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To Downsize or Not: The Influence of CEO Regulatory Focus on the Relationship between Financial Distress and Employee Downsizing

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Abstract

Building on upper echelons theory, this study examines the influence of CEO regulatory focus as a moderating factor for the relationship between financial distress and employee downsizing. Financial distress is hypothesized to be positively related to employee downsizing. However, CEO regulatory focus is expected to moderate this relationship, such that CEOs high in prevention focus decide not to engage in downsizing when in financial distress, whereas CEOs high in promotion focus are expected to engage in downsizing when their firm is experiencing financial distress. To analyze these propositions, unbalanced panel data from the S&P500 index was used, consisting of 2195 observations from 2010-2020. Additionally, over 4000 shareholder letters from annual reports were collected and analyzed to capture the CEO regulatory focus construct. Logistic regression findings show that financial distress indeed increases the likelihood of workforce reductions. Additionally, CEO prevention focus does not moderate this relationship. Contrastingly, CEO promotion focus does have a moderating role, but in the opposite direction as anticipated. CEO promotion focus moderates the relationship, such that promotion-focused CEOs of financially distressed firms are less likely to engage in employee downsizing. Future work could focus on replicating this study with samples consisting of small and medium firms (SMEs) to see if the effects remain. Additionally, the inclusion of board data and performance outcomes could simultaneously strengthen and extend findings on the effect of CEO regulatory focus.

Keywords: financial distress · employee downsizing · upper echelons theory · regulatory focus theory · promotion focus · prevention focus

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1. Introduction

Firms cannot always be profitable or continuously maintain substantial growth rates. Rather, following lifecycle theory, performance declines are common among large firms (Koh et al., 2015; Yehning et al., 1995). If such performance declines are of a sustained period and a severe nature, they are often termed corporate or financial distress (Altman & Hotchkiss, 2006). Financial distress can have different causes. Schweizer and Nienhaus (2017) identify high leverage, low operating profitability and overexpansion as potential endogenous sources of financial distress. On the other hand, the authors identify rapid technological changes, industry crises, or changes in legislation or competition as external causes.

Different strategic actions can be taken to turn around a financially distressed firm. These have been divided into operational, managerial, financial and portfolio action (Schweizer & Nienhaus, 2017). Although all of these options can be impactful, research on operational action in response to financial distress appears to be most prevalent. This includes actions which relate to operational processes, products, human resources and capital expenditures (Cefis & Marsili, 2005; Cottrell & Nault, 2004; D'Aveni, 1989; McKinley, 1993; Robins, 1993). One often researched measure against financial distress is related to human resource strategy, being employee downsizing (Ahmadjian & Robinson, 2001; Budros, 2005; Datta et al., 2010).

Employee downsizing can be defined as the proactive and planned elimination of positions (Cascio, 1994). In their extensive review on employee downsizing, Datta et al. (2010) discuss various drivers of downsizing. They identify macroeconomic and industry sources which drive downsizing. Many of these factors seem related to drivers of financial distress, such as changes in institutional environment, technological intensity and high levels of competition (Budros, 1997; Guthrie & Datta, 2008; Redman & Keithley, 1998). In addition to external drivers, Datta et al. (2010) also discuss internal drivers of employee downsizing. Among these drivers is firm performance. Results on the relationship between firm performance and employee downsizing have however yielded mixed results, with some finding a negative relationship, while other scholars find insignificant results (Ahmadjian & Robinson, 2001; Budros, 2005; Coucke et al., 2007; Igbal & Shetty, 1994; Perry & Shivdasani, 2005).

To better understand this discrepancy in findings, one could turn to literature on the role of executives in deciding whether or not to downsize when performing poorly. Upper echelons literature provides a compelling argument to do so. This theory argues organizations

are a reflection of their executives, as they shape the organization and its outcomes through the strategic choices they (do not) engage in (Carpenter et al., 2004; Hambrick, 2007; Hambrick & Mason, 1984). Within this branch, multiple studies have also been conducted on the link between poor firm performance and strategic actions taken in response. Executives constantly assess how their firm performs compared to their desired performance, also known as aspiration level (Cyert & March, 1963). Once actual performance drops below the aspired level, decision-makers are likely to start searching and implementing possible solutions to improve performance (Greve, 2003). Moreover, the greater the discrepancy becomes, the riskier such solutions become according to Greve (1998). Surprisingly, research on firm performance and strategic change also resulted in mixed findings in this field, as some find drops in actual performance leading to lower levels of strategic change (Audia & Greve, 2006; Chattopadhyay et al., 2001; Iyer & Miller, 2008). Desai (2016) also notices this inconsistency in findings and argues yet to be researched moderators to influence this relationship. Some studies have been conducted on such potential moderators, such as firm resource base, board size and board responsibility for CEO appointment (Desai, 2016; Wei-Ru, 2008; Zorn et al., 2020).

However, the role of CEO characteristics has been overlooked as a potentially crucial factor which moderates this relationship between firm performance (particularly poor performance), and strategic action in the form of employee downsizing. This is somewhat surprising, especially when taking an upper echelons perspective, which considers the major influence of executive characteristics in their decision-making. Moreover, CEOs of financially distressed firms (reflecting poor performance) have no-clear cut contingency plan on how to act in such a situation. As a result, no strong situational cues can be used to champion a specific strategic action. Therefore, variability which arises in strategic action can likely be attributed to individual executive characteristics (Colbert et al., 2014; Hambrick, 2007; Penney et al., 2011).

One characteristic which has gained widespread attention in the upper echelons field, is CEO regulatory focus. This characteristic may explain why some CEOs engage in employee downsizing when their firm is performing poorly, whereas others CEOs may not engage in downsizing. CEO regulatory focus consists of two foci, which have been shown different in terms of needs, goals and framing (Gamache et al., 2015; Higgins, 1997). In essence, prevention-focused CEOs are focused on avoiding undesirable end-states, whereas promotion-focused CEOs look to achieve desirable end-states (Crowe & Higgins, 1997; Higgins, 1997). This characteristic has already been found leading to different CEO outcomes

in terms of acquisitions, R&D spending, and extent of strategic change (Gamache et al., 2015; Jiang et al., 2020; Scoresby et al., 2021). Based on these promising results, CEO regulatory focus may also be able to explain the mixed findings with regards to the link between poor firm performance and employee downsizing. By integrating literature on financial distress, downsizing, and regulatory focus theory which is embedded in the upper echelons field, this study seeks to research the effect of CEO regulatory focus on the relationship between financial distress and employee downsizing, using the following research question and sub-questions:

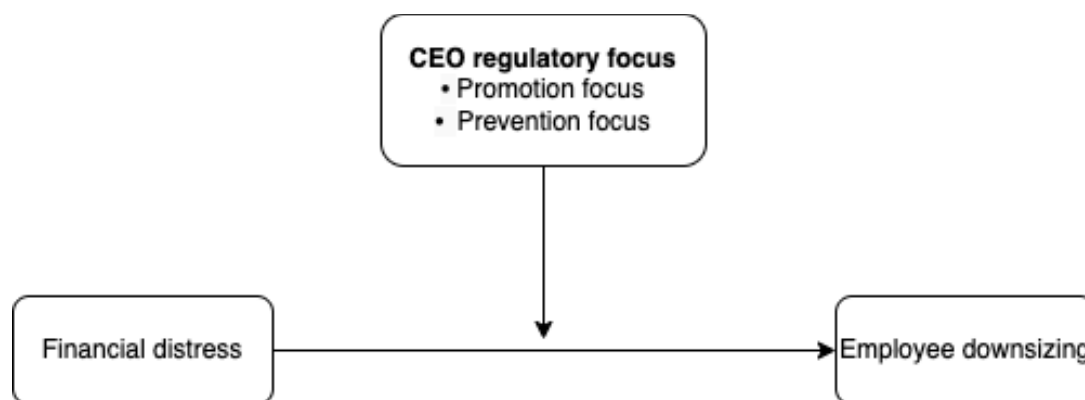
How does CEO regulatory focus influence the relationship between financial distress and the strategic action of employee downsizing?

This research question will be answered with the use of the following sub-questions:

- How is financial distress related to the strategic action of employee downsizing?
- How does CEO promotion focus influence the relationship between financial distress influence the strategic action of employee downsizing?
- How does CEO prevention focus influence the relationship between financial distress influence the strategic action of employee downsizing?

The main research question, together with the sub-questions, lead to the conceptual model as depicted below:

Figure 1. *Conceptual model.*



2. Literature and hypothesis development

This section includes a discussion of the literature relevant to the concepts of this study, and also includes hypothesis development. First, the concepts of financial distress and employee downsizing are discussed. Second, the focus shifts to CEO regulatory focus as moderating the relationship between the previously mentioned concepts. Regulatory focus is first rooted in upper echelons theory, after which the regulatory focus construct itself is discussed in more detail. This discussion of literature is succeeded by hypothesis development.

2.1.1 Financial distress

Firms cannot continuously grow or be profitable at all times. In contrast to growth, firms may face declining performance (Altman & Hotchkiss, 2006; Yehning et al., 1995). Lifecycle theory argues most firms go through phases in which they experience performance declines (Koh et al., 2015). Financial or corporate distress is an often-used concept to capture such declining performance if it persists (Yehning et al., 1995). Financial distress may be caused by internal and external causes. Internal causes for financial distress include high leverage, low operating profitability and overexpansion, whereas exogenous sources of financial distress may be industry crises, or abrupt changes in technology, legislation or competition (Schweizer & Nienhaus, 2017).

Moreover, the term financial distress has been used somewhat interchangeably to refer to different firm conditions. Altman and Hotchkiss (2006) identify four general terms which are used in literature to refer to financial distress, being failure, insolvency, bankruptcy and default. Regarding the latter, the authors argue technical default seldom is a sign for potential formal default or bankruptcy, as technical defaults are often renegotiated and may be isolated incidents. Insolvency and bankruptcy, on the other hand, are situations which are the *result* of continued poor performance. Moreover, it has been shown that insolvency and bankruptcy are rather uncommon among large multinational firms, as firm size is related to survival chances (Agarwal et al., 2002; Kato, 2010). Next, Altman and Hotchkiss (2006) discuss how the term failure is also used to refer to poor financial performance, but in a less definitive sense as is the case with bankruptcy or insolvency. Rather, failure refers to negative performance in the following sense: *“the realized rate of return on invested capital [...] is significantly and continually lower than prevailing rates on similar investments or insufficient revenues to cover cost, and [...] average return on investment is constantly below the firm’s cost of capital”* (Altman & Hotchkiss, 2006, p. 4). As these authors note, such definitions make no

claims about the (dis)continuance of the organization. Instead, it is focused on firm performance itself and not on the result of firm performance, although this failure condition can only last for a certain period of time as it eventually will lead to bankruptcy (Altman et al., 2017). Consequently, firms may engage in action to reverse their financially distressed situation.

Strategic actions which can be taken to reverse financial distress are manifold, and differ in type and magnitude. In their review, Schweizer and Nienhaus (2017) identify four potential organizational areas for turnaround, being operational, managerial, portfolio and financial action. Operational turnaround activities may focus on operational processes (Robins, 1993), products (Cefis & Marsili, 2005; Cottrell & Nault, 2004), human resources (McKinley, 1993), and capital expenditures (D'Aveni, 1989). Managerial actions relate to the replacement of executives, while portfolio actions refer to divestment or investment decisions (Dahiya, 2003; Denis & Kruse, 2000; Morrow Jr et al., 2007). Lastly, financial turnaround strategies are focused on debt restructuring or improving liquidity (Giroud et al., 2012; John, 1993). However, the majority of research within the financial distress turnaround context entails human capital strategies (McKinley, 1993; Schweizer & Nienhaus, 2017). In particular, employee downsizing is a strategic measure which appears to be often taken in response to financial distress, according to a number of authors (Ahmadjian & Robinson, 2001; Budros, 2005; Datta et al., 2010).

2.1.2 Employee downsizing as a strategic response

Employee downsizing is a proactive strategy which involves the planned elimination of positions (Cascio, 1994). As it is proactive, downsizing contrasts with firm decline, which is involuntary and leads to an erosion of the resource base of a firm (McKinley et al., 2000).

The decision to engage in employee downsizing may be caused by various exogenous and endogenous factors. Based on a review of the literature, Datta et al. (2010) identify the economic and institutional environment as potential external causes which guide a firm in the direction of workforce reductions. In addition, industry factors (e.g., competition, technological intensity) also play a role (Baumol et al., 2003; Budros, 1997; Wagar, 1997).

A larger body of research exists on endogenous factors that drive workforce reductions. Endogenous factors can be attributed to firm characteristics, strategy, governance, HR policies and employee attributes (Datta et al., 2010). In particular, firm characteristics have been studied in relation to downsizing, such as firm performance, leverage, size, age and reputation (Ahmadjian & Robinson, 2001; Budros, 1997; Hillier et al., 2007; Kang &

Shivdasani, 1997; Yoo & Mody, 2000). Some studies show high leverage leading to financial distress, which in turn increases employee downsizing among such firms (Coucke et al., 2007; Ofek, 1993). Additionally, arguments to engage in employee downsizing when in financial distress may be to reduce personnel cost or improve efficiency, thereby increasing profitability (Datta & Basuil, 2015; DeWitt, 1998). However, as Datta et al. (2010) note, results on the relationship between firm performance and downsizing have produced somewhat mixed results. Although a majority of the research finds poor performance leading to downsizing (Ahmadjian & Robinson, 2001; Budros, 2005; Coucke et al., 2007; Kang & Shivdasani, 1997; Yu & Park, 2006), some studies find no relationship (Igbal & Shetty, 1994; Perry & Shivdasani, 2005). This might possibly be explained by the fact that other potential strategic action or no action at all may as well be taken in response to financial distress, as Schweizer and Nienhaus (2017) show in their review of turnaround strategies. However, this calls for a more behavioral perspective, as the decision whether to engage in downsizing is made by the firm's top management, which is considered in the next paragraph.

2.1.3 Role of executives in downsizing decision

Top management plays a central role in deciding on how to act in response to financial distress. To put it even more strongly, firms reflect their executives, as they shape the organization through the strategic choices they do (or do not) make (Carpenter et al., 2004; Hambrick, 2007; Hambrick & Mason, 1984). Moreover, executives continuously compare firm performance to their aspiration level or target, to assess whether current practices need to be changed (Cyert & March, 1963). Greve (1998, 2003) argues once performance drops below the aspired level (which will likely be the case when performing poorly), decision makers are more likely to explore solutions to reverse the performance decline, known as problemistic search. Moreover, the further the actual performance drops below the aspired level, the greater the search for solutions and the riskier solutions become (Greve, 1998).

However, research on this argued negative relationship between firm performance and strategic change has yielded mixed findings. On the one hand, scholars have corroborated this relationship (Gaba & Bhattacharya, 2012; Gaba & Joseph, 2013; Mehtha et al., 2021). On the other hand, others find an opposing effect, where a performance drop leads to lower levels of change (Audia & Greve, 2006; Chattopadhyay et al., 2001). For example, Iyer and Miller (2008) find that firms are more likely to acquire when performance is rising towards the aspiration level, where the opposite would be expected (less acquisitive behavior when reaching the aspiration level). These differing results also seems in line with the mixed

findings for this relationship from the downsizing domain (Datta et al., 2010; Schweizer & Nienhaus, 2017).

Desai (2016) argues this discrepancy in findings is likely due to unidentified moderating factors. Environmental factors may play a role (Gaba & Joseph, 2013), but internal causes also exert an influence. Multiple scholars establish the firm's resource base as a moderating factor with regards to the extent of change during financial distress (Audia & Greve, 2006; Wei-Ru, 2008). In addition, Desai (2016) researches board size as a potential moderating factor, and finds the negative relationship between firm performance and organizational change more pronounced for small boards. In a related vein, Zorn et al. (2020) also show board members play an important role in strategic change in response to financial distress. They find that board members responsible for the appointment of the current CEO are likely to display choice-supportive bias and escalation of commitment in favor of this CEO, even when the firm is performing poorly, in turn leading to even lesser performance.

Indeed, firm executives play a pivotal role in deciding whether strategic action is taken in response to performance decline. In line with this reasoning, upper echelons theory posits the firm reflects its executives, such that individual executive characteristics shape their decisions and as a result, shape the firm and organizational outcomes (Hambrick, 2007; Hambrick & Mason, 1984; Hambrick & Quigley, 2014). Moreover, there is no clear-cut contingency plan to reverse financial distress. This implies there are no strong situational cues on how to act, and as a result variability in strategic action is likely to arise based on individual characteristics of executives (Colbert et al., 2014; Hambrick, 2007; Penney et al., 2011). Hence, individual executive characteristics may explain whether a financially distressed firm engages in downsizing. Rather surprisingly, the role of executive characteristics has of yet been overlooked in the research on poor firm performance and downsizing.

However, regulatory focus may well explain why some CEOs do engage in downsizing whereas others do not. Recently, this motivational characteristic has gained widespread attention within the upper echelons field. Motivational attributes influence the goal-setting of CEOs and the pursuit of these goals (Johnson et al., 2015), and are suggested to have a more direct and impactful effect on the behavior and strategic choices of CEOs, compared to other measures such as personality traits (Jiang et al., 2020; Gamache et al., 2015; Wang et al., 2016). CEO regulatory focus may play an important role in the decision to downsize, as it consists of two foci which clearly differ in their needs, goals and framing (Crowe & Higgins, 1997; Higgins, 1997). Moreover, CEO regulatory focus has already been

discovered to impact strategic decisions such as acquisitive behavior, the extent of strategic change, R&D investments and stakeholder strategy adoption (Gamache et al., 2015; Gamache et al., 2020; Jiang et al., 2020; Scoresby et al., 2021). As this previous research has established that CEOs with different regulatory foci diverge on whether they engage in strategic action, regulatory focus may play an important role in downsizing decisions as well.

As such, CEO regulatory focus may extend our knowledge by identifying CEOs who engage in downsizing when their firm experiences financial distress, and CEOs who do not, thereby also answering a scholarly call by Schweizer and Nienhaus (2017) to integrate behavioral characteristics into financial distress research. CEO regulatory focus may be a crucial moderating factor which steers CEO of financially distressed firms towards downsizing, or may cause them to stay away from it. Additionally, if CEOs are aware of their inclination towards one of the regulatory foci, they may take this into account when discussing potential strategic action. As the regulatory focus construct is rooted in upper echelons theory, a discussion of the latter will follow first, after which CEO regulatory focus is elaborated on in more detail.

2.2.1 Upper echelons theory

Upper echelons theory (UET) argues organizations are a reflection of its top managers (Hambrick & Mason, 1984). It is built on the assumption that executive characteristics shape their interpretations (Hambrick & Mason, 1984). Theory suggests that top executives shape a firm accordingly to their individual characteristics (Bilgili et al., 2020; Wang et al., 2016). Therefore, organizational variance will arise based on characteristics which vary on an individual level. There has been a large interest in the study of the individual characteristics of top executives (CEOs), as they may have a profound impact on the firm (for a review, see Wang et al., 2016). The UET model argues that individual properties shape situational perception, and exert an influence on the strategic choices executives make, which in turn influence consequent firm outcomes (Hambrick & Mason, 1984). As such, different individual characteristics lead to different strategic choices which yield different firm outcomes.

The original UET framework suggested a distinction between psychological properties and observable properties (Hambrick & Mason, 1984). Research on CEO characteristics has developed along these lines, although earlier work tended to focus more on observable characteristics, such as CEO tenure or previous career experiences (Carpenter et al., 2004; Henderson et al., 2006). In recent years however, the focus in the study of these

characteristics has shifted to psychological measures of a proximal nature (Wang et al., 2016). Research in this area is split along two lines. On the one hand, scholars have examined CEO personality based on personality trait frameworks such as the Big Five Factor Model (FFM), focusing on extraversion, agreeableness and conscientiousness (Chatterjee & Hambrick, 2007; Colbert et al., 2014; Herrmann & Nadkarni, 2014). However, data collection has posed problems with respect to the direct and intrusive nature of these measures (Bilgili et al., 2020). Instead, most work has been conducted using single self-concept measures, such as CEO narcissism (Chatterjee & Hambrick, 2007), charisma (Agle et al., 2006), overconfidence (Chen et al., 2014) or regulatory focus (Gamache et al., 2015). Especially the latter is increasingly gaining scholarly attention, and is of central focus in the current research.

2.2.2 Regulatory focus theory

Regulatory focus relates to whether one is motivated to achieve desirable end-states, or pursues avoiding undesirable end-states (Higgins, 1997). The theory is built on the principle that people seek pleasure and try to avoid pain, and introduces two regulatory systems based on this hedonistic principle, being a promotion and prevention regulatory system (Higgins, 1997). These systems regulate cognition, affect and behavior in an individual with regards to their goal-setting and accomplishment of goals (Gamache et al., 2015).

Although the regulatory focus concept distinguishes between a promotion focus and a prevention focus, these foci are not necessarily dependent on each other. Studies have shown they are only marginally correlated, which implies it is possible to score high in neither, one, or both foci (Gamache et al., 2020; Lanaj et al., 2012). Despite the fact that conceptualizations exist which assume an individual can score high for both or neither foci (Bilgili et al., 2020), most research follows the traditional distinction between promotion and prevention focus (Jiang et al., 2020; Li et al., 2021; Scoresby et al., 2021). Moreover, Lanaj et al. (2012) suggest regulatory focus is generally stable (i.e., either a promotion or prevention focus is present within an individual) within specific contexts, such as work-related environments. Huang et al. (2021) also corroborate this finding in a strategic management context, showing that only one of the regulatory foci in CEOs leads to ambidexterity, rather than both foci together.

In short, regulatory focus is considered a motivational orientation, which reflects the extent to which an individual is strategically inclined to achieve certain objectives (Crowe & Higgins, 1997; Gamache et al., 2020). Higgins (1997) argues ideals, needs and the framing of situations contribute to the presence of either a promotion or prevention focus. As these

elements differ for each focus, the promotion and prevention focus may lead to differences in the inclination to downsize for CEOs of poorly performing firms (Jiang et al., 2020; Wang et al., 2016). Hence, a theoretical understanding of each focus is of importance and follows next.

2.2.3 Promotion focus

An individual is said to have a promotion focus when they pursue desirable end-states or outcomes (Gamache et al., 2020). First of all, individuals with a promotion focus are fueled by strong ideals (Higgins, 1997). This explains why such individuals are concerned with growth, advancement and accomplishments (Scoresby et al., 2021; Shah et al., 1998). Secondly, promotion focused individuals have an internal need to grow and develop. Therefore, there is a clear alignment between the needs and goals of promotion-oriented individuals, which are both focused on growth. Thirdly, the internal psychological framing also contributes to a promotion-oriented focus. Based on their strong needs and ideals for growth, such individuals are focused on ensuring there are no gains left on the table, and their framing can be characterized as either gain or non-gain (Higgins, 1997). In line with this reasoning, CEOs with a promotion focus would rather include a strategic action which may turn out not to work (and even has some unintended consequences), than not include it and jeopardize reaching their desired end-state because of the omission of this strategic action. Gamache et al. (2015) provide a study which displays this principle at work, showing that CEOs with a promotion focus are more likely to engage in a higher number of acquisitions which are also of higher value, compared to CEOs with a prevention focus.

In conclusion, the ideals, goals and framing of an individual combine to form a promotion focus. Such individuals seek to align their current situation with their desired situation (Brockner & Tory Higgins, 2001). Promotion focused individuals perceive their current situation and based on their ideal future situation, they are likely to engage in strategic action which may lead to this desired future state.

2.2.4 Prevention focus

In contrast to a promotion focus, an individual is said to have a prevention focus when they want to prevent undesirable end-states or outcomes (Gamache et al., 2020). Based on Higgins (1997), ideals, needs and psychological framing also contribute to a prevention focus. First of all, ideals which fit individuals with a prevention focus are protection, safety and security (Higgins, 1997). Secondly, prevention-focused people are focused on protecting against threats and are motivated by ‘ought-to-be’ states. The ideals and needs of a prevention-based

individual thus align very well. Thirdly, psychological framing within prevention-based individuals is characterized by loss or non-loss. This implies that CEOs who are prevention-oriented would rather avoid actions which might lead to undesirable outcomes, than take such action and potentially benefit from it. Prevention-focused individuals can thus be described as more reluctant to risk. Jiang et al. (2020) confirm this risk-averseness for prevention-oriented CEOs and strategic change. Their research shows that CEOs with a prevention focus are less likely to engage in strategic change, compared to CEOs with a promotion focus.

Based on differences in regulatory focus, different responses can be expected from prevention-focused CEOs compared to promotion-focused CEOs in terms of downsizing. In the next section, hypotheses are developed for these relationships, as well as for the relationship between financial distress and employee downsizing.

2.3 Financial distress and employee downsizing

Financial distress is expected to drive the decision to reduce the workforce based on three main arguments. First, previous research has identified various causes for downsizing, related to firm performance (Cascio et al., 2021; Datta et al., 2010). For example, Cascio (1994) identifies financially struggling firms as most likely to engage in employee downsizing. Datta et al. (2010) also discuss firm performance as an important factor which drives downsizing decisions. In addition, low profitability, decline in shareholder value, intense competition and market uncertainty are all factors which may hamper performance, and have been shown to drive the decision to downsize (Budros, 2004; Datta et al., 2010; Hillier et al., 2007; Yu & Park, 2006). This result holds among most countries and industries, where studies find poor firm performance leading to workforce downsizing (Ahmadjian & Robinson, 2001; Budros, 2004; Cascio et al., 2021).

Second, the decision to downsize is taken with its possible advantages in mind. Research has been conducted on investor reactions, firm profitability and other organizational outcomes (Datta et al., 2010). Although most studies find negative stock reactions for downsizing announcements in the short-term (Chatrath et al., 1995; Franz et al., 1998), long-term stock returns appear to be positive (Cascio et al., 1997). In terms of firm profitability, findings have been mixed (Datta et al., 2010), with authors finding negative short-term effects, but positive performance effects two to three years after downsizing (Espahbodi et al., 2000; Kang & Shivdasani, 1997; Perry & Shivdasani, 2005). Datta et al. (2010) suggest it may take some time for the positive effects of downsizing to materialize. Another study shows that if downsizing is framed as efficiency enhancing, it may also lead to improved sales

(Palmon et al., 1997). Perhaps more important however is the rationale executives follow when opting for downsizing. Downsizing is often engaged in as it is expected to lead to efficiency and financial improvements (DeWitt, 1998), which are expected to help in overcoming financial distress. Firms expect downsizing to lead to an increase in firm performance, as it leads to a quick reduction in personnel cost which may lead to higher profit levels (Datta & Basuil, 2015).

Third, it may be the case that firms that are in financial distress are expected to downsize, and as a result, will do so (Budros, 1999). Based on mimetic isomorphism (the tendency to mimic similar organizations when dealing with uncertainty, see DiMaggio & Powell, 1983), Budros (1999) argues that downsizing within a specific organization is more likely to happen, when similar organizations have also done so. As many financially distressed firms have opted for downsizing as their turnaround strategy (Datta et al., 2010; Schweizer & Nienhaus, 2017), the level of taken-for-grantedness may be higher. Budros (1999) argues when this level of taken-for-grantedness is higher, downsizing rates will increase. When high levels of downsizing are present among similar firms, the chance of workforce reduction increases (Budros, 1997; Tsai et al., 2006). Indeed, Ahmadjian and Robinson (2001) empirically confirm this tendency to downsize when other similar financially distressed firms also do.

Based on the three preceding arguments, firms experiencing financial distress are expected to engage in employee downsizing, leading to the following hypothesis:

H1. *Financial distress is positively related to the strategic action of employee downsizing.*

2.4 Moderating role of CEO prevention focus

CEO prevention focus is expected to moderate the relationship between financial distress and employee downsizing, such that prevention-focused CEOs do not engage in downsizing. This is based on the following three arguments. First, CEOs high in prevention focus have internal needs which relate to protection and security, and they have a large sense of responsibility for their firm (Bilgili et al., 2020; Gamache et al., 2020). This need for protection and security extends to the firm's limited resources, to which employees also belong (Scoresby et al., 2021). Employee downsizing leads to the loss of human capital, which prevention-based CEOs will seek to avoid. Laying off a substantial amount of the workforce will be perceived a clear loss following their loss vs. non-loss framing (Crowe & Higgins, 1997; Higgins, 1997). Therefore, such CEOs can be expected not to reduce their workforce, as the prevention-based

CEOs' sense of responsibility for the firm and its employees and the strategic action of workforce reduction do not align.

Second, CEOs with a prevention focus have been shown risk-averse, for example with regards to the number and value of acquisitions they undertake (Gamache et al., 2015). Moreover, Scoresby et al. (2021) argue prevention-based CEOs are less inclined to engage in strategic action (such as downsizing). Studies on similar motivational constructs confirm this tendency to evade strategic action. For example, Fernández-Menéndez et al. (2020) and Shi and DesJardine (2021) find that for the implicit achievement motive, individuals fitting the 'fear' avoidance approach (similar to prevention focus), may display threat rigidity, and refrain from acting when facing a threat. Similarly, Gamache and McNamara (2019) research temporal focus, another motivational attribute which shapes perception and strategic choice. They discover that negative media reactions after an acquisition lead to less subsequent acquisition spending by CEOs, especially for CEOs with a past temporal focus. This past focus is related to prevention focus, as both have a tendency to use past information to avoid undesirable states in the present (Jiang et al., 2020). Following these studies, prevention-based CEOs tend to avoid strategic action.

Third, CEOs high in prevention focus have been shown to assess disruptive change negatively (Jiang et al., 2020). Downsizing is complex and may require new capabilities and resources (Zhang & Rajagopalan, 2010). In addition, downsizing may have various unintended non-financial consequences (McKinley et al., 2000; Ray & Maheshwari, 2017; Yu & Park, 2006). Besides the already discussed loss of social capital in itself, workforce reduction may negatively affect the firm's dynamic capabilities and create feelings of distrust among employees (Céspedes-Lorente et al., 2019; Schenkel & Teigland, 2017). These are potential consequences prevention-based CEOs weigh saliently in their decision-making. As prevention-based CEOs are focused on preventing negative outcomes, they will attach more weight to the negative consequences of downsizing. Therefore, prevention-based CEOs can be expected not to engage in this strategic action which potentially leads to many undesirable consequences. Following these arguments, this leads to the following hypothesis:

H2. *CEO prevention focus moderates the relationship between financial distress and employee downsizing such that CEOs high in prevention focus will not engage in employee downsizing.*

2.5 Moderating role of CEO promotion focus

In contrast to prevention-focused CEOs, CEOs high in promotion-focus are expected to reduce their workforce when their firm experiences financial distress, based on three primary reasons. First, promotion-based CEOs are more likely to employ strategic action when they believe the situation requires so (Scoresby et al., 2021). Promotion-based CEOs would risk taking actions which may turn out not to work, rather than taking no measures at all, also known as error of omission (Gamache et al., 2015; Jiang et al., 2020). Gamache et al. (2015) show this inclination to engage in strategic change, also arguing promotion-based CEOs are willing to try out multiple strategic actions to discover the most effective one to reach their desired goal. In addition, Jiang et al. (2020) claim promotion-based CEOs will not ignore possibilities to align their firm with their environment. In the case of financial distress, this may imply downsizing for its potential financial and efficiency benefits (DeWitt, 1998). Therefore, CEOs higher in promotion focus are likely to engage in workforce reduction in response to financial distress.

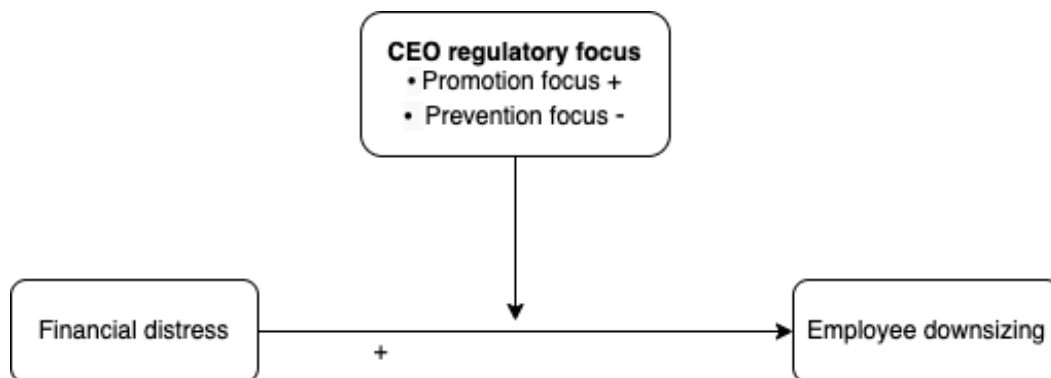
Second, promotion-based CEOs are more willing to engage in risky and disruptive strategic action if it brings them closer to their desired goal (Jiang et al., 2020). As long as the firm moves towards the desired goal, such CEOs are not bothered by mistakes made along the way. This implies that negative consequences of downsizing such as loss of social capital and distrust among employees (Céspedes-Lorente et al., 2019; McKinley et al., 2000; Ray & Maheshwari, 2017; Yu & Park, 2006), will not be weighed as saliently in comparison to prevention-based CEOs. Indeed, Gamache et al. (2015) argue that for promotion-based CEOs, potential gains are more important than potential losses.

Third, promotion-based CEOs have been shown to assess disruptive change positively (Gamache et al., 2015; Lanaj et al., 2012). Such CEOs look at potential positive outcomes of strategic actions such as downsizing, and overlook potential negative outcomes or assess them less saliently. Scoresby et al. (2021) argue such CEOs may even take strategic action without performing necessary due diligence. In addition, downsizing leads to ambiguity and uncertainty in terms of structure and social capital. Promotion-based CEOs have been shown willing of such risks, in contrast to prevention-based CEOs (Hmieleski & Baron, 2008; Liu, 2011). Taken together, based on these three arguments it is hypothesized that promotion-based CEOs will engage in employee downsizing when their firm experiences financial distress, leading to the following hypothesis:

H3. *CEO promotion focus moderates the relationship between financial distress and employee downsizing such that CEOs high in promotion focus will engage in employee downsizing.*

The hypotheses are displayed in the conceptual model in Figure 2.

Figure 2. *Conceptual model.*



3. Methodology

In this section, the methodological choices of this study will be explained and justified.

First, sample selection and data collection are discussed. Second, the variables and their respective measurements are outlined and justified. Finally, the analytical approach will be discussed.

3.1 Sample and data collection

To test the hypotheses, a longitudinal dataset of firm data, ranging between 2010 and 2020, was obtained from Compustat. This dataset consisted of S&P500 firms, which includes publicly listed firms on the New York Stock Exchange and NASDAQ. Downsizing research often includes data from such indexes due to its transparency and accessibility (Datta et al., 2010). In total, this dataset contained 5406 observations for 500 firms, which was reduced to 2195, due to missing data and the absence of shareholder letters in some cases, which will be further discussed in the next paragraph. These observations comprised of detailed year-by-year data on firm level, for example financial data, information on industry and employee count. This substantial amount of data enables researching across year, industry and firm size in order to research hypothesized effects.

However, the database did not include CEO names and information on regulatory focus. To obtain this data, annual reports from the timeframe 2010-2020 for the S&P500 firms were manually collected one by one, as they contain CEO letters to shareholders. The annual reports were retrieved from annualreports.com and company websites, which returned 4079 annual reports. Not all S&P500 firms provided a letter to shareholders in their annual reports, as it is not an obligatory component of an annual report. This explains why not all companies include a CEO letter to shareholders, or why some firms provided letters for certain years but for other years did not. After collecting shareholder letters, a second dataset was created in which firm identifiers, firm name and financial year were entered from the original database. Next, CEO name, text of the shareholder letter and whether other executives also signed the letter were manually entered. Once this database had been completed, the shareholder letter text was analyzed by means of a script in statistical software package *R* to identify prevention focus and promotion focus words. After these regulatory focus scores were added to the shareholder letter dataset, this dataset was merged with the original dataset. This led to a remaining number of 3800 observations for which CEO name

and regulatory focus scores were present. Missing CEO names were supplemented with the use of Execucomp data (WRDS).

Additionally, to measure whether a firm had engaged in downsizing, employee downsizing was operationalized using year-by-year employee numbers, which were included in the original dataset. In addition, data on total assets, receivables, inventory, Net PPE, and other financials were either already present or computed using available financial data in the S&P500 dataset.

In order to test the proposed hypotheses, several quantitative analyses were conducted. Financial distress served as an independent variable, which captures poor firm performance. The dependent variable was employee downsizing, and regulatory focus of the CEO served as a moderating variable for this relationship between financial distress and employee downsizing. These variables and their respective measurements are discussed below.

3.2 Dependent variable

To measure employee downsizing, annual data on employee numbers for the S&P500 firms was used from the Compustat database. This variable included the number of employees for a firm in a specific year. A lagged variable was created for number of employees for the timeframe 2010-2020. This enabled calculating percentage change in employees by using the formula:

$$\text{Percentage change in employees} = \frac{N \text{ of employees } (t2) - N \text{ of employees } (t1)}{N \text{ of employees } (t1)} \times 100$$

With the use of this formula, percentage changes in employees for the period 2010-2020 were recorded for each firm. Next, a “cut-off” approach was used following other studies which aimed to measure downsizing in a longitudinal fashion (Cascio et al., 2021; Guthrie & Datta, 2008; Vicente-Lorente & Zúñiga-Vicente, 2018). This cut-off point refers to a decrease in employees of more than 5%, which can be considered a sign of downsizing. Previous empirical research has established that 5% is a valid cut-off point, which is a commonly used threshold which is able to distinguish between intentional employee downsizing and fluctuations in number of employees due to either reactive or temporary decreases in employee numbers (Ahmadjian & Robinson, 2001; Cascio et al., 1997).

After percentage changes in employee numbers were computed, a dichotomous variable was created based on the change in percentage of employee numbers. All workforce

reductions of more than 5% were coded as ‘1’, which indicated downsizing had occurred. All other observations were coded as ‘0’, indicating no downsizing had occurred.

3.3 Independent variable

Financial distress served as the independent variable of this research, which is used to reflect poor firm performance. Different mathematical models exist which aim to measure financial distress levels. However, one formula which is commonly used to compute financial distress, is Altman’s Z-score (Al-Hadi et al., 2019; Altman et al., 2017; Jia & Li, 2022; Mehtha et al., 2021), which is displayed below:

Altman Z-score financial distress:

$$1.2 \times \frac{\text{Working capital}}{\text{total assets}} + 1.4 \times \frac{\text{retained earnings}}{\text{total assets}} + 3.3 \times \frac{\text{EBIT}}{\text{total assets}} + 0.6 \times \frac{\text{Market value of equity}}{\text{book value of total liabilities}} + 0.99 \times \frac{\text{sales}}{\text{total assets}}$$

The Altman Z-score indicates the likelihood of a firm going bankrupt within two years (Altman, 1968; Altman et al., 2017). It combines five well-known financial ratios in order to compute this score. These ratios respectively assess the firm’s liquidity, profitability, asset productivity, solvency and activity or asset turnover. The predictive ability of these measures has been established by other authors (Amoa-Gyarteng, 2021; Olariu, 2016; Rashid & Abbas, 2011). When interpreting Altman Z-scores, scores lower than 1.8 indicate severe financial distress, and scores between 1.9 and 3 imply financial distress, while scores above 3 indicate good financial health (Altman, 2000). Hence, scores ranging between 0 and 3 were coded as ‘financial distress’, whereas scores higher than 3 were coded as ‘no financial distress’. Data for the items included in the formulas were computed with data which was present in the Compustat database for S&P500 firms from 2010-2020.

3.4 Moderating variable

Measuring psychological CEO properties can be rather challenging. Following Kaplan (2008), McClelland et al. (2010) and Gamache et al. (2015), letters to shareholders in annual firm reports were used. More specifically, CEO regulatory focus was measured following the procedure established by Gamache et al. (2015). These authors identified the content of CEO letters to shareholders to be a valid data source for measuring CEO regulatory focus, and

developed a dictionary to apply content analysis to the letters, in order to identify the prevention and promotion focus. This has been shown a suitable procedure to identify this variable (Steinbach et al., 2016). In addition, Gamache et al. (2015) performed extensive analyses on the content, convergent and discriminant validity of their dictionary, which all yielded favorable results. As a result, this dictionary is an established measurement instrument in content analysis research on CEO regulatory focus (Gamache et al., 2020; Huang et al., 2021; Jiang et al., 2020; Scoresby et al., 2021). Furthermore, analyzing letters to shareholders is unobtrusive, yields consistent results, and has high data accessibility (Gamache et al., 2015; Scoresby et al., 2021). Moreover, Johnson et al. (2015) indicate that CEO communication patterns are a very suitable data source which can effectively identify an underlying regulatory focus.

The CEO regulatory focus distinguishes between a prevention and promotion focus, both for which Gamache et al. (2015) created their own dictionaries. These dictionaries are included in Appendix A. The prevention focus includes 25 different words, and for promotion focus 27 different words were established. In addition, the dictionaries are constructed so that they are able to capture different tenses of identified words. Examples of prevention focus words are “careful, duty, avoid, protect, and responsible”. Words which are included in the promotion focus list are “accomplish, grow, ideal, increase, and expand”. The content analysis of the shareholder letters was run using open-source statistical package *R*.

This analysis provided count scores for prevention and promotion focus for each shareholder letter, as well as total word length. In order to create a metric variable, the same approach Gamache et al. (2015) applied was used. Regulatory focus scores were divided over letter length to create percentages for promotion and prevention focus scores.

Finally, it is important to address a concern which is sometimes raised when using shareholder letters to extract CEO personality elements. Some note that such letters may be written by the public relations department instead of the CEO itself (Dورياu et al., 2007). However, even if this is to some extent the case, it has been shown that the CEO, according to personal preference, structures and edits the letter (Abrahamson & Hambrick, 1997; Dورياu et al., 2007). In addition, Eggers and Kaplan (2009) show that successive CEOs lead to significantly different letters, in terms of structure, style and content. Finally, Scoresby et al. (2021) also address this concern and they show, based on intraclass correlations, that these correlate more strongly for individual CEOs than for different CEOs within the organization, substantiating shareholder letters even further as a viable data source.

3.5 Control variables

The analyses controlled for asset change, number of M&As, firm size, market-to-book ratio, financial leverage, firm age, industry, additional signees of the shareholder letter, CEO tenure, and CEO prominence.

First of all, asset change was included as a control. Koh et al. (2015) show mature firms in financial distress may downsize on assets. Cascio et al. (1997) argue that by controlling for changes in assets, the effect of scope of operations is excluded and the effect of employee downsizing is isolated. Consistent with previous research, asset change was operationalized by computing year-by-year percentage differences in net property, plant and equipment (Guthrie & Datta, 2008). A reduction of more than 5% in assets is considered a valid threshold implying asset downsizing has occurred (Cascio et al., 2021), and was implemented as a control variable.

Second, number of M&As was included as control variable as well, as acquiring or merging with another firm may seriously impact the asset and employee base of a firm. Including M&As as a control variable may further contribute in isolating the effect of employee downsizing.

A third control variable which was included is firm size. Firm size is related to firm performance, and HR practices as well, which both may influence employee downsizing (Guthrie, 2001; Jackson & Schuler, 1995). Consistent with Guthrie and Datta (2008), the natural logarithm of total assets was used to operationalize firm size.

Fourth, market-to-book ratio was incorporated. This ratio considers the valuation of a firm, and serves as a proxy for firm performance (Cascio et al., 2021). If a firm performs to or above expectation, its market value will be higher than its book value, as investors believe the firm will be profitable in the future. The share prices of the firm take this into account.

Fifth, financial leverage was considered. Financial leverage implies using debt to finance assets. This has been shown to impact financial distress levels and indirectly, downsizing (Coucke et al., 2007; Ofek, 1993). Financial leverage was computed by dividing debt in current and long-term liabilities over shareholder equity (Johnsen & Melicher, 1994).

A sixth control variable which was inserted was firm age, as firm age may impact debt levels (Andrieu et al., 2018). Firm age was operationalized through the inclusion of a firm's IPO, which is the date of initial public offering of the firm's stock.

Additionally, industry was also inserted as control. Based on the first digit of the Standard Industrial Classification (SIC), industries were included in the analysis to control for

potential differences across industries. Financial distress and downsizing levels may differ across industries, which justifies the inclusion of industry as a control.

An eight dichotomous control variable was also inserted which stated whether other executives had signed the letter to shareholders as well. When other executives contribute to the shareholder letter, this may lead to different regulatory focus scores, which do not solely represent the signing CEO. By controlling whether other board members signed the shareholder letter as well, potential influences of other executives may be detected.

Next, CEO tenure was also included. Previous research has found CEO tenure to impact firm performance (Richard et al., 2009; Simsek, 2004). Hence, it was decided to include it as a control. CEO tenure may influence whether CEOs do or do not engage in certain strategic action.

Finally, a tenth control variable which was inserted, and which also concerns the individual level of the CEO, was CEO prominence, which is a measurement that indicates CEO narcissism. Chatterjee and Hambrick (2007) show CEO narcissism to impact strategic action and performance. For example, such CEOs engage in more acquisitions. Hence, it was decided to insert as control. Consistent with Chatterjee and Hambrick (2007), photographs in the annual report were assigned prominence scores. Appendix B includes the coding scheme for this variable.

3.6 Analysis

As the dependent variable of the study is of a binary nature, logistic regression was used to run the models. A total number of five different models were ran, for which the research model equations are given below:

Model 1: Control variables

Employee downsizing = $\beta_0 + \beta_1 \text{ Year} + \beta_2 \text{ CEO} + \beta_3 \text{ Firm size} + \beta_4 \text{ Market-to-book value} + \beta_5 \text{ Leverage} + \beta_6 \text{ Asset change} + \beta_7 \text{ M\&As} + \beta_8 \text{ Other letter signees} + \beta_9 \text{ CEO prominence} + \beta_{10} \text{ CEO tenure}$

Model 2: Financial distress

Employee downsizing = $\beta_0 + \beta_1 \text{ Year} + \beta_2 \text{ CEO} + \beta_3 \text{ Firm size} + \beta_4 \text{ Market-to-book value} + \beta_5 \text{ Leverage} + \beta_6 \text{ Asset change} + \beta_7 \text{ M\&As} + \beta_8 \text{ Other letter signees} + \beta_9 \text{ CEO prominence} + \beta_{10} \text{ CEO tenure} + \beta_{11} \text{ Financial distress}$

Model 3: CEO prevention focus

Employee downsizing = $\beta_0 + \beta_1 \text{ Year} + \beta_2 \text{ CEO} + \beta_3 \text{ Firm size} + \beta_4 \text{ Market-to-book value} + \beta_5 \text{ Leverage} + \beta_6 \text{ Asset change} + \beta_7 \text{ M\&As} + \beta_8 \text{ Other letter signees} + \beta_9 \text{ CEO prominence} + \beta_{10} \text{ CEO tenure} + \beta_{11} \text{ Financial distress} + \beta_{12} \text{ CEO prevention focus} + \beta_{13} \text{ Financial distress} * \text{ CEO prevention focus}$

Model 4: CEO promotion focus

Employee downsizing = $\beta_0 + \beta_1 \text{ Year} + \beta_2 \text{ CEO} + \beta_3 \text{ Firm size} + \beta_4 \text{ Market-to-book value} + \beta_5 \text{ Leverage} + \beta_6 \text{ Asset change} + \beta_7 \text{ M\&As} + \beta_8 \text{ Other letter signees} + \beta_9 \text{ CEO prominence} + \beta_{10} \text{ CEO tenure} + \beta_{11} \text{ Financial distress} + \beta_{12} \text{ CEO promotion focus} + \beta_{13} \text{ Financial distress} * \text{ CEO promotion focus}$

Model 5: both foci

Employee downsizing = $\beta_0 + \beta_1 \text{ Year} + \beta_2 \text{ CEO} + \beta_3 \text{ Firm size} + \beta_4 \text{ Market-to-book value} + \beta_5 \text{ Leverage} + \beta_6 \text{ Asset change} + \beta_7 \text{ M\&As} + \beta_8 \text{ Other letter signees} + \beta_9 \text{ CEO prominence} + \beta_{10} \text{ CEO tenure} + \beta_{11} \text{ Financial distress} + \beta_{12} \text{ CEO prevention focus} + \beta_{13} \text{ CEO promotion focus} + \beta_{14} \text{ Financial distress} * \text{ CEO prevention focus} + \beta_{15} \text{ Financial distress} * \text{ CEO promotion focus}$

3.7 Research ethics

No participants or experiments were involved in the current research and all data used is publicly available. However, that does not acquit the researcher from actively considering research ethics. Therefore, efforts were made to transparently inform the reader about choices made during the research, in line with the code of conduct for research integrity (KNAW et al., 2018).

Additionally, one could argue the personality assessment for CEOs are somewhat stigmatizing. Individuals are not deterministic; a high score on a personality measure does not automatically lead to a certain outcome. When considering research ethics, it is important to note this and reflect on it. In this study, various control variables which captured other individual characteristics were included as well, to prevent focusing on one characteristic and drawing conclusions based on a sole personality characteristic.

4. Results

This section contains both descriptive and statistical results of the analyses performed. In the following paragraph, the descriptive results are discussed and examined. After this examination the necessary assumption checks for logistic regression follow. Finally, the regression results are provided and discussed in detail.

3.1 Descriptive statistics

First, descriptive statistics were requested and analyzed. These descriptive statistics and their respective correlations are shown in Table 1 and Table 2. The descriptive statistics were consulted to identify potential issues which may arise during the regression analyses (Hair et al., 2019). Additionally, the correlation table enables examining relationships among variables. The highest correlation coefficient is .33 for the correlation between employee downsizing and asset downsizing, a correlation which was expected and was controlled for in the following analyses. Furthermore, based on a threshold of .70, the correlation coefficients do not show main variables correlating strongly with one another (Field, 2018; Taylor, 1990). However, based on the descriptive data, the distribution of CEO promotion and prevention focus was identified to be severely right-skewed. It was decided to convert these variables to dummies based on their mean. Scores falling below their respective mean were coded as a low score for that regulatory focus, while scores above the mean were coded as high. In the case of financial distress, the variable was coded according to the mentioned thresholds for Altman's Z-score (Altman, 2000), with the dummy indicating financial distress being included. Finally, the dependent variable downsizing percentage was converted to a dummy variable, as research established decreases of more than 5% to be a sign of actual downsizing (Ahmadjian & Robinson, 2001; Cascio et al., 1997). The continuous counterparts of these dummy variables are included in Table 1 to provide information about their distribution, as this is less straight-forward to assess for dummy variables.

Table 1. Descriptive statistics

	Variable	<i>M</i>	<i>SD</i>	Min	Max
1	Financial distress continuous*	3.52	2.34	.05	12.24
2	Financial distress dummy	.49	.50	.00	1.00
3	Promotion focus continuous*	.01	.01	.00	.08
4	Promotion focus dummy	.17	.38	.00	1.00
5	Prevention focus continuous*	.01	.01	.01	.15
6	Prevention focus dummy	.20	.40	.00	1.00
7	Firm size (ln)	18.95	.150	13.15	24.25
8	Market-to-book ratio	4.57	4.76	.28	39.83
9	Leverage	1.33	2.25	.00	42.24
10	Asset change (%)	7.23	16.63	-98.31	83.91
11	N of M&As	.64	1.95	.00	43.00
12	CEO tenure	6.79	6.69	.00	50.00
13	Firm age	1997.26	8.39	1968	2018
14	CEO prominence	2.43	.97	1.00	4.00
15	Downsizing continuous* (%)	4.36	14.25	-100.00	98.75
16	Downsizing dummy	.11	.32	.00	1.00

Note: *Inclusion of continuous measures for financial distress, promotion focus, prevention focus, downsizing is supplementary; dummy variables were used in further analyses.

Table 2. Correlations

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Financial distress												
(2) Promotion foc. high	.03											
(3) Prevention foc. high	.03	.06										
(4) Firm size (ln)	.30	.08	.06									
(5) MB ratio	-.28	.03	-.02	-.30								
(6) Leverage	.10	.07	.01	.03	.36							
(7) Asset change	-.06	-.02	-.01	.10	.13	-.02						
(8) N of M&As	-.06	-.03	.08	.04	.02	-.03	.06					
(9) CEO tenure	-.08	-.06	-.02	-.04	.04	-.08	.08	.07				
(10) Firm age	.08	.02	.06	-.15	.18	.06	.12	-.05	-.08			
(11) CEO prominence	.06	.03	.02	.23	-.08	-.03	-.04	.09	-.08	.06		
(12) Downsizing	.26	.02	.02	.09	-.07	-.01	-.33	-.04	-.05	-.03	-.01	

Note: Pairwise deletion procedure used for calculating correlations.

3.2 Data preparation and assumptions

After assessing the descriptive data, the dataset was prepared and applicable assumptions were checked (Hair et al., 2019). Performing assumptions checks is important to prevent the introduction of bias, which may compromise the results. However, first some missing values were imputed. Following this, the data were checked for outliers which can seriously influence the results. Next, the assumptions for logistic regression were checked. This included establishing linearity of the predictors with the logit of the outcome variable and ensuring the absence of multicollinearity (Field, 2018). The process of data preparation and assumption checks is outlined below.

3.2.1 Missing data

In some cases, CEO name was present for multiple years, but in certain years no scores were computed for the moderating variable regulatory focus, because of missing shareholder letters. In this case, a score for the missing year(s) was computed through mean substitution for these CEOs. Scores on promotion and prevention focus were imputed based on the mean of other years which were present for that particular CEO. This led to a total number of 325 imputed values for the variables CEO promotion and prevention focus. Furthermore, the length of shareholder letters was also not present for these 325 cases. This variable was necessary to divide regulatory focus scores over letter length, to create a metric scale through obtaining percentages. The value of shareholder letter length was also computed based on the length of other letters of that CEO which were present in the dataset, for the 325 cases mentioned.

3.2.2 Outliers

All metrically scaled predictors were analyzed for outliers, as well as the outcome variable. The dependent variable, downsizing, included a number of large positive percentage changes in employee number. Such cases are likely due to mergers or acquisitions. However, the control variables already contained a control for M&As. Hence, after assessing the descriptive data, it was decided to remove all values for employee downsizing which were smaller than -100% or larger than 100%. This led to the exclusion of 289 cases, leaving 5113 observations.

Additionally, a number of outliers were removed for some control variables. For the asset change variable, the same procedure as for the dependent variable was followed. All observations below -100% and above 100% were deleted, which led to the exclusion of 371 cases. Next, residuals of the remaining observations were assessed by means of Cook's

distance, standardized residuals, and leverage values. Field (2018) argues residuals with a Cook's distance larger than one are candidates for deletion, as well as cases having standardized residuals >3 . Moreover, values with more than three times average leverage are argued to exert undue influence and may be removed (Field, 2018; Stevens, 2002). After inspection, some cases showed high standardized residuals (>3), which led to the exclusion of 43 values and a remaining sample of 4988 for the variable asset change. Next, market-to-book value also displayed some large numbers (e.g., -113.50 or 229.50 as minimum and maximum value). As this ratio should not take on negative values, 137 negative values were deleted first. After inspection based on the previously mentioned measures for outlier detection, a further 63 values were deleted based on exceeding three times average leverage or standardized residuals higher than 3. This left a total number of cases of 5002. In the case of the leverage variable, 173 values below zero were deleted since this ratio can only take on zero or positive values. Furthermore, Cook's distance, leverage and standardized residuals indicated the presence of 28 outliers, which were removed. Total N afterwards was 4325. As for firm size, one value was omitted from the analysis, as this value had a high standardized residual and was larger than three times average leverage for firm size, leaving 5371 observations. Finally, the variable firm age showed 3097 missing values (57.33%), which decreased the total number of cases included in the analysis from 2195 to 700. As this is a substantial decrease in sample size, it was decided to remove firm age as a control variable from the analysis. The other control variables were either not of a metric measurement level or did not reveal any significant outliers.

The independent variable financial distress showed 30 negative values as well, which were deleted as this ratio cannot take on negative values. The variable also included a number of large scores. Following Fields' (2018) thresholds for leverage values, standardized residuals and Cook's distance, 303 values were deleted, leading to a total number of 3945 observations. For the moderating variable CEO regulatory focus, the same thresholds regarding Cook's distance, standardized residuals and leverage were used, which led to the exclusion of 14 observations for CEO prevention focus (3794 cases left), and 25 observations for CEO promotion focus (leaving 3794 cases). After removal of the outliers, the applicable assumptions for logistic regression were performed.

3.2.3 Linearity with the logit of the outcome variable

The dependent variable of this study was dichotomous, as a firm either engaged in downsizing or not, based on the $>5\%$ threshold of workforce reduction (Cascio et al., 2021;

Guthrie & Datta, 2008; Vicente-Lorente & Zúñiga-Vicente, 2018). Hence, a logistic regression was performed due to the dichotomous nature of the dependent variable. Although logistic regression does not assume linearity of the independent variable with the dependent variable, it does assume the continuous predictors are linearly related to the logit of the outcome variable (Hair et al., 2019). In order to assess this, the Box-Tidwell test was conducted. To do so, log-terms were created for each continuous predictor. After this, a logistic regression was performed, which included all continuous predictors, as well as an interaction term with their log-transformed counterpart. The output of this test can be found in Appendix C. To assume linearity with the logit of the dependent variable, the Box-Tidwell test mandates interaction terms are insignificant (Field, 2018). Although the variables leverage and CEO tenure are significant at the .05 level, their interaction terms are not. As none of the interaction terms are significant, their linearity with the outcome variable can be assumed, and this assumption is not violated.

3.2.4 Multicollinearity

A second assumption of logistic regression is that no two predictor variables are correlated to a large extent. Appendix D includes an overview of collinearity diagnostics. Hair et al. (2019) suggest when tolerance values are <0.1 , multicollinearity becomes a severe issue.

Additionally, one can look at the variance inflation factor (VIF) to establish the presence of multicollinearity. Hair et al. (2019) argue values higher than 10 are a signal for multicollinearity, although stricter thresholds of 5 or 3 are also used. The collinearity statistics show the industry dummies to be problematic in terms of multicollinearity, as all of the industries have tolerance values of $<.1$, and VIF values of >10 . Therefore, it was decided to remove industry as a control variable. The lowest tolerance value of the remaining variables is .533 for CEO prominence low with a VIF value of 1.877, idemnifying the remaining variables of multicollinearity issues. As this assumption was now met, the logistic regression models were run next.

3.3 Logistic regression results

Five different logistic regression models were run to test the hypotheses. These models are reported in Table 3. As the sample consisted of panel data, dummies for year and CEO were included in each model, to account for within-subject and time variance. *Model 1* is a baseline model, which includes these fixed effect dummies for year and CEO, as well as the control variables. *Model 2* adds the main effect of financial distress. Next, *Model 3* inserts the main

effect of high CEO prevention focus and an interaction term with financial distress. *Model 4* contains main effects for financial distress, high CEO promotion focus and their interaction. Finally, *Model 5* holds all controls, main effects and interactions.

Before the logistic regression coefficients were interpreted, goodness-of-model-fit was assessed first. An overview of these measures can be found in Appendix E. First, the Hosmer and Lemeshow test was interpreted to see whether the data fit a logistic regression model. For all models, this test was insignificant, implying a logistic model has good predictivity (Hair et al., 2019). Secondly, the omnibus test of model coefficients was assessed to see if the inclusion of new variables led to a significant improvement of the model. The results of this test, along with an interpretation of model coefficients follows below.

The controls included in *Model 1* account for a significant amount of variance in employee downsizing, $\chi^2(10) = 258.691, p < .001$. McFadden's adjusted pseudo- R^2 indicates 68.8% of the variance in employee downsizing is accounted for by the control variables, as various controls are significant.

Hypothesis 1 expected firms experiencing financial distress to engage in employee downsizing. This was tested with *Model 2*, which accounts for a significant amount of variance in employee downsizing, $\chi^2(1) = 5.133, p = .023$, with McFadden's adjusted pseudo- R^2 showing 69.1% of variance explained, indicating excellent fit (McFadden, 1977). As shown in *Model 2*, financial distress leads to employee downsizing, supporting Hypothesis 1 ($B = 1.301, \text{Exp}(B) = 3.674, p = .029$). Firms experiencing financial distress are almost 3.7 times more likely to engage in downsizing compared to firms which do not experience financial distress, CI [1.138, 11.858]. This effect also holds at a significance level of .05 in *Model 3-5*, confirming the robustness of the result.

Hypothesis 2 stated that CEO prevention focus would moderate the relationship between financial distress and employee downsizing, such that prevention-focused CEOs of financially distressed firms would not engage in downsizing. This was tested with *Model 3*, for which the omnibus test of coefficients does not show a significant improvement of the model: $\chi^2(2) = 0.312, p = .855$. The main effect of CEO prevention focus is insignificant ($B = 0.694, \text{Exp}(B) = 2.002, p = .611$), as well as the interaction term between CEO prevention focus and financial distress ($B = -0.762, \text{Exp}(B) = 0.467, p = .573$). Therefore, Hypothesis 2 is rejected.

Hypothesis 3 argued promotion-focused CEOs of financially distressed firms would engage in downsizing. This was tested in *Model 4*, which shows the main effects of financial distress and CEO promotion focus, and the interaction between CEO promotion focus and

financial distress. *Model 4* shows a significant model improvement of $\chi^2(2) = 7.963, p = .019$. Additionally, McFadden's adjusted pseudo- R^2 indicates 69.8% of the variance in employee downsizing is accounted for when including CEO promotion focus and the interaction term. When interpreting the model coefficients, we see the main effect of CEO promotion focus is significant ($B = 2.884, \text{Exp}(B) = 17.891, p = .006$). This implies that in general, promotion focused CEOs are more likely to engage in downsizing, compared to CEOs who do not have a promotion focus. However, in order to examine Hypothesis 3, the interaction term is of main interest. This shows promotion-based CEOs of financially distressed firms are less likely to engage in downsizing ($B = -2.337, \text{Exp}(B) = 0.097, p = .034$) with CI [.011, .835]. Hence, H3 is rejected, as the opposite effect as expected is found. A CEO promotion focus moderates the positive relationship between financial distress and downsizing such that for these CEOs, this relationship becomes attenuated.

The results found for the hypotheses in their respective model all remain in *Model 5*, which includes all effects and interaction. Again, the omnibus test of model coefficients is significant, indicating significant model improvement: $\chi^2(2) = 8.447, p = .015$. The effect of financial distress remains significant ($B = 1.845, \text{Exp}(B) = 6.327, p = .012$), similar to the main effect of CEO promotion focus ($B = 3.052, \text{Exp}(B) = 21.165, p = .005$). The main effect of CEO prevention focus still is insignificant, just as its interaction term with financial distress. The interaction term for CEO promotion focus and financial distress remains significant at the .05 level ($B = -2.495, \text{Exp}(B) = 0.082, p = .028$), similar to *Model 4*.

Table 3. Logistic regression results.

Dependent variable: employee downsizing					
Model	1	2	3	4	5
(Constant)	-64.948 (7917.159)	-62.069 (7819.019)	-61.808 (7843.805)	-62.469 (8225.358)	-62.653 (8212.588)
Control variables					
Firm size	2.029** (0.856)	1.868** (0.876)	1.846** (0.881)	1.873** (0.895)	1.862** (0.896)
Market-to-book value	-0.206 (0.140)	-0.128 (0.140)	-0.123 (0.140)	-0.144 (0.145)	-0.137 (0.146)
Leverage	0.145 (0.343)	-0.100 (0.357)	-0.124 (0.361)	-0.044 (0.366)	-0.083 (0.369)
Asset change	-0.226*** (0.025)	-0.226*** (0.025)	-0.227*** (0.026)	-0.229*** (0.026)	-0.231*** (0.026)
M&As	-0.095 (0.254)	-0.130 (0.257)	-0.129 (0.257)	-0.044 (0.271)	-0.041 (0.271)
Other letter signees	-3.536** (1.380)	-3.411** (1.368)	-3.427** (1.370)	-2.892** (1.371)	-2.898** (1.373)
CEO prominence low	-3.015** (1.186)	-2.957** (1.187)	-2.933** (1.191)	-3.059** (1.226)	-3.015** (1.232)
CEO prominence moderate	-0.044 (0.566)	0.056 (0.575)	0.074 (0.578)	0.122 (0.585)	0.156 (0.589)
CEO prominence high	-1.828* (0.977)	-1.699* (0.986)	-1.706* (0.995)	-1.578 (1.054)	-1.607 (1.015)
CEO tenure	-0.611* (0.356)	-0.528 (0.354)	-0.533 (0.359)	-0.492 (0.355)	-0.510 (0.359)
Independent variables					
Financial distress high		1.301** (0.598)	1.471** (0.680)	1.553** (0.636)	1.845** (0.736)
CEO prevention focus			0.694 (1.365)		1.015 (1.390)
CEO promotion focus				2.884*** (1.054)	3.052*** (1.088)
Interaction effects					
Financial distress*CEO prevention focus			-0.762 (1.351)		-1.203 (1.375)
Financial distress*CEO promotion focus				-2.337** (1.100)	-2.495** (1.135)
-2LL	406.113	400.981	400.668	393.018	392.221
Cox & Snell R square	.338	.340	.340	.342	.342
McFadden Adj. R square	.688	.691	.691	.698	.698
Nagelkerke R square	.751	.755	.755	.760	.761
Percentage correct	95.9	95.9	95.9	95.9	95.9
Observations	2195	2195	2195	2195	2195

*** $p < .01$, ** $p < .05$, * $p < .10$. Fixed effects for Year and CEO included (not displayed in table).

5. Discussion and conclusion

In this final part, the results will be discussed in conjunction with their respective hypotheses. Implications of the findings will also be addressed. Furthermore, limitations of the current study will be discussed and directions for future research provided. The section ends with a conclusion of the research.

5.1 Discussion

Taking an upper echelons perspective, this study researched the relationship between financial distress, employee downsizing and the moderating role of CEO regulatory focus. Previous research has yielded mixed findings with regards to the link between poor firm performance and employee downsizing, with some studies finding firms engaging in downsizing when performing poorly, whereas others find no relationship (Datta et al., 2010; Desai, 2016; Schweizer & Nienhaus, 2017). To explain this discrepancy in findings, upper echelons theory was identified as promising theoretical underpinning, as it has shown various CEO characteristics to influence strategic decision making within firms (Hambrick & Mason, 1984; Wang et al., 2016). Within the upper echelons field, CEO regulatory focus, consisting of a prevention and promotion focus, has been found leading to divergent strategic action (Gamache et al., 2015; Gamache et al., 2020; Scoresby et al., 2021). Based on these results, the current study investigated the influence of CEO regulatory within the context of poor performance and downsizing. To this end, the following research question was posited: *How does CEO regulatory focus influence the relationship between financial distress and the strategic action of employee downsizing?*

To answer this research question, three hypotheses were developed. First, the relationship between financial distress (signaling poor performance) and employee downsizing was researched. The results indicated that firms which experience financial distress indeed are more likely to engage in employee downsizing. All models which included financial distress, displayed a positive relationship with employee downsizing. This result confirms the first hypothesis. It is also consistent with various studies which also establish this relationship (Ahmadjian & Robinson, 2001; Budros, 2005; Coucke et al., 2007; Kang & Shivdasani, 1997; Yu & Park, 2006). When firms are financially distressed, they seek to improve their profitability. As Schweizer and Nienhaus (2017) note, there are various options to reach this goal. Employee downsizing is often deployed with the aim of improving efficiency or reducing

personnel expenditures to increase profitability (Datta & Basuil, 2015; DeWitt, 1998). This may explain why financial distress leads to employee downsizing.

However, some studies did not find significance for this link (Igbal & Shetty, 1994; Perry & Shivdasani, 2005; Yoo & Mody, 2000). This might possibly be caused by their sample selection. For example, Yoo and Mody (2000) only include telephone companies in their sample, which narrows down the sample, while downsizing has been shown to occur more frequently in certain, other industries. Coucke et al. (2007) show it more common in manufacturing firms than their non-manufacturing counterparts, and Wagar (1997) finds differences in extent of downsizing, with the communications sector engaging in less profound workforce reductions, compared to other industries.

Another potential explanation for some authors finding non-significant effects, may be the different operationalizations used to capture poor performance. Some studies employ financial distress, similar to this study (Franz et al., 1998; Mehtha et al., 2021), but others use return on assets, return on equity, or other measures such as productivity (Ahmadjian & Robinson, 2001; Kang & Shivdasani, 1997; Yoo & Mody, 2000). All these operationalizations may be equally valid to capture poor performance, but may also lead to different results when trying to establish relationships with downsizing. Finally, as Desai (2016) argues, moderating factors may influence the relationship between poor performance and strategic action, which was the rationale for including CEO regulatory focus in the current study.

The second hypothesis of this study argued CEO prevention focus to moderate the relationship between financial distress and employee downsizing, such that prevention-focused CEOs would not engage in downsizing. Unfortunately, the results show no influence of prevention focus as well as the interaction between prevention focus and financial distress. This finding contradicts previous studies in the regulatory focus field, which have found an effect for CEO prevention focus (Gamache et al., 2015; Gamache et al., 2020; Scoresby et al., 2021). However, these authors focus on other strategic action, being acquisitions, differences in stakeholder strategy and R&D investments, and do not focus on downsizing or a context of poor performance. Employee downsizing clearly differs as a strategic action form previously researched actions, which may explain why no effect was found. Additionally, downsizing among prevention-focused CEOs may be more diffuse. Based on the properties of this focus, some of these CEOs may engage in small workforce reductions, whereas others do not. The extent to which prevention-focused CEOs are willing of downsizing may differ largely among them. Another potential explanation for the non-significance, is the fact that CEOs may compile a set of actions in response to financial distress. Such actions may also compose of financial,

managerial or portfolio action, besides or in addition to downsizing (Schweizer & Nienhaus, 2017). Prevention-focused CEOs may include other measures which better suit their regulatory focus. Some of these CEOs can additionally choose to still include workforce reductions, while others find a set of other measures to be more appropriate to battle financial distress.

The third hypothesis stated that CEO promotion focus moderates the relationship between financial distress and employee downsizing, such that promotion-focused CEOs would engage in downsizing. A significant positive main effect of CEO promotion focus was found, which means that, in general, such CEOs are more likely to reduce their workforces. However, in the context of financial distress, the results showed the interaction between CEO promotion focus and financial distress not leading to more downsizing, rejecting the third hypothesis. Conversely, the coefficients revealed significance in the other direction as anticipated. CEO promotion focus moderates the relationship such that CEOs with a promotion focus are less likely to engage in downsizing when in financial distress.

There may be several explanations for this contradictory finding. First, promotion focused CEOs have been shown eager to engage in strategic action (Gamache et al., 2015; Jiang et al., 2020). However, the underlying rationale of engaging in this action is to grow the firm (Crowe & Higgins, 1997; Higgins, 1997). As reducing the workforce is the exact opposite of growing the firm, promotion-focused CEOs may opt to engage in other strategic actions in response to financial distress. Schweizer and Nienhaus (2017) argue firms may engage in acquisitions when in financial distress. In line with this, Morrow Jr et al. (2007) and Wu (2013) find acquiring new resources when in distress has a positive effect on the turnaround process. Hence, such strategic action may better fit promotion-focused CEOs of financially distressed firms.

Secondly, it could be the case that when financially distressed, the promotion focus becomes even more prevalent, leading such CEOs to protect their resource base against declining, as decline is diametrically opposed to their urge for growth. This seems to confirm findings by multiple authors, who show resource base an important factor for the extent of strategic change during poor performance (Audia & Greve, 2006; Wei-Ru, 2008). As downsizing under distress may lead to an even further reduction of resources, these CEOs may avoid this action.

When performing to standard however, it may be the case the urge to protect resources is only present to a lesser extent, and promotion-based CEOs do engage in workforce reduction to, for example, improve efficiency (DeWitt, 1998). This may in turn lead to higher profits. Moreover, when not in financial distress, the risk of a declining resource base is not as high in

comparison to when financially distressed. As such, promotion-based CEOs may decide to downsize when not in distress to drive performance, as they perceive more stability in their resource base. This could be a possible explanation for the positive main effect in relation to downsizing.

Theoretical implications

These results add to the literature on poor firm performance and downsizing in two ways. First, there have been some contradictory findings within the downsizing domain with regards to the link between poor performance and employee downsizing (Datta et al., 2010). Most studies find a positive relationship (Ahmadjian & Robinson, 2001; Budros, 2005; Coucke et al., 2007; Kang & Shivdasani, 1997; Yu & Park, 2006), but some scholars find insignificant results (Igbal & Shetty, 1994; Perry & Shivdasani, 2005; Yoo & Mody, 2000). Consistent with the majority of studies, this research finds the positive relationship between financial distress and employee downsizing, strengthening the theoretical base underlying this relationship.

Second, in order to explain the mixed findings with regards to firm performance and strategic action (Audia & Greve, 2006; Chattopadhyay et al., 2001; Desai, 2016; Gaba & Bhattacharya, 2012; Gaba & Joseph, 2013; Mehtha et al., 2021), this study introduced a CEO behavioral perspective anchored in upper echelons theory, thereby also answering the call by Schweizer and Nienhaus (2017) to integrate behavioral characteristics into financial distress literature. CEO regulatory focus provides a new perspective on firm strategic action in the light of poor performance. This study has shown CEO promotion focus to alter the relationship between financial distress and employee downsizing, such that these CEOs are less likely to engage in downsizing when in financial distress. This finding also adds to the research on CEO regulatory focus in relation to strategic action (Gamache et al., 2015; Gamache et al., 2020; Huang et al., 2021; Jiang et al., 2020; Scoresby et al., 2021), introducing a new strategic action in the form of downsizing. More importantly, CEO regulatory focus provides a possible explanation for the mentioned inconsistencies in earlier findings. As such, it warrants the inclusion of CEO regulatory focus in the debate on firm performance and consequent strategic action.

Managerial implications

The findings of this study also carry some managerial implications. It may be worthwhile for CEOs to assess whether they are promotion-focused or not. As Crowe and Higgins (1997) note, a promotion focus drives individuals towards certain actions. Based on the findings from

the current study, such CEOs stay away from downsizing when financially distressed. Although promotion-based CEOs could engage in other action, not engaging in action when in financial distress could be a sign of threat-rigidity (Fernández-Menéndez et al., 2020). CEOs could contemplate if they have this focus, and consider the risks when deciding on whether or not to engage in downsizing. Additionally, a board could assess regulatory focus when appointing a new CEO. As Gamache et al. (2015) also suggest, the antecedents and consequences of a promotion focus could be considered in this process.

5.2 Limitations and directions for future research

This research also has some limitations, which in turn provide directions for future research. A first limitation concerns data collection for measuring the regulatory focus construct. To compute this variable, number of regulatory focus words were divided over total letter length. However, in some instances it was not entirely clear whether a section was written by the CEO. Some letters included inserts containing notes from other executives or other information, which were excluded from the database. In a few cases, it was not entirely clear whether a CEO had written the section. These sections were excluded from the database. Future research could develop a codebook to assess which parts to include, or assign levels of magnitude to different sections of the CEO letter. Additionally, other data sources could be included as well, such as earnings calls to research their potential in revealing CEO regulatory focus.

A second limitation entails the sample. Although the S&P500 sample had a substantial number of observations, it concerns some of the world's most powerful and influential firms. Previous studies have shown that firm size is positively related to survival chances (Agarwal et al., 2002; Kato, 2010). Hence, S&P500 firms are less likely to be (severely) financially distressed. Future work could investigate financial distress levels for small and medium enterprises (SMEs), and see if the found effects of CEO regulatory focus remains for such companies.

A further limitation of this study and a potential avenue for future work, is the inclusion of board composition data. This study only included regulatory focus data for the CEO, and ignored the potential impact of other executives. However, board members also influence strategic decisions. Scholars may examine the interplay between different foci within the downsizing context. For example, Desai (2016) finds evidence that board size moderates the relationship between performance and strategic action. Guoli et al. (2017) combine regulatory foci for the CEO and CFO to see how they interact to shape corporate

strategy. Similar to their study, researching regulatory focus scores of other board members in addition to the CEO may provide insights on a behavioral level in the strategic decision-making mechanisms at play.

Lastly, another limitation of this study is that it did not include a performance outcome. That is, the performance effect of whether or not firms had engaged in workforce reductions was not included in the model. As the upper echelons model includes strategic action and consequent firm outcomes, this would be an interesting avenue to pursue. In advancing the work on regulatory focus and its divergent strategic action, a potential next step could be to include outcome measures, which consider firm performance after (not) engaging in strategic action.

5.3 Conclusion

After reviewing the literature on poor firm performance, employee downsizing and upper echelons theory, this study introduced CEO regulatory focus as a potentially influential moderator for the relationship between poor performance, which was operationalized as financial distress (Koh et al., 2015; Mehtha et al., 2021), and the strategic action of employee downsizing. Although some studies find insignificant results for the relationship between poor performance and workforce reductions (Igbal & Shetty, 1994; Perry & Shivdasani, 2005; Yoo & Mody, 2000), this study finds poor performance leading to higher levels of employee downsizing, strengthening the theoretical base of studies finding similar results (Ahmadjian & Robinson, 2001; Budros, 2005; Coucke et al., 2007; Kang & Shivdasani, 1997; Yu & Park, 2006).

Furthermore, findings revealed that CEO prevention focus did not significantly impact the financial distress – downsizing relationship. CEO promotion focus, however, did exert an influence. CEO promotion focus displayed a significant main effect, which implied promotion-focused CEOs in general to be more likely to engage in downsizing. Additionally, a significant interaction effect was found, which was in the other direction the hypothesis anticipated. More precisely, CEO promotion focus moderated the relationship between financial distress and employee downsizing, such that promotion-focused CEOs are less likely to engage in downsizing.

This research shows the influence of CEO regulatory focus on firm strategic action. Grounded in upper echelons theory, CEO regulatory focus is partly able to explain differences in firm strategic action in the context of poor firm performance. Still, future work is needed to gain a better understanding of the moderating role of the regulatory focus concept. This study

raises questions on the exact inner workings of the CEO regulatory focus concept, and additional research is needed to uncover the effect of CEO regulatory focus against the backdrop of poor firm performance and consequent strategic action. This future research could focus on extending the measurement of CEO regulatory focus to a board level and identify the effect of the interplay between foci. Additionally, future work could focus on including other data sources such as earnings calls, to further strengthen the found effects, and include a performance outcome as well.

When taken together, the findings of this research show that financially distressed firms are more likely to engage in employee downsizing. Additionally, this study shows that CEO regulatory focus alters this effect. More precisely, a CEO promotion focus decreases the likelihood of financially distressed firms engaging in employee downsizing. As such, CEO regulatory focus is a moderating variable which may be able to explain the contradictory findings on poor performance and whether a firm engages in strategic action as response. Moreover, the findings also hold practical relevance, as it may be worthwhile for CEOs to consider their regulatory focus, and which potential effects this may have for their strategic decision-making.

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References

- Abrahamson, E., & Hambrick, D. C. (1997). Attentional homogeneity in industries: The effect of discretion. *Journal of Organizational Behavior*, 18(1), 513-532.
- Agarwal, R., Sarkar, M. B., & Echambadi, R. (2002). The conditioning effect of time on firm survival: An industry lifecycle approach. *Academy of Management Journal*, 45(5), 971-994. <https://doi.org/10.2307/3069325>
- Agle, B., Nagarajan, N., Sonnenfeld, J., & Srinivasan, D. (2006). Does CEO charisma matter? An empirical analysis of the relationships among organizational performance, environmental uncertainty, and top management team perceptions of CEO charisma. *Academy of Management Journal*, 49(1), 161-174. <https://doi.org/10.5465/AMJ.2006.20785800>
- Ahmadjian, C. L., & Robinson, P. (2001). Safety in numbers: Downsizing and the deinstitutionalization of permanent employment in Japan. *Administrative Science Quarterly*, 46(4), 622-654. <https://doi.org/10.2307/3094826>
- Al-Hadi, A., Chatterjee, B., Yaftian, A., Taylor, G., & Monzur Hasan, M. (2019). Corporate social responsibility performance, financial distress and firm life cycle: Evidence from Australia. *Accounting & Finance*, 59(2), 961-989. <https://doi.org/10.1111/acfi.12277>
- Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *Journal of Finance*, 13(4), 589-609. <https://doi.org/10.1111/j.1540-6261.1968.tb00843.x>
- Altman, E. I. (2000). Predicting financial distress of companies: Revisiting the Z-score and zeta. In A. R. Bell, C. Brooks, & M. Prokopczuk (Eds.), *Handbook of Research Methods and Applications in Empirical Finance* (pp. 428–456). <https://doi.org/10.4337/9780857936097.00027>
- Altman, E. I., & Hotchkiss, E. (2006). *Corporate financial distress and bankruptcy: Predict and avoid bankruptcy, analyze and invest in distressed debt* (3 ed.). John Wiley & Sons. <https://doi.org/10.1002/9781118267806>
- Altman, E. I., Iwanicz-Drozowska, M., Laitinen, E. K., & Suvas, A. (2017). Financial distress prediction in an international context: A review and empirical analysis of Altman's Z-score model. *Journal of International Financial Management & Accounting*, 28(2), 131-171. <https://doi.org/10.1111/jifm.12053>

- Amoa-Gyarteng, K. (2021). Corporate financial distress: The impact of profitability, liquidity, asset productivity, activity and solvency. *Journal of Accounting, Business & Management*, 28(2), 104-115. <https://doi.org/10.31966/jabminternational.v28i2.447>
- Andrieu, G., Staglianò, R., & Van der Zwan, P. (2018). Bank debt and trade credit for SMEs in Europe: firm-, industry-, and country-level determinants. *Small Business Economics*, 51(1), 245-264. <https://doi.org/10.1007/s11187-017-9926-y>
- Audia, P. G., & Greve, H. R. (2006). Less likely to fail: Low performance, firm size, and factory expansion in the shipbuilding industry. *Management Science*, 52(1), 83-94. <https://doi.org/10.1287/mnsc.1050.0446>
- Baumol, W., Blinder, A., & Wolfe, E. (2003). *Downsizing in America: reality, causes, and consequences*. Russell Sage Foundation.
- Bilgili, H., Campbell, J. T., O'Leary-Kelly, A., Ellstrand, A. E., & Johnson, J. L. (2020). The final countdown: Regulatory focus and the phases of CEO retirement. *Academy of Management Review*, 45(1), 58-84. <https://doi.org/10.5465/amr.2016.0455>
- Brockner, J., & Tory Higgins, E. (2001). Regulatory focus theory: Implications for the study of emotions at work. *Organizational Behavior & Human Decision Processes*, 86(1), 35-66. <https://doi.org/10.1006/obhd.2001.2972>
- Budros, A. (1997). The new capitalism and organizational rationality: The adoption of downsizing programs, 1979-1994. *Social Forces*, 76(1), 229-249. <https://doi.org/10.2307/2580324>
- Budros, A. (1999). A conceptual framework for analyzing why organizations downsize. *Organization Science*, 10(1), 69-82. <https://doi.org/10.1287/orsc.10.1.69>
- Budros, A. (2004). Causes of early and later organizational adoption: The case of corporate downsizing. *Sociological Inquiry*, 74(3), 355-380. <https://doi.org/10.1111/j.1475-682X.2004.00096.x>
- Budros, A. (2005). Downsizing in America: Reality, causes, and consequences. *Administrative Science Quarterly*, 50(3), 490-492. <https://doi.org/10.2189/asqu.2005.50.3.490>
- Carpenter, M. A., Geletkanycz, M. A., & Sanders, W. G. (2004). Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management*, 30(6), 749-778. <https://doi.org/10.1016/j.jm.2004.06.001>
- Cascio, W. F. (1994). Downsizing: What do we know, what have we learned? *Academy of Management Executive*, 23(4), 53-53. <https://doi.org/10.2307/4165111>

- Cascio, W. F., Chatrath, A., & Christie-David, R. A. (2021). Antecedents and consequences of employee and asset restructuring. *Academy of Management Journal*, 64(2), 587-613. <https://doi.org/10.5465/amj.2018.1013>
- Cascio, W. F., Young, C. E., & Morris, J. R. (1997). Financial consequences of employment-change decisions in major U.S. corporations. *Academy of Management Journal*, 40(5), 1175-1189. <https://doi.org/10.2307/256931>
- Cefis, E., & Marsili, O. (2005). A matter of life and death: Innovation and firm survival. *Industrial & Corporate Change*, 14(6), 1167-1192. <https://doi.org/10.1093/icc/dth081>
- Céspedes-Lorente, J. J., Magán-Díaz, A., & Martínez-Ros, E. (2019). Information technologies and downsizing: Examining their impact on economic performance. *Information & Management*, 56(4), 526-535. <https://doi.org/10.1016/j.im.2018.09.012>
- Chatrath, A., Ramchander, S., & Song, F. (1995). Are market perceptions of corporate layoffs changing? *Economics Letters*, 47(3-4), 335-342. <https://doi.org/01651765>
- Chatterjee, A., & Hambrick, D. C. (2007). It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, 52(3), 351-386. <https://doi.org/10.2189/asqu.52.3.351>
- Chattopadhyay, P., Glick, W. H., & Huber, G. P. (2001). Organizational actions in response to threats and opportunities *Academy of Management Journal*, 44(5), 937-955. <https://doi.org/10.5465/3069439>
- Chen, G., Crossland, C., & Luo, S. (2014). Making the same mistake all over again: CEO overconfidence and corporate resistance to corrective feedback. *Strategic Management Journal*, 36(10), 1513-1535. <https://doi.org/10.1002/smj.2291>
- Colbert, A. E., Barrick, M. R., & Bradley, B. H. (2014). Personality and leadership composition in top management teams: Implications for organizational effectiveness. *Personnel Psychology*, 67(2), 351-387. <https://doi.org/10.1111/peps.12036>
- Cottrell, T., & Nault, B. A. (2004). Product variety and firm survival in the microcomputer software industry *Strategic Management Journal*, 25(10), 1005-1025. <https://doi.org/10.1002/smj.408>
- Coucke, K., Pennings, E., & Sleuwaegen, L. (2007). Employee layoff under different modes of restructuring: exit, downsizing or relocation. *Industrial and Corporate Change*, 16(2), 161-182. <https://doi.org/10.1093/icc/dtm002>
- Crowe, E., & Higgins, E. T. (1997). Regulatory focus and strategic inclinations: Promotion and prevention in decision-making. *Organizational Behavior and Human Decision Processes*, 69(2), 117-132. <https://doi.org/10.1006/obhd.1996.2675>

- Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Prentice-Hall.
- D'Aveni, R. A. (1989). The aftermath of organizational decline: A longitudinal study of strategic and managerial characteristics of declining firms. *Academy of Management Journal*, 32(3), 577-605. <https://doi.org/10.2307/256435>
- Dahiya, S. (2003). Debtor-in-possession financing and bankruptcy resolution: Empirical evidence. *Journal of Financial Economics*, 69(1), 259-280. [https://doi.org/10.1016/S0304-405X\(03\)00113-2](https://doi.org/10.1016/S0304-405X(03)00113-2)
- Datta, D. K., & Basuil, D. A. (2015). Does employee downsizing really work? In M. Andresen & C. Nowak (Eds.), *Human Resource Management Practices: Assessing Added Value* (pp. 197-221). Springer International Publishing. https://doi.org/10.1007/978-3-319-08186-1_12
- Datta, D. K., Guthrie, J. P., Basuil, D., & Pandey, A. (2010). Causes and effects of employee downsizing: A review and synthesis. *Journal of Management*, 36(1), 281-348. <https://doi.org/10.1177/0149206309346735>
- Denis, D. J., & Kruse, T. A. (2000). Managerial discipline and corporate restructuring following performance declines. *Journal of Financial Economics*, 55(3), 391-424. [https://doi.org/10.1016/S0304-405X\(99\)00055-0](https://doi.org/10.1016/S0304-405X(99)00055-0)
- Desai, V. M. (2016). The behavioral theory of the (governed) firm: Corporate board influences on organizations' responses to performance shortfalls. *Academy of Management Journal*, 59(3), 860-879. <https://doi.org/10.5465/amj.2013.0948>
- DeWitt, R.-L. (1998). Firm, industry, and strategy influences on choice of downsizing approach. *Strategic Management Journal*, 19(1), 59-79.
- Dimaggio, P. J., & Powell, W. W. (1983). The iron cage revisited - Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147-160. <https://doi.org/10.2307/2095101>
- Duriau, V. J., Reger, R. K., & Pfarrer, M. D. (2007). A content analysis of the content analysis literature in organization studies. *Organizational Research Methods*, 10(1), 5-34. <https://doi.org/10.1177/1094428106289252>
- Eggers, J. P., & Kaplan, S. (2009). Cognition and renewal: Comparing CEO and organizational effects on incumbent adaptation to technical change. *Organization Science*, 20(2), 461-477. <https://doi.org/10.1287/orsc.1080.0401>
- Espahbodi, R., John, T., & Vasudevan, G. (2000). The effects of downsizing on operating performance. *Review of Quantitative Finance and Accounting*, 15, 107-126. <https://doi.org/10.1023/A:1008321929083>

- Fernández-Menéndez, J., Rodríguez-Ruiz, Ó., López-Sánchez, J.-I., & Delgado-Piña, M. I. (2020). Innovation in the aftermath of downsizing: evidence from the threat-rigidity perspective. *Personnel Review*, *49*(9), 1859-1877. <https://doi.org/10.1108/PR-02-2019-0082>
- Field, A. P. (2018). *Discovering statistics using IBM SPSS statistics* (4 ed.). Sage
- Franz, D. R., Crawford, D., & Dwyer, D. J. (1998). Downsizing, corporate performance, and shareholder wealth. *American Journal of Business*, *13*(1), 11-20. <https://doi.org/10.1108/19355181199800001>
- Gaba, V., & Bhattacharya, S. (2012). Aspirations, innovation, and corporate venture capital: A behavioral perspective. *Strategic Entrepreneurship Journal*, *6*(2), 178-199. <https://doi.org/10.1002/sej.1133>
- Gaba, V., & Joseph, J. (2013). Corporate structure and performance feedback: Aspirations and adaptation in M-form firms. *Organization Science*, *24*(4), 1102-1119. <https://doi.org/10.1287/orsc.1120.0788>
- Gamache, D. L., & McNamara, G. (2019). Responding to bad press: How CEO temporal focus influences the sensitivity to negative media coverage of acquisitions. *Academy of Management Journal*, *62*(3), 918-943. <https://doi.org/10.5465/amj.2017.0526>
- Gamache, D. L., McNamara, G., Mannor, M. J., & Johnson, R. E. (2015). Motivated to acquire? The impact of CEO regulatory focus on firm acquisitions. *Academy of Management Journal*, *58*(4), 1261-1282. <https://doi.org/10.5465/amj.2013.0377>
- Gamache, D. L., Neville, F., Bundy, J., & Short, C. E. (2020). Serving differently: CEO regulatory focus and firm stakeholder strategy. *Strategic Management Journal*, *41*(7), 1305-1335. <https://doi.org/10.1002/smj.3134>
- Giroud, X., Mueller, H. M., Stomper, A., & Westerkamp, A. (2012). Snow and leverage. *Review of Financial Studies*, *25*(3), 680-710. <https://doi.org/10.1093/rfs/hhr113>
- Greve, H. R. (1998). Performance, aspirations and risky organizational change. *Administrative Science Quarterly*, *43*(1), 58-86. <https://doi.org/10.2307/2393591>
- Greve, H. R. (2003). A behavioral theory of R&D expenditures and innovations: Evidence from shipbuilding. *Academy of Management Journal*, *46*(6), 685-702. <https://doi.org/10.5465/30040661>
- Guoli, C., Meyer-Doyle, P., & Wei, S. (2017). How CEO and CFO regulatory focus Interact to shape the firm's corporate strategy. *INSEAD Working Papers Collection*(3), 1-41.

- Guthrie, J. (2001). High-involvement work practices, turnover, and productivity: Evidence from New Zealand. *Academy of Management Journal*, 44(1), 180-190.
<https://doi.org/10.2307/3069345>
- Guthrie, J. P., & Datta, D. K. (2008). Dumb and dumber: The impact of downsizing on firm performance as moderated by industry conditions. *Organization Science*, 19(1), 108-123. <https://doi.org/10.1287/orsc.1070.0298>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis*. Cengage Learning.
- Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review*, 32(2), 334-343. <https://doi.org/10.5465/AMR.2007.24345254>
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193-206.
<https://doi.org/10.5465/AMR.1984.4277628>
- Hambrick, D. C., & Quigley, T. J. (2014). Toward more accurate contextualization of the CEO effect on firm performance. *Strategic Management Journal*, 35(4), 473-491.
<https://doi.org/10.1002/smj.2108>
- Henderson, A. D., Miller, D., & Hambrick, D. C. (2006). How quickly do CEOs become obsolete? Industry dynamism, CEO tenure, and company performance. *Strategic Management Journal*, 27(5), 447-460. <https://doi.org/10.1002/smj.524>
- Herrmann, P., & Nadkarni, S. (2014). Managing strategic change: The duality of CEO personality. *Strategic Management Journal*, 35(9), 1318-1342.
<https://doi.org/10.1002/smj.2156>
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52(12), 1280-1300.
<https://doi.org/10.1037/0003-066X.52.12.1280>
- Hillier, D., Marshall, A., McColgan, P., & Werema, S. (2007). Employee layoffs, shareholder wealth and firm performance: Evidence from the UK. *Journal of Business Finance & Accounting*, 34(3-4), 467-494. <https://doi.org/10.1111/j.1468-5957.2007.02042.x>
- Hmieleski, K. M., & Baron, R. A. (2008). Regulatory focus and new venture performance: A study of entrepreneurial opportunity exploitation under conditions of risk versus uncertainty. *Strategic Entrepreneurship Journal*, 2(4), 285-299.
<https://doi.org/10.1002/sej.56>
- Huang, S., Battisti, M., & Pickernell, D. (2021). CEO regulatory focus as the microfoundation of organizational ambidexterity: A configurational approach. *Journal of Business Research*, 125, 26-38. <https://doi.org/10.1016/j.jbusres.2020.12.004>

- Igbal, Z., & Shetty, S. (1994). A multivariate analysis of employee layoffs. *American Business Review*, 12(2), 15.
- Iyer, D. N., & Miller, K. D. (2008). Performance feedback, slack, and the timing of acquisitions. *Academy of Management Journal*, 51(4), 808-822.
<https://doi.org/10.5465/AMJ.2008.33666024>
- Jackson, S. E., & Schuler, R. S. (1995). Understanding human resource management in the context of organizations and their environments. *Annual Review of Psychology*, 46(1), 237. <https://doi.org/10.1146/annurev.ps.46.020195.001321>
- Jia, J., & Li, Z. (2022). Corporate environmental performance and financial distress: Evidence from Australia. *Australian Accounting Review*, 0(0), 1-13.
<https://doi.org/10.1111/auar.12366>
- Jiang, W., Wang, L., Chu, Z., & Zheng, C. (2020). How does CEO regulatory focus matter? The impacts of CEO promotion and prevention focus on firm strategic change. *Group & Organization Management*, 45(3), 386-416.
<https://doi.org/10.1177/1059601119891268>
- John, K. (1993). Managing financial distress and valuing distressed securities: A survey and a research agenda. *The Journal of the Financial Management Association*, 22(3), 60-78.
<https://doi.org/10.2307/3665928>
- Johnsen, T., & Melicher, R. W. (1994). Predicting corporate bankruptcy and financial distress: Information value added by multinomial logit models. *Journal of Economics and Business*, 46(4), 269-286. [https://doi.org/10.1016/0148-6195\(94\)90038-8](https://doi.org/10.1016/0148-6195(94)90038-8)
- Johnson, P. D., Smith, M. B., Wallace, J. C., Hill, A. D., & Baron, R. A. (2015). A review of multilevel regulatory focus in organizations. *Journal of Management*, 41(5), 1501-1529. <https://doi.org/10.1177/0149206315575552>
- Kang, J.-K., & Shivdasani, A. (1997). Corporate restructuring during performance declines in Japan. *Journal of Financial Economics*, 46(1), 29-65. [https://doi.org/10.1016/S0304-405X\(97\)00024-X](https://doi.org/10.1016/S0304-405X(97)00024-X)
- Kaplan, S. (2008). Cognition, capabilities and incentives: Assessing firm response to the fiber-optic revolution. *Academy of Management Journal*, 51(4), 672-695.
<https://doi.org/10.5465/AMJ.2008.33665141>
- Kato, M. (2010). The role of investment efficiency in the industry life cycle. *Industrial & Corporate Change*, 19(1), 273-294. <https://doi.org/10.1093/icc/dtp041>
- KNAW, NFU, NWO, TO2-federatie, Hogescholen, V., & VSNU. (2018). *Netherlands code of conduct for research integrity*.

- Koh, S., Durand, R. B., Dai, L., & Chang, M. (2015). Financial distress: Lifecycle and corporate restructuring. *Journal of Corporate Finance*, 33, 19-33.
<https://doi.org/10.1016/j.jcorpfin.2015.04.004>
- Lanaj, K., Chang, C. H., & Johnson, R. E. (2012). Regulatory focus and work-related outcomes: A Review and meta-analysis. *Psychological Bulletin*, 138(5), 998-1034.
<https://doi.org/10.1037/a0027723>
- Li, A., Chiu, S. S., Kong, D. T., Cropanzano, R., & Ho, C. W. (2021). How CEOs respond to mortality salience during the COVID-19 pandemic: Integrating terror management theory with regulatory focus theory. *Journal of Applied Psychology*, 106(8), 1188-1201. <https://doi.org/10.1037/apl0000956>
- Liu, H. H. (2011). Impact of regulatory focus on ambiguity aversion. *Journal of Behavioral Decision Making*, 24(4), 412-430. <https://doi.org/10.1002/bdm.702>
- McClelland, P. L., Xin, L., & Barker III, V. L. (2010). CEO commitment to the status quo: Replication and extension using content analysis. *Journal of Management*, 36(5), 1251-1277. <https://doi.org/10.1177/0149206309345019>
- McFadden, D. (1977). Quantitative methods for analyzing travel behaviour of individuals: Some recent developments. In D. Hensher & P. Stopher (Eds.), *Behavioural Travel Modelling* (pp. 279-318). Croom Helm.
- McKinley, W. (1993). Organizational decline and adaptation: Theoretical controversies. *Organization Science*, 4(1), 1-9. <https://doi.org/10.1287/orsc.4.1.1>
- McKinley, W., Zhao, J., & Rust, K. G. (2000). A sociocognitive interpretation of organizational downsizing. *Academy of Management Review*, 25(1), 227-243.
<https://doi.org/10.5465/amr.2000.2791612>
- Mehtha, S. R., Bhilare, M., & Mehtha, V. (2021). Promoters' equity share pledging, financial performance and financial distress: A case study of future group companies listed in national stock exchange of India. *International Journal of Research in Commerce & Management*, 12(9), 1-19.
- Morrow Jr, J. L., Sirmon, D. G., Hitt, M. A., & Holcomb, T. R. (2007). Creating value in the face of declining performance: firm strategies and organizational recovery. *Strategic Management Journal*, 28(3), 271-283. <https://doi.org/10.1002/smj.579>
- Ofek, E. (1993). Capital structure and firm response to poor performance. *Journal of Financial Economics*, 34(1), 3-30. [https://doi.org/10.1016/0304-405X\(93\)90038-D](https://doi.org/10.1016/0304-405X(93)90038-D)
- Olariu, D. B. (2016). Profitability ratio as a tool for bankruptcy prediction. *SEA: Practical Application of Science*, 369-372.

- Palmon, O., Sun, H.-L., & Tang, A. P. (1997). Layoff announcements: Stock market impact and financial performance. *Financial Management*, 26(3), 54-68.
<https://doi.org/10.1111/%28ISSN%291755-053X/issues>
- Penney, L. M., David, E., & Witt, L. A. (2011). A review of personality and performance: Identifying boundaries, contingencies, and future research directions. *Human Resource Management Review*, 21(4), 297-310.
<https://doi.org/10.1016/j.hrmr.2010.10.005>
- Perry, T., & Shivdasani, A. (2005). Do boards affect performance? Evidence from corporate restructuring. *The Journal of Business*, 78(4), 1403-1432.
<https://doi.org/10.1086/430864>
- Rashid, D. A., & Abbas, Q. (2011). Predicting bankruptcy in Pakistan. *Theoretical and Applied Economics*, 18, 103-128.
- Ray, P., & Maheshwari, S. (2017). The essence of downsizing: A review of literature. *Indian Journal of Industrial Relations*, 53(2), 290-301.
- Redman, T., & Keithley, D. (1998). Downsizing goes east? Employment re-structuring in post-socialist Poland. *The International Journal of Human Resource Management*, 9(2), 274-295. <https://doi.org/10.1080/095851998341099>
- Richard, O. C., Wu, P., & Chadwick, K. (2009). The impact of entrepreneurial orientation on firm performance: the role of CEO position tenure and industry tenure. *International Journal of Human Resource Management*, 20(5), 1078-1095.
<https://doi.org/10.1080/09585190902850281>
- Robins, J. A. (1993). Organizations as strategy: Restructuring production in the film industry. *Strategic Management Journal*, 14, 103-118. <https://doi.org/10.1002/smj.4250140909>
- Schenkel, A., & Teigland, R. (2017). Why doesn't downsizing deliver? A multi-level model integrating downsizing, social capital, dynamic capabilities, and firm performance. *International Journal of Human Resource Management*, 28(7), 1065-1107.
<https://doi.org/10.1080/09585192.2015.1130734>
- Schweizer, L., & Nienhaus, A. (2017). Corporate distress and turnaround: integrating the literature and directing future research. *Business Research*, 10(1), 3-47.
<https://doi.org/10.1007/s40685-016-0041-8>
- Scoresby, R. B., Withers, M. C., & Ireland, R. D. (2021). The effect of CEO regulatory focus on changes to investments in R&D. *Journal of Product Innovation Management*, 38(4), 401-420. <https://doi.org/10.1111/jpim.12591>

- Shah, J., Higgins, E. T., & Friedman, R. S. (1998). Performance incentives and means: How regulatory focus influences goal attainment. *Journal of Personality & Social Psychology*, 74(2), 285-293. <https://doi.org/10.1037/0022-3514.74.2.285>
- Shi, W., & DesJardine, M. R. (2021). Under attack! CEO implicit motives and firm competitive responses following short seller activism. *Organization Science*, 1-27. <https://doi.org/10.1287/orsc.2021.1464>
- Simsek, Z. (2004). CEO tenure and organizational performance: Testing a non-linear intervening model [Proceeding]. O1-O6. <https://doi.org/10.5465/AMBPP.2004.13863781>
- Steinbach, A., Devers, C. E., McNamara, G., & Li, J. (2016). Peering into the executive mind: Expanding our understanding of the motives for acquisitions. In *Advances in mergers and acquisitions* (Vol. 15, pp. 145-160). Emerald Group Publishing Limited. <https://doi.org/10.1108/S1479-361X20160000015008>
- Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences*. Erlbaum.
- Taylor, R. (1990). Interpretation of the correlation coefficient: A basic review. *Journal of Diagnostic Medical Sonography*, 6(1), 35-39. <https://doi.org/10.1177/875647939000600106>
- Tsai, P., Wu, S.-L., Wang, H.-K., & Huang, I.-C. (2006). An empirical research on the institutional theory of downsizing: Evidence from MNC's subsidiary companies in Taiwan. *Total Quality Management*, 17(5), 633-654. <https://doi.org/10.1080/14783360600588216>
- Vicente-Lorente, J. D., & Zúñiga-Vicente, J. Á. (2018). The U-shaped effect of R&D intensity on employee downsizing: evidence from Spanish manufacturing firms (1994-2010). *International Journal of Human Resource Management*, 29(15), 2330-2351. <https://doi.org/10.1080/09585192.2016.1239212>
- Wagar, T. H. (1997). Factors affecting permanent workforce reduction: Evidence from large Canadian organizations. *Canadian Journal of Administrative Sciences*, 14(3), 303-314. <https://doi.org/10.1111/j.1936-4490.1997.tb00137.x>
- Wang, G., Holmes, R. M., Oh, I. S., & Zhu, W. (2016). Do CEOs matter to firm strategic actions and firm performance? A meta-analytic investigation based on upper echelons theory. *Personnel Psychology*, 69(4), 775-862. <https://doi.org/10.1111/peps.12140>
- Wei-Ru, C. (2008). Determinants of firms' backward- and forward-looking R&D search behavior. *Organization Science*, 19(4), 609-622. <https://doi.org/10.1287/orsc.1070.0320>

- Wu, B. (2013). Opportunity costs, industry dynamics, and corporate diversification: Evidence from the cardiovascular medical device industry, 1976–2004. *Strategic Management Journal*, 34(11), 1265-1287. <https://doi.org/10.1002/smj.2069>
- Yehning, C., Weston, J. F., & Altman, E. I. (1995). Financial distress and restructuring models. *The Journal of the Financial Management Association*, 24(2), 57-75. <https://doi.org/10.2307/3665535>
- Yoo, H.-O., & Mody, B. (2000). Predictors of downsizing in the U.S. local telephone industry. *Information Society*, 16(1), 23-33. <https://doi.org/10.1080/019722400128301>
- Yu, G. C., & Park, J. S. (2006). The effect of downsizing on the financial performance and employee productivity of Korean firms. *International Journal of Manpower*, 27(3), 230-250. <https://doi.org/10.1108/01437720610672158>
- Zhang, Y., & Rajagopalan, N. (2010). Once an outsider, always an outsider? CEO origin, strategic change, and firm performance. *Strategic Management Journal*, 31(3), 334-346. <https://doi.org/10.1002/smj.812>
- Zorn, M. L., DeGhetto, K., Ketchen, D. J., & Combs, J. G. (2020). The impact of hiring directors' choice-supportive bias and escalation of commitment on CEO compensation and dismissal following poor performance: A multimethod study. *Strategic Management Journal*, 41(2), 308-339. <https://doi.org/10.1002/smj.3092>

Appendices

Appendix A: Regulatory focus dictionary

Promotion focus words	Prevention focus words
Accomplish, Achieve, Advancement, Aspiration, Aspire, Attain, Desire, Earn, Expand, Gain, Grow, Hope, Hoping, Ideal, Improve, Increase, Momentum, Obtain, Optimistic, Progress, Promoting, Promotion, Speed, Swift, Toward, Velocity, Wish	Accuracy, Afraid, Anxious, Avoid, Careful, Conservative, Defend, Duty, Escape, Escaping, Evade, Fail, Fear, Loss, Obligation, Ought, Pain, Prevent, Protect, Responsible, Risk, Safety, Security, Threat, Vigilance

Dictionary lists retrieved from Gamache et al. (2020)

Appendix B: Coding scheme CEO prominence

CEO prominence was coded according to the following scheme:

Score	Definition
1	No photograph of CEO in annual letter
2	Photograph of CEO with one or more executives
3	Photograph of CEO occupying less than half a page
4	Photograph of CEO occupying more than half a page

This coding scheme was developed by Chatterjee and Hambrick (2007)

Appendix C: Box-Tidwell test (linearity continuous predictors with outcome variable)

		Variables in the Equation					
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Market_to_book_value	,071	,158	,204	1	,652	1,074
	MBV_log by Market_to_book_value	-,037	,052	,496	1	,481	,964
	Asset_change	,053	,155	,116	1	,733	1,054
	Asset_change by Asset_change_log	-,084	,057	2,149	1	,143	,920
	Leverage	,703	,276	6,475		,011	2.020
	Leverage by Leverage_log	-,290	,149	3,806	1	,051	,748
	CEO_tenure	-,182	,086	4,479	1	,034	,834
	CEO_tenure by CEO_tenure_log	,046	,024	3,620	1	,057	1,047
	Constant	-2,217	,507	19,090	1	,000	,109

Appendix D: Multicollinearity tests

		Coefficients ^a	
		Collinearity Statistics	
Model		Tolerance	VIF
1	Market_to_book_value	,598	1,671
	Asset_change	,953	1,050
	Firm_size	,793	1,260
	Leverage	,630	1,586
	CEO_tenure	,904	1,107
	M&As	,868	1,153
	Other_letter_signees	,539	1,854
	CEO_prominence_low	,533	1,877
	CEO_prominence_moderate	,707	1,415
	CEO_prominence_high	,781	1,281
	Financial_distress_high	,628	1,593
	Promotion_focus_high	,963	1,039
	Prevention_focus_high	,965	1,037
	Industry2	,009	115,143
	Industry4	,002	552,440
	Industry5	,003	337,989
	Industry6	,012	81,609
	Industry7	,008	120,887
	Industry8	,009	111,980
	Industry9	,004	255,070
Industry10	,091	11,037	

a. Dependent Variable: Downsizing_dichotomous

Appendix E: Goodness-of-model fit measures logistic regression

Hosmer and Lemeshow test

	Chi-square	df	Sig.
Model 1	0.189	8	.999
Model 2	0.152	8	.999
Model 3	0.155	8	.999
Model 4	0.010	8	.999
Model 5	0.018	8	.999

Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Model 1	258.691	10	< .001
Model 2	5.133	1	.023
Model 3	0.312	2	.855
Model 4	7.963	2	.019
Model 5	8.447	2	.015