Hypothesis 2: *A greater inconsistency between positive performance feedback and negative performance prospects will result in less R&D search when the firm's CEO has more ownership power.*	✓
Hypothesis 3: *A greater inconsistency between positive performance feedback and negative performance prospects will result in more R&D search when the firm's CEO has more expert power*.	✗
Hypothesis 4: A *greater inconsistency between positive performance feedback and negative performance prospects will result in more R&D search when the firm's CEO has more prestige power*.	✓

Study 2, presented in Chapter 3, shed light on how investors evaluated acquisitions by firm with growth or dividend reputations. The findings of this study

suggested that investors evaluated differently acquisitions made by firms with dividend and growth reputations, which was evident from the differences in the abnormal returns associated with the acquisition announcement. To be more precise, firms with a strong growth reputation generated almost twice as high returns for announcing an acquisition as those with a strong dividend reputation. Substantive information cues such as the growth reputation of the target firm strengthened investors' perceptions when acquisitions were interpreted as negative, but not as positive expectancy violations. When investors interpreted an acquisition as a negative expectancy violation, symbolic information cues helped to counteract this, and they also strengthened investors' perceptions when the acquisition was felt to be a positive expectancy violation. Specifically, investors' reactions were more positive when firms with a dividend reputation used more dividend framing in their acquisition announcements, and also when those with a growth reputation used more growth framing. Table 5.2 summarizes the hypotheses and empirical support for Study 2.

Table 5.2 Summary of hypotheses and findings of Study 2, Chapter 3

Hypothesis 1a*: The strength of the acquirer's dividend reputation is negatively associated with the abnormal stock returns associated with an acquisition announcement.*	✗
Hypothesis 1b*: The strength of the acquirer's growth reputation is positively associated with the abnormal stock returns associated with an acquisition announcement.*	✓
Hypothesis 2a: A *target firm's growth reputation will strengthen the negative association between the acquirer's dividend reputation and the abnormal stock returns associated with an acquisition announcement.*	✓
Hypothesis 2b: *A target firm's growth reputation will strengthen the positive association between the acquirer's growth reputation and the abnormal stock returns associated with an acquisition announcement*.	✗
Hypothesis 3a: *Dividend framing will weaken the negative association between the acquirer's dividend reputation and the abnormal stock returns associated with an acquisition announcement*.	✓
Hypothesis 3b: *Growth framing will strengthen the positive association between the acquirer's growth reputation and the abnormal stock returns associated with an acquisition announcement*.	✓

Study 3, presented in Chapter 4, set out to answer the question of how status shapes CEOs' linguistic style and how that then affects investors' evaluations of the firm. Focusing on powerful language as the most appropriate aspect of language use to focus on in this particular context, this study revealed that non-high-status CEOs used higher levels of powerful language in their communication to investors. These CEOs used even higher levels of powerful language when they were overconfident, and somewhat lower levels when they received higher compensation. While we proposed that higher levels of powerful language from a CEO would result in lower investor evaluations of the firm, we discovered that both very low and very high levels of powerful language resulted in equally low evaluations. Moderate levels of powerful language from CEOs were most beneficial for firms, because this resulted in the highest evaluations of the firm from investors. Table 5.3 summarizes the hypotheses of Study 3, and whether each of these was supported empirically.

Table 5.3 Summary of hypotheses and findings of Study 3, Chapter 4

Hypothesis 1*: There is a positive relationship between the non-high status of CEOs and the level of powerful language in CEOs' communications to investors.*	✓
Hypothesis 2*: CEO overconfidence strengthens the positive relationship between the non-high status of CEOs and the level of powerful language in CEOs' communications to investors.*	✓
Hypothesis 3*: CEO compensation weakens the positive relationship between the non-high status of CEOs and the level of powerful language in CEOs' communications to investors.*	✓
Hypothesis 4*: The level of powerful language in CEOs' communications to investors is negatively related to investors' evaluations of firms.*	✗

5.2 THEORETICAL IMPLICATIONS

The findings of this dissertation have important implications for scholars interested in decision making in firms and in external audience evaluations with a specific focus on financial markets. I now discuss briefly their theoretical

implications for research on behavioral strategy, behavioral financial markets and impression management.

5.2.1 Behavioral strategy

Overall, our theory and findings have implications for how scholars might study the micro foundations of firm decision making and communication styles, especially in relation of performance feedback (e.g., Cyert and March, 1963; Greve, 2003; Jordan and Audia, 2012). In Study 1, we showed how CEO power could explain firms' reactions to inconsistent feedback, which resulted from firms' good past performance and analysts' expectations of poor future performance. Specifically, CEO power defined how CEOs interacted with other stakeholders in the firm when interpreting the inconsistent feedback, and this then impacted the firm's strategic decision-making process. Our theory thus implies that scholars could use constructs such as power, which captures interpersonal dynamics in the dominant coalition, to understand how firms make decisions in response to performance feedback.

We also theorized that that CEOs would engage in more self-enhancement in response to performance feedback when they had more harsh power, and would be more likely to problem-solve when they had more soft power. Indeed, 'harsh' or 'control' forms of CEO power were not instrumental in resolving performance-related problems, and when CEOs had this form of power, they gradually tended to prioritize their own interests and to focus more on self-enhancement. However, 'soft' or 'persuasive' power enabled CEOs to command support, loyalty and commitment from other stakeholders, making them more confident about considering mutually beneficial outcomes when confronted with inconsistent feedback, and where CEOs exercised this form of power, they also showed a preference for problem-solving. Our theory thus implies that it is worthwhile distinguishing between the soft and harsh power of decision makers when studying

the effects of power on firm outcomes, especially in contexts where the interests of decision makers might diverge from those of the firm.

One of our post-hoc analyses could have important implications for a construct that has not received much attention in behavioral strategy, and that is CEO functional expertise (e.g., Kor and Misangyi, 2008; Merluzzi and Phillips, 2016). One unexpected finding was that a CEO's function-based expertise was more informative than more broadly defined firm-specific expertise in terms of determining how firms might respond to inconsistent feedback. This suggests that directing more attention to this first form of expertise should be more valuable to those interested in the role played by CEOs, TMTs and directors in responses of this kind. Our post-hoc findings also imply that scholars interested in how TMT functional diversity affects decision making could benefit from examining which specific functions are over- or under-represented within TMTs, rather than focusing on the level of diversity per se.

Finally, the findings from Study 3 have implications for scholars trying to understand how CEOs act as a result of upward social comparisons that are based on external evaluations of a CEO's abilities and quality (e.g., Ammann *et al.*, 2016; Shi *et al.*, 2017). Most research focuses on how a CEO's perceived inferior standing by comparison with his or her peers prompts certain behaviors such as engagement in acquisitions or patenting activity but pay no attention to whether this might also affect the way the CEO communicates to others. We show that non-high-status CEOs use higher levels of powerful language in their communication, as they anticipate that this could improve other people's perceptions of their quality and abilities, which could then boost their status. This implies that symbolic actions such as impression management are as attractive as substantive actions to CEOs who find themselves in an inferior position relative to their peers. Scholars could therefore benefit from further integration of social comparison theory and impression management in order to better understand the consequences for CEOs and heir firms of upward social comparison.

5.2.2 Behavioral financial markets

My dissertation also has implications for scholars interested in the behavioral underpinnings of investors' reactions to firms' announcements as examined through the lens of expectancy violation theory (EVT) (e.g., Graffin *et al*., 2016). The main limitation in current research is that EVT has been applied exclusively to contexts of *negative* expectancy violations where a *single* set of expectations from firms has been considered (e.g., Elsbach, 1994; Wang *et al*., 2016; Zavyalova *et al*., 2012). In my dissertation, I exploit the full spectrum of predictions of EVT and demonstrate its usefulness in explaining not only negative but also positive reactions by investors to acquisition announcements. By integrating insights on reputation with EVT in a way that makes clear how reputation helps to create shareholder value in various ways, we identify different sets of firm-related expectations that investors use to evaluate firms' initiatives. This allows us to capture the complexity of the evaluative processes used by investors, in which the same strategic initiative may be interpreted sometimes as a positive and sometimes as a negative expectancy violation. This implies that insights from EVT might be most useful to explain investors' reactions to firms' announcements when multiple sets of expectations that investors may have of firms are being considered.

Additionally, our inability to find empirical support for our assumption that substantive information cues would have a similar effect, and would reinforce investors' interpretations of an acquisition as either a negative or a positive expectancy violation, has some important implications. First, it implies that it might be helpful to look separately at the boundary conditions of EVT when examining positive as opposed to negative expectancy violations. Second, it implies that insights gained by studying the boundary conditions of EVT in relation only to negative expectancy violations (e.g., Zavyalova *et al*., 2016; Zavyalova *et al*., 2012) should not be automatically assumed to apply also to positive expectancy violations.

Lastly, studies in management have focused primarily on identifying boundary conditions to the predictive value of EVT by looking at impression

management tactics (e.g., Rhee and Fiss, 2014). By considering not only the contingency effects of such tactics, in which symbolic information cues are presented, but looking also at substantive information cues, we are able to better recognize and integrate the predictions of EVT with recent advances in impression management theory. Our theory and findings reveal that symbolic information cues are used to shape perceptions of expectancy violations in a *positive* way, while substantive information cues are used to reinforce existing interpretations. To better understand the boundary conditions of EVT, scholars should therefore differentiate between substantive and symbolic cues used by audiences to make sense of expectancy violations.

5.2.3 Impression management

Our findings also have important implications for broader research on impression management (e.g., Chen *et al*., 2015; Graffin *et al*., 2016; Graffin *et al*., 2011). Our empirical analysis in Study 2 showed that sometimes impression management techniques such as the framing used in acquisition announcements did not have a direct effect on the evaluations of external audiences. Rather, they were effective only to the extent that they were aligned with firms' specific reputations. These insights stress the importance of not assuming impression management to be universally effective and of taking into account the fit between the characteristics of the framer and the selected impression management technique when assessing how effective that technique is likely to be.

Second, because most research on impression management has been done in contexts that involve unambiguously negative events (e.g., Elsbach, 1994; Wang *et al*., 2016; Zavyalova *et al*., 2012), some scholars have questioned the effectiveness of reactive impression management techniques such as framing. However, we are able to demonstrate that with ambiguous events such as an acquisition – where both positive and negative interpretations can be made, since the acquisition may be perceived by some investors as a negative expectancy violation – framing can be

used to help shape those perceptions more positively. This suggests that it may be beneficial for those interested in how impression management is used when there are expectancy violations to consider ambiguous violation events, as this may provide insights into the effectiveness of reactive impression management.

Finally, previous research has concentrated on the effectiveness of impression management, implying that the outcomes for those using it would be more or less positive (Busenbark *et al*., 2017; Graffin *et al*., 2011; Graffin *et al*., 2016), but the possibility that the outcomes might also be *negative* has not been explored. In Study 3, we are able to show that CEOs' use of a specific impression management technique, namely high levels of powerful language, to boost their status is disliked by investors and results in lower investor evaluations of firms. This finding highlights the importance of investigating a broader range of outcomes of impression management and the need for a better understanding of which impression management techniques and when could backfire.

5.3 PRACTICAL IMPLICATIONS

The findings of this dissertation have important implications for practitioners with respect to how a firm should behave in its interactions with financial markets in order to ensure its long-term well-being. I next discuss briefly the practical implications for executives, boards of directors as advising and monitoring bodies, and investors and financial analysts.

5.3.1 For managers

First, our findings suggest that some CEOs could be a true asset for firms, in that when they receive negative indications from financial markets, they respond by investing more in R&D. Those CEOs usually have expertise in sales and marketing, have been educated at an elite school, or sit on the boards of multiple firms. If the CEO lacks this form of background and expertise, guidance can be provided by

other TMT members to help steer the firm in the right direction and prevent insufficient resources being allocated to R&D.

Second, our findings highlight the sensitivity of the financial markets to what firms say and how they say it. Therefore, to ensure support from investors for their strategic initiatives, firms should pay particular attention to their corporate communications. Our findings provide concrete recommendations with regard to acquisitions and earnings announcements, but they might be relevant in other contexts, too. For example, we encourage firms that are announcing an acquisition to provide sufficient information to investors regarding how the acquisition is expected to create additional value for shareholders. In doing so, firms should consider how value is currently being delivered either through growth or dividends and should provide a rationale for how the acquisition will contribute to that specific form of value creation.

In addition, CEOs should be cautious about using language that is too powerful when communicating financial results to investors, because this type of language seems to provoke a more negative reaction from investors, regardless of the actual information content. Particular care should be taken by CEOs who have failed to secure a prestigious award which has been won by another CEO within their industry. Our findings indicate that these CEOs tend to compensate for this by using more powerful language.

5.3.2 For boards of directors (BODs)

Our findings outline the importance of greater monitoring by the BODs in some situations to ensure that the management is doing what is in the best interests of the firm. For example, our findings reveal that founder CEOs, CEOs with a high level of power over the other TMT members, or CEOs with too high a stake in the firm might underinvest in R&D when they receive negative indications from financial analysts about the firm's future prospects. Greater monitoring of those CEOs by the board could therefore ensure that R&D investments are decided in a

way that addresses potential drops in future performance. In addition, our findings reveal that investors might penalize firms with a dividend reputation when they are acquiring a target with a high growth reputation. We thus advise the board of directors of such a firm to bear this in mind, and urge them to weigh up the potential benefits and drawbacks before deciding to acquire a high-growth target. Finally, we recommend directors to pay attention to and adequately compensate their CEOs, who failed to win a CEO award. Indeed, we showed that doing so could potentially reduce CEO's use of powerful language when communicating with investors, which could then benefit firm's evaluations.

5.3.3 For investors and financial analysts

Our findings suggest that investors may show a particular bias when evaluating strategic decisions taken by certain firms and the way in which those decisions are communicated by the firm. Our study showed that investors favored acquisitions by firms with a strong growth reputation. Indeed, such firms generated twice as high returns to their acquisition announcements as acquirers with a strong dividend reputation. Whether the target was actually a high-growth firm did not play any role in investors' evaluation when the acquisition was being made by a firm that was itself high-growth. Optimism bias towards high-growth firms has been observed and criticized recently in contexts such as initial public offerings (IPOs). As our findings reconfirm the presence of such a bias, we advise investors to try to be more analytical in their evaluative processes, especially when evaluating the initiatives of high-growth firms. Further we demonstrated that investors' evaluations of the future prospects of the firm are affected by the level of powerful language that CEOs use when communicating to investors. However, as we show that such language could be used opportunistically by some CEOs, investors should try to devalue how information regarding the firm is communicated to them when making financial judgements.

5.4 LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The studies presented in this dissertation are not without their limitations. Nevertheless, some of those limitations provide fruitful ground for future research. The main limitations that I discuss relate to our ability to capture both the complexity of constructs such as power, reputation and status and the degree of intentionality in language use in the context of framing and powerful language.

5.4.1 The complexity of power, reputation and status

First, the complexity of power, reputation and status stems from the fact that firms and individuals may have power over the same audience in multiple ways, and can also have differing reputations and status with that audience. For example, a CEO may have multiple sources of power over the same stakeholder (Chatterjee and Pollock, 2017). In Study 1, we focused on CEOs' harsh power over the board and other TMT members, yet CEOs might also have soft power over them, gained through having hired them or through a long joint tenure in which they have developed friendship ties. Thus, future research could investigate how specific sources of power between the CEO and another important firm's stakeholder, i.e. the TMT or the BODs, combine to affect decision making.

Similarly, firms and individuals could have multiple reputations, or multiple sources of status (Mishina *et al*., 2012; Prato *et al*., 2019). In Study 2, we assumed that the acquiring firm might have both growth and dividend reputations, but we did not investigate what the implications of this might be in terms of potential joint effects. Where a firm has multiple strong reputations, this might lead to fuzziness in the minds of the audience as to what might be expected of the firm and the individuals within it (Parker *et al*., in press). Therefore, a fruitful next step would be to study how audiences integrate and prioritize expectations when they evaluate initiatives.

Last, we did not consider whether different sources of power, status and different reputations might work as substitutes or complements to one another (Misangyi and Acharya, 2014; Prato *et al*., 2019). We believe that using a configurational approach such as qualitative comparative case analysis could be very useful to advance the theories further.

5.4.2 The degree of intentionality in language

First, we were not able to account for the degree of intentionality in the use of language-related constructs. That is, we were not able to make a clear distinction between framing and linguistic style used as an impression management technique from these same two things arising as a product of managerial sense-making efforts or subconscious processes. Although previous research suggests that both can occur (e.g., Kaplan, 2008), a useful avenue for future research would be to differentiate between these two, and to investigate what implications this distinction might have for the effectiveness of framing and linguistic style. This line of research could also be extended to include identifying instances in which firms intentionally use language that is expected to result in more negative evaluations.

Second, we studied how framing and language style shaped the perceptions of a single target audience, i.e., investors. Nevertheless, since the information released by firms is public, other unintended or secondary audiences have access to it. Not much research has been done to understand the extent to which audiences are attentive to and affected by framing and language styles in corporate announcements when the message is not directed specifically at them. However, because of the proliferation of social media, understanding the spillover effects of the themes and styles of corporate communication on multiple audiences is crucial not only from a theoretical but also from a practical perspective.

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SUMMARY

Public firms increasingly face pressures from the financial markets to deliver on short-term targets and maintain positive relationships with analysts and investors. Prioritizing the interests of the financial markets, though, often leads firms to engage in suboptimal strategic behavior such as passing up economically valuable opportunities or hiding information. Little is known about which firms address pressures from financial markets in ways that do not jeopardize the well-being of the firm in the long run. This dissertation provides a behavioral strategy perspective on how to prevent the mutual influence of firms and financial markets from having potentially counterproductive outcomes. Specifically, the dissertation contains three empirical studies that seeks to shed light on how evaluations by financial markets affect firm decision making and how strategic decisions are evaluated by those markets in various contexts.

By approaching these issues through the lenses of power, reputation and status, this dissertation reveals some important insights. The first study shows that the kind of power held by a CEO determines the extent to which firms invest in R&D when financial analysts voice concerns regarding the future prospects of a previously successful firm. While CEO prestige power is instrumental in boosting R&D investment, CEO expert, structural and ownership power hinders it. The second study shows that building a strong growth or dividend reputation helps firms who are engaging in acquisitions to maintain positive relationships with investors. This is even more the case when firms communicate in their acquisition announcements how the acquisition is meant to exceed the expectations that investors have of firms, based on their growth or dividend reputations. Finally, the third study highlights the complex nature of the benefits associated with status that a CEO has gained by winning a prestigious award. The study reveals that investors react positively to information released by firms with high-status CEOs not because

of the CEO's status per se, but because those CEOs use less powerful language to communicate to investors, which investors prefer.

Overall, my dissertation demonstrates how unpacking the effects of power, reputation and status on decision-making and evaluation could help to advance behavioral strategy research. I hope that my research will inspire scholars to review their current views on how power, reputation and status can be a double-edged sword for firms and will encourage them to seek out a more fine-grained understanding of when and how these things can be a benefit or a burden to firms. I am hopeful that my research may provide insights for managers into how firms can interact with investors in ways that will not damage the firm's long-term interests.

SAMENVATTING

Openbare bedrijven worden steeds meer onder druk gezet door de financiële markten om kortetermijndoelstellingen te halen en positieve relaties met analisten en beleggers te onderhouden. Het prioriteren van de belangen van de financiële markten leidt er echter vaak toe dat bedrijven zich bezighouden met suboptimaal strategisch gedrag, zoals het voorbij laten gaan van economisch waardevolle kansen of het verbergen van informatie. Er is weinig bekend over welke bedrijven de druk van de financiële markten weerstaan op een manier die het welzijn van de onderneming op de lange termijn niet in gevaar brengt. Dit proefschrift biedt een gedragsstrategieperspectief over hoe te voorkomen dat de wederzijdse invloed van bedrijven en financiële markten potentieel contraproductieve uitkomsten heeft. Specifiek bevat het proefschrift drie empirische studies die proberen licht te werpen op hoe evaluaties door financiële markten de besluitvorming van bedrijven beïnvloeden en hoe strategische beslissingen door die markten in verschillende contexten worden geëvalueerd.

Door deze kwesties te benaderen via de invalshoeken van macht, reputatie en status, onthult mijn proefschrift enkele belangrijke inzichten. De eerste studie toont aan dat het soort macht van een CEO bepaalt in hoeverre bedrijven investeren in R&D wanneer financiële analisten hun bezorgdheid uiten over de toekomstperspectieven van een voorheen succesvol bedrijf. Terwijl macht van de CEO op basis van prestige een belangrijke rol speelt bij het stimuleren van investeringen in R&D, belemmert de CEO's expertise op het gebied van structuur en eigendom deze juist. De tweede studie toont aan dat het opbouwen van een sterke groei- of dividendreputatie bedrijven die zich bezighouden met overnames helpt om positieve relaties met investeerders te onderhouden. Dit is nog meer het geval wanneer bedrijven in hun overnameaankondigingen communiceren hoe de overname de verwachtingen die investeerders van bedrijven hebben, op basis van

hun groei- of dividendreputatie, bedoelt te overstijgen. Tot slot benadrukt de derde studie de complexe aard van de voordelen die verbonden zijn aan de status die een CEO heeft verkregen door het winnen van een prestigieuze prijs. De studie toont aan dat beleggers positief reageren op informatie die wordt vrijgegeven door bedrijven met een hoge status van CEO's, niet vanwege de status van de CEO op zich, maar omdat deze CEO's minder krachtige taal gebruiken om te communiceren met beleggers, wat de voorkeur van beleggers heeft.

In het algemeen laat mijn proefschrift zien hoe het behandelen van de effecten van macht, reputatie en status op de besluitvorming en evaluatie, het onderzoek naar gedragsstrategie vooruit kan helpen. Ik hoop dat mijn onderzoek wetenschappers zal inspireren om hun huidige opvattingen over hoe macht, reputatie en status een tweesnijdend zwaard kan zijn voor bedrijven, te herzien en hen zal aanmoedigen om te blijven zoeken naar een meer fijnmazig begrip van wanneer en hoe deze dingen een voordeel of een last kunnen zijn voor bedrijven. Ik heb goede hoop dat mijn onderzoek inzichten kan opleveren voor managers in de manier waarop bedrijven met beleggers kunnen omgaan op een manier die de belangen van het bedrijf op de lange termijn niet schaadt.

РЕЗЮМЕ

Публичните компании все повече се сблъскват с натиска от финансовите пазари да демонстрират стабилни резултати в краткосрочен план и да поддържат положителни отношения с анализатори и инвеститори. Приоритизирането на интересите на финансовите пазари обаче често води компаниите да предприемат неоптимални стратегически решения като отхвърляне на икономически ценни възможности или скриване на информация. Малко се знае за това, кои фирми успяват се справят с натиска от финансовите пазари по начини, които не застрашават благосъстоянието на компаниите в дългосрочен план. Моята дисертация предоставя поведенческа стратегия за това как да се предотвратят потенциално нежелани резултати от взаимното влияние на фирмите и финансовите пазари. По-конкретно, дисертацията съдържа три емпирични проучвания, които се стремят да обяснят как оценките на финансовите пазари влияят на начина, по който компаниите вземат стратегически решения и как такива решения се оценяват от тези пазари в различни контексти.

Дисертацията ми дава отговор на тези въпроси, разглеждайки ги през обектива на три важни фактора: власт, репутация и статус. Първото проучване показва, че видът власт, притежаван от изпълнителния директор, влияе върху степента на инвестиране в изследване и развитие на компанията, за да неутрализира опасенията на финансовите анализатори относно бъдещите перспективи на фирмата, която е демонстрирала задоволителни финансови резултати до момента. Властта, която произлиза от престижа на изпълнителния директор, стимулира инвестициите в изследване и развитие, за да подсигури успеха на компанията и да опровергае финансовите анализатори. Властта, която произлиза от експертизата на изпълнителния директор, неговата завидно по-висока позиция в компанията от всеки друг

работник или акциите, които притежава, го карат да избягва подобни инвестиции и да игнорира мнението на анализаторите. Второто проучване показва, че компаниите, които са изградили репутация за силен растеж или изплащане на стабилни дивиденти, успяват да подсигурят положителна оценка и подкрепа от своите акционери, когато обявят инвестиране в закупуването на предприятие, което е стратегия, към която акционерите са обикновено скептично настроени. Дори по-успешни са тези компании, които наблягат на това как подобна стратегия е предприета, за да може компанията да надхвърли очакванията на акционерите за силен растеж или изплащане на по-високи дивиденти в бъдеще, имайки се в предвид репутацията на компанията. И накрая, проучване три разкрива, че инвеститорите реагират положително на информация, разпространена от фирми с изпълнителен директор с висок статус, не поради статута на изпълнителния директор сам по себе си, а защото тези изпълнителни директори използват не толкова силен език за комуникация с инвеститорите, което те предпочитат.

Като цяло моята дисертация демонстрира как фокусирането върху фактори като власт, репутация и статус, може да доведе до нови изводи и насоки в сферата на поведенческата стратегия, да обясни как те влияят върху вземането на решения в една компания и как тази решения се оценяват от финансовите пазари. Надявам се, че изводът от тази дисертация, че властта, репутацията и статутът са многопластови, ще провокира учените да търсят по-детайлно разбиране за това кога и как тези фактори могат да са полезни или да навредят на една компания. Надявам се моето изследване да помогне на изпълнителни директори да подобрят начина, по който си взаимодействат с инвеститорите, което би имало позитивен ефект върху дългосрочното благосъстояние на компаниите.

ABOUT THE AUTHOR

Radina Blagoeva is a doctoral candidate Strategic Management at the Rotterdam School Management, Erasmus University, where she al obtained an MPhil in Strategic Management a Entrepreneurship *cum laude*. During her PhD, s spent three months as a visiting scholar at the L Kong Chian School of Business, Singapore Management University. In August 2020, she will join the Terry College of Business, University of Georgia, as an Assistant Professor.

Radina is interested in behavioral strategy, and more specifically in the interactions and mutual influence of CEOs, firms and financial markets. Her research is focused on the impact of biases on (1) how CEOs incorporate feedback from financial markets in strategic decisions and (2) how financial markets evaluate firms' strategic initiatives and communications. She analyzes those issues primarily through the lenses of power, status and reputation.

Radina has published some of her work in the Academy of Management Journal and Strategic Management Journal. She has also won a prestigious Strategic Management Society SRF Dissertation Research Program Grant. She has presented her work at multiple international conferences, including the Academy of Management Annual Meeting, Strategic Management Society Annual Conference, International Corporate Governance Society Annual Conference and Centre for Corporate Reputation Symposium.

PORTFOLIO

PAPERS

Published papers

Blagoeva RR, Mom TJM, Jansen JJP, George G. Problem-solving or self-enhancement? A power perspective on how CEOs change R&D search in the face of inconsistent feedback. ***Academy of Management Journal***.

Blagoeva RR, Kavusan K, Jansen JJP. Who violates expectations? How firms' growth and dividend reputations affect investors' reactions to acquisitions. ***Strategic Management Journal***

Work in progress

The center of attention: a power perspective on how CEOs use self-centered language when communicating to investors after earnings misses. Data analysis phase. With Justin Jansen and Tom Mom. Target journal: ***Administrative Science Quarterly***

It's about the way you say it: CEO status, power language and their effect on investors' reactions. Data analysis phase. With Gokhan Ertug. Target journal: ***Academy of Management Journal***

When is power enacted? How formal and informal CEO power impact CEO compensation. Data analysis phase. With Mirko Benischke and Michael Withers. Target journal: ***Strategic Management Journal***

Whom to listen to? How assessment of strategic fit by the acquirer and target parent affects investors' reactions to acquisition announcements. Data analysis phase. Target journal: ***Strategic Management Journal***

Are your sins ever forgiven? How investors react to an appointment of a director with a sin reputation. Data collection phase. With Ilaria Orlandi. Target journal: ***Strategic Management Journal***

How performance feedback and diverging interests of the dominant coalition impact managerial attention to sustainability goals. Data collection phase. With Alina Andrei. Target journal: ***Academy of Management Journal***

RESEARCH VISIT

Lee Kong Chian School of Business, Singapore Management University, Singapore Visiting PhD, 2017 (3 months)
Sponsors: Prof. Gerard George, Prof. Heli Wang

CONFERENCE PRESENTATIONS

Strategic Management Society Special Conference, Las Vegas, 2019
International Corporate Governance Society Annual Conference, Shanghai, 2018
Strategic Management Society Annual Conference, Paris, 2018
Strategic Management Society Special Conference*, Costa Rica, 2017
Strategic Management Society Annual Conference, Houston, 2017
International Corporate Governance Society Annual Conference, Rome, 2017
Academy of Management Annual Meeting, Atlanta, 2017
Frontiers in MOC-TIM Conference, Zurich, 2017
Academy of Management Annual Meeting, Anaheim , 2016

AWARDS, GRANTS, AND SCHOLARSHIPS

OMT Above and Beyond the Call of Duty Award, AOM Annual Meeting, 2019
Centre for Corporate Reputation stipend €300, 2019
SMS Conference Las Vegas Early Career Workshop scholarship $385, 2019
Erasmus University Rotterdam Talent Placement Programme, 2018
SMS SRF Dissertation Research Program Grant $10,000, 2017
SMS Annual Doctoral Workshop scholarship $815, 2017
Erasmus Trustfond research visit grant €750, 2017
Erasmus Trustfond conference participation grant €500, 2016, 2018

INVITED WORKSHOPS

Centre for Corporate Reputation Symposium Workshop, Oxford 2019
STR Dissertation Consortium at the AOM Annual Meeting, 2019

SMS Special Conference Las Vegas Early Career Workshop, 2019
ICGS Doctoral Consortium, 2018
SMS SRF Workshop, 2018
EURAM Dissertation Colloquium, 2018
SMS Annual Doctoral Workshop, 2017

TEACHING AND SUPERVISION

M.Sc. Strategic Management, Erasmus University Rotterdam
Strategic Leadership and Corporate Governance (co-instructor) 2018, 2019, 2020
Master Thesis Supervision 2016, 2017, 2018, 2019, 2020
Master Thesis Co-readership 2016, 2017, 2018, 2019, 2020

B.Sc. (International) Business Administration, Erasmus University Rotterdam
Research Training and Bachelor Thesis (co-instructor) 2017
Bachelor Internship (instructor) 2017, 2018, 2019
Erasmus Consultancy Project: Indonesia (co-instructor) 2018

CONFERENCE AND UNIVERSITY SERVICE

Reviewer for the AOM Annual Meeting (2016 –), SMS Conferences (2018 –), ICGS Annual Conference (2018 –)

Co-organizer of a panel symposium, AOM Annual Meeting, Boston, 2019

Master student representative in the accreditation committee evaluating the ERIM MPHIL program (2015)

Discussion table recorder - "Global Responsible Research Summit in Business and Management", hosted by the Erasmus University Rotterdam, 2019

PhD representative in the accreditation committee evaluating the ERIM PhD program (2020)

THE ERIM PHD SERIES

The ERIM PhD Series contains PhD dissertations in the field of Research in Management defended at Erasmus University Rotterdam and supervised by senior researchers affiliated to the Erasmus Research Institute of Management (ERIM). All dissertations in the ERIM PhD Series are available in full text through the ERIM Electronic Series Portal: http://repub.eur.nl/pub. ERIM is the joint research institute of the Rotterdam School of Management (RSM) and the Erasmus School of Economics (ESE) at the Erasmus University Rotterdam (EUR).

Dissertations in the last four years

Ahmadi, S., *A motivational perspective to decision-making and behavior in organizations*, Promotors: Prof. J.J.P. Jansen & Dr T.J.M. Mom,
EPS-2019-477-S&E, https://repub.eur.nl/pub/116727

Akemu, O., *Corporate Responses to Social Issues: Essays in Social Entrepreneurship and Corporate Social Responsibility,*
Promotors: Prof. G.M. Whiteman & Dr S.P. Kennedy, EPS-2017-392-ORG, https://repub.eur.nl/pub/95768

Albuquerque de Sousa, J.A., *International stock markets: Essays on the determinants and consequences of financial market development*, Promotors:
Prof. M.A. van Dijk & Prof. P.A.G. van Bergeijk, EPS-2019-465-F&A, https://repub.eur.nl/pub/115988

Alserda, G.A.G., *Choices in Pension Management*, Promotors:
Prof. S.G. van der Lecq & Dr O.W. Steenbeek, EPS-2017-432-F&A, https://repub.eur.nl/pub/103496

Arampatzi, E., *Subjective Well-Being in Times of Crises: Evidence on the Wider Impact of Economic Crises and Turmoil on Subjective Well-Being,*
Promotors: Prof. H.R. Commandeur, Prof. F. van Oort & Dr. M.J. Burger,
EPS-2018-459-S&E, https://repub.eur.nl/pub/111830

Avci, E., *Surveillance of Complex Auction Markets: a Market Policy Analytics Approach*, Promotors: Prof. W. Ketter, Prof. H.W.G.M. van Heck & Prof. D.W. Bunn, EPS-2018-426-LIS, https://repub.eur.nl/pub/106286

Balen, T.H. van, *Challenges of Early Stage Entrepreneurs: the Roles of Vision Communication and Team Membership Change*,
Promotors: Prof. J.C.M. van den Ende & Dr M. Tarakci, EPS-2019-468-LIS, https://repub.eur.nl/pub/115654

Bernoster, I., *Essays at the Intersection of Psychology, Biology, and Entrepreneurship,* Promotors: Prof. A.R. Thurik, Prof. I.H.A. Franken &
Prof. P.J.F Groenen, EPS-2018-463-S&E, https://repub.eur.nl/pub/113907

Bouman, P., *Passengers, Crowding and Complexity: Models for Passenger Oriented Public Transport*, Prof. L.G. Kroon, Prof. A. Schöbel &
Prof. P.H.M. Vervest, EPS-2017-420-LIS, https://repub.eur.nl/pub/100767

Bunderen, L. van, *Tug-of-War: Why and when teams get embroiled in power struggles*, Promotors: Prof. D.L. van Knippenberg & Dr. L. Greer,
EPS-2018-446-ORG, https://repub.eur.nl/pub/105346

Burg, G.J.J. van den, *Algorithms for Multiclass Classification and Regularized Regression*, Promotors: Prof. P.J.F. Groenen & Dr. A. Alfons,
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Chammas, G., *Portfolio concentration*, Promotor: Prof. J. Spronk,
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Dalmeijer, K., *Time Window Assignment in Distribution Networks*, Promotors: Prof A.P.M. Wagelmans & Dr R. Spliet, EPS-2019-486-LIS, https://repub.eur.nl/pub/120773

Dennerlein, T. *Empowering Leadership and Employees' Achievement Motivations: the Role of Self-Efficacy and Goal Orientations in the Empowering Leadership Process*, Promotors: Prof. D.L. van Knippenberg & Dr J. Dietz,
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Dolgova, E., *On Getting Along and Getting Ahead: How Personality Affects Social Network Dynamics, Promotors*: Prof. P.P.M.A.R Heugens &
Prof. M.C. Schippers, EPS-2019-455-S&E, https://repub.eur.nl/pub/119150

Duijzer, L.E., *Mathematical Optimization in Vaccine Allocation*,
Promotors: Prof. R. Dekker & Dr W.L. van Jaarsveld, EPS-2017-430-LIS, https://repub.eur.nl/pub/101487

Eijlers, E., *Emotional Experience and Advertising Effectiveness: on the use of EEG in marketing*, Prof. A. Smidts & Prof. M.A.S. Boksem, Eps-2019-487-MKT, https://repub.eur.nl/pub/124053

El Nayal, O.S.A.N., *Firms and the State: An Examination of Corporate Political Activity and the Business-Government Interface,* Promotor: Prof. J. van Oosterhout & Dr. M. van Essen, EPS-2018-469-S&E, https://repub.eur.nl/pub/114683

Feng, Y., *The Effectiveness of Corporate Governance Mechanisms and Leadership Structure: Impacts on strategic change and firm performance*,
Promotors: Prof. F.A.J. van den Bosch, Prof. H.W. Volberda & Dr J.S. Sidhu,
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Frick, T.W., *The Implications of Advertising Personalization for Firms, Consumer, and Ad Platfroms,* Promotors: Prof. T. Li & Prof. H.W.G.M. van Heck, EPS-2018-452-LIS, https://repub.eur.nl/pub/110314

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Kahlen, M. T., *Virtual Power Plants of Electric Vehicles in Sustainable Smart Electricity Markets*, Promotors: Prof. W. Ketter & Prof. A. Gupta,
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Maas, A.J.J., *Organizations and their external context: Impressions across time and space*, Promotors: Prof. P.P.M.A.R Heugens & Prof. T.H. Reus, EPS-2019-478-S&E, https://repub.eur.nl/pub/116480

Maira, E., *Consumers and Producers*, Promotors: Prof. S. Puntoni & Prof. C. Fuchs, EPS-2018-439-MKT, https://repub.eur.nl/pub/104387

Nair, K.P., *Strengthening Corporate Leadership Research: The relevance of biological explanations*, Promotors: Prof. J. van Oosterhout & Prof. P.P.M.A.R Heugens, EPS-2019-480-S&E, https://repub.eur.nl/pub/120023

Nullmeier, F.M.E., *Effective contracting of uncertain performance outcomes: Allocating responsibility for performance outcomes to align goals across supply chain actors*, Promotors: Prof. J.Y.F.Wynstra & Prof. E.M. van Raaij, EPS-2019-484-LIS, https://repub.eur.nl/pub/118723

Okbay, A., *Essays on Genetics and the Social Sciences*, Promotors: Prof. A.R. Thurik, Prof. Ph.D. Koellinger & Prof. P.J.F. Groenen, EPS-2017-413-S&E, https://repub.eur.nl/pub/95489

Peng, X., *Innovation, Member Sorting, and Evaluation of Agricultural Cooperatives*, Promotor: Prof. G.W.J. Hendriks, EPS-2017-409-ORG, https://repub.eur.nl/pub/94976

Petruchenya, A., *Essays on Cooperatives: Emergence, Retained Earnings, and Market Shares*, Promotors: Prof. G.W.J. Hendriks & Dr Y. Zhang, EPS-2018-447-ORG, https://repub.eur.nl/pub/105243

Plessis, C. du, *Influencers: The Role of Social Influence in Marketing*, Promotors: Prof. S. Puntoni & Prof. S.T.L.R. Sweldens, EPS-2017-425-MKT, https://repub.eur.nl/pub/103265

Pocock, M., *Status Inequalities in Business Exchange Relations in Luxury Markets*, Promotors: Prof. C.B.M. van Riel & Dr G.A.J.M. Berens, EPS-2017-346-ORG, https://repub.eur.nl/pub/98647

Pozharliev, R., *Social Neuromarketing: The role of social context in measuring advertising effectiveness*, Promotors: Prof. W.J.M.I. Verbeke & Prof. J.W. van Strien, EPS-2017-402-MKT, https://repub.eur.nl/pub/95528

Reh, S.G., *A Temporal Perspective on Social Comparisons in Organizations,* Promotors: Prof. S.R. Giessner, Prof. N. van Quaquebeke & Dr. C. Troster, EPS-2018-471-ORG, https://repub.eur.nl/pub/114522

Riessen, B. van, *Optimal Transportation Plans and Portfolios for Synchromodal Container Networks*, Promotors: Prof. R. Dekker & Prof. R.R. Negenborn, EPS-2018-448-LIS, https://repub.eur.nl/pub/105248

Schie, R. J. G. van, *Planning for Retirement: Save More or Retire Later?* Promotors: Prof. B. G. C. Dellaert & Prof. A.C.D. Donkers, EOS-2017-415-MKT, https://repub.eur.nl/pub/100846

Schouten, K.I.M. *Semantics-driven Aspect-based Sentiment Analysis,* Promotors: Prof. F.M.G. de Jong, Prof. R. Dekker & Dr. F. Frasincar, EPS-2018-453-LIS, https://repub.eur.nl/pub/112161

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Radina Blagoeva is a doctoral candidate in Strategic Management at the Erasmus University Rotterdam, where she also obtained an MPhil in Strategic Management with cum laude. Radina is interested in behavioral strategy, and more specifically in the interactions and mutual influence of CEOs, firms and financial markets.

In her dissertation, Radina focuses on the impact of biases on how CEOs incorporate feedback from financial markets in strategic decisions, and how financial markets evaluate firms' strategic initiatives and communications. She analyzes those issues primarily through the lenses of power, reputation and status in three empirical studies. In Study 1, she investigates how different sources of CEO power affect a firm's responsiveness to inconsistent feedback. In Study 2, she examines how investors evaluate acquisitions by firm with different reputations for value creation. In Study 3, she sheds light on the role of CEO linguistic style in explaining the relationship between CEO status and investors' reactions to earning announcements. Overall, in her dissertation, Radina demonstrates how unpacking the effects of power, reputation and status on decision-making and evaluation could help to advance behavioral strategy research.

Radina has some of her work in her dissertation accepted for publication in the Academy of Management Journal and the Strategic Management Journal. She has also won a prestigious Strategic Management Society SRF Dissertation Research Program Grant. She has presented her work at multiple international conferences, including the Academy of Management Annual Meeting, Strategic Management Society Annual Conference, International Corporate Governance Society Annual Conference and Centre for Corporate Reputation Symposium.

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