Master Thesis

Remain in the spotlight or retreat into the shadows? The relationship between CEO narcissism, impression offsetting and the stock market reaction to an acquisition announcement

Student:	Stephan Reuling
Student number:	s1003696
Supervisors:	dr. H.L. Aalbers
Second reader:	J. Röttger MSc
Master:	Business Administration: Strategic Management
Academic year:	2021-2022

Abstract

Drawing on upper echelon theory, impression management literature and signalling theory, this study examines the relationship between CEO narcissism, impression offsetting and the stock market reaction to an acquisition announcement. Impression offsetting is a technique that is used by companies when they expect that an event, in this thesis an acquisition, will negatively influence the perceptions of stakeholders. This thesis proposes a moderated mediation model as basis for the hypotheses. It is hypothesized that CEO narcissism is negatively related to impression offsetting and in turn that impression offsetting is positively related to the stock market reaction to an acquisition announcement. Thereby, impression offsetting mediates the expected negative relationship between CEO narcissism and the stock market reaction. Lastly, CEO power is proposed as a moderator of the relationship between CEO narcissism and impression offsetting. A quantitative study was conducted to test the hypotheses, the sample consisting of S&P 500 companies that acquired a public target in the years 2010-2021. The hypothesized relationships between CEO narcissism and impression offsetting and impression offsetting and the stock market reaction were not supported by the results. Partial support was found for the negative relationship between CEO narcissism and the stock market reaction. Several additional analyses regarding the hypothesized relationships were carried out. This thesis contributes to various strands of literature, such as the literature on CEO narcissism and impression offsetting. Several suggestions for future research are discussed.

Table of contents

Introduction

Impression management is common in human behaviour. It can be described as a process in which individuals attempt to control the impressions others form of them (Leary & Kowalski, 1990). With organizations being institutions created by humans, it is no surprise that organizations also actively engage in impression management. Organizational impression management deals with actions that are purposely designed to influence external perceptions of an organization (Elsbach et al., 1998). An example is maintaining a corporate reputation, whereby corporate communication is used as a tool to influence perceptions (Highhouse et al., 2009; Hooghiemstra, 2000). Another instance in which companies use communication to influence perceptions is in the context of mergers and acquisitions (M&A). In an M&A context, firm communication is a strategic tool for companies to influence investors' perceptions, as investors are looking to gain more information to reduce the information asymmetry which is present between the firm and investors (Connelly et al., 2011). The theoretical field which looks into these cases of incomplete and asymmetrically distributed information is signalling theory. The firm is often the intentional or unintentional sender of a signal, which serves as information to the receivers, which are often investors (Aalbers et al., 2021a). These firm signals are crucial, as these can alter the market's beliefs about a firm. But what if a firm engages in impression management when it senses a certain event can be perceived negatively by stakeholders? The sending out of positive but unrelated information, in anticipation of an event to which stakeholders might negatively react, is an impression management technique used by firms called impression offsetting (Graffin et al., 2016). In this study, the negative event refers to an acquisition announcement, as capital markets often respond negatively to acquisition announcements (Haleblian et al., 2009). The usage of impression offsetting by a company can be a crucial signal for investors, as impression offsetting is associated with low CEO confidence in an acquisition's potential to create value (Gamache et al., 2019). This thesis will look into the use of impression offsetting by companies and examine its influence on the stock market reaction. The stock market reaction will be measured by using an event study methodology to calculate abnormal returns which are attributable to the acquisition announcement.

However, in examining the relationship between impression offsetting and the stock market reaction, this thesis will consider an additional element that has so far been relatively overlooked by research. Although the relevance of impression management on investors' perceptions and assessment of a company has been established (Pan et al., 2017; Whittington

et al., 2016), the influence of CEO characteristics on the usage of anticipatory impression management is less well researched. This thesis aims to partly fill that gap by combining impression management literature with upper echelon theory. The core assumption in upper echelon theory is that organizational outcomes such as strategic choices and firm performance are partially dependent on the manager's background (Hambrick & Mason, 1984). An example of a CEO characteristic that is relevant to firm outcomes is CEO narcissism. Narcissism is a multi-layered personality trait, characterized by a combination of a grandiose and unrealistically positive self-view, a continuous need to have this self-view reinforced (by self-regulation) and a general disregard for other persons (Cragun et al., 2020). CEO narcissism has been linked to several firm outcomes, such as the number and size of acquisitions (Chatterjee & Hambrick, 2007) but also to lower profitability (Ham et al., 2018). Prior upper echelon theory research has shown that several CEO characteristics, such as gender, CEO overconfidence and CEO narcissism influence firm communications, such as the annual report or earnings announcements, and more specifically the tone of firm communications (Bassyouny et al., 2020; Liu & Nguyen, 2020; Marquez-Illescas et al., 2019). This thesis builds on these findings and hypothesizes that CEO narcissism has an influence on companies' use of impression offsetting.

In combining upper echelon theory and impression management literature, this thesis fills a relevant gap in literature. There is increasing evidence that CEOs use impression management to influence stock market perceptions, which makes understanding impression management and its effects fundamental to improve the efficiency of capital markets (Boudt & Thewissen, 2019; Westphal et al., 2012). More specifically, this thesis tries to respond to a call by Gamache et al. (2019) who proposed that CEO traits such as CEO narcissism might influence impression offsetting. The notion of impression offsetting is highly relevant to both companies and investors. For investors, impression offsetting can be a signal to spot low CEO confidence and in turn warn them of the acquisition's limited potential to create value (Gamache et al., 2019). Impression offsetting and its effects are also relevant to companies, as by using impression offsetting in the expectation of possibly violating stakeholder expectations, firms have shown to be able to significantly reduce the negative market reaction (Graffin et al., 2016).

This thesis will employ a moderated mediation model to achieve its research objective, which is to gain insight into the relationship between (1) CEO narcissism and impression offsetting, (2) impression offsetting and the subsequent stock market reaction and (3) CEO

narcissism and the stock market reaction. Lastly, CEO power is proposed as a possible moderator of the relationship between CEO narcissism and impression offsetting. A CEO is considered powerful if he/she can consistently influence key decisions in the firm, despite potential opposition from executives (Adams, 2005). CEO power is considered a relevant moderator as CEO power can exacerbate the negative effects of CEO narcissism (Zhu & Chen, 2015).

In line with the above, the research question of this thesis is as follows:

To what extent does impression offsetting mediate the relationship between CEO narcissism and the stock market reaction to an acquisition announcement?

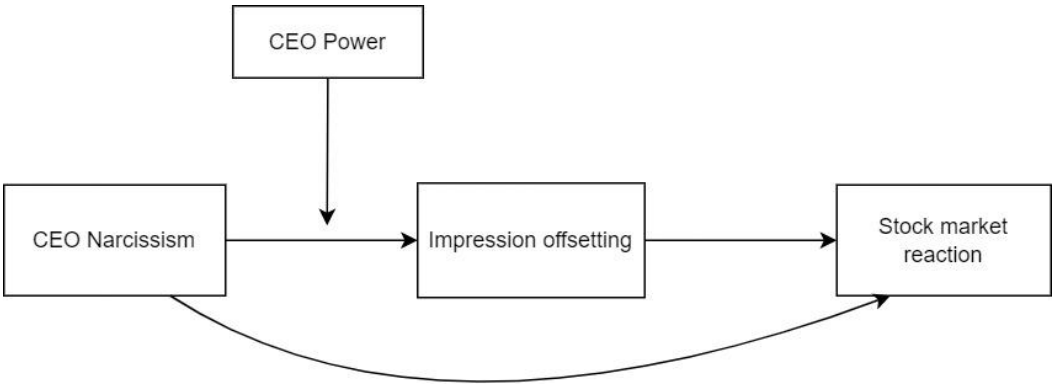
The following sub-question is used to take into account the moderating variable:

To what extent does CEO power moderate the relationship between CEO narcissism and impression offsetting?

These questions lead to the following conceptual model:

Figure 1

Conceptual model



The study is conducted by analysing acquisitions of public targets by S&P 500 companies, whereby it is argued that CEO narcissism is negatively related to impression offsetting and that the stock market reacts more negatively to companies with a narcissistic CEO. It is argued that impression offsetting can dampen this negative relationship. Lastly, CEO power is proposed as a moderator which strengthens the negative relationship between CEO narcissism and impression offsetting.

Contribution to literature

This thesis contributes to several strands of literature. First of all, it contributes to the discussion on whether CEO narcissism has a positive or negative influence on organizations. On the one hand, CEO narcissism is positively related to several financial performance metrics (Cragun et al., 2020) but it is also linked to questionable behaviours, such as manipulating financial policies to achieve desired results (Olsen et al., 2014) and fraud (Rijsenbilt & Commandeur, 2013). By looking into the relationship between CEO narcissism and the stock market reaction to an acquisition announcement, this thesis contributes to the discussion on the effect of CEO narcissism on firm outcomes.

Secondly, this thesis contributes to the literature on impression management and impression offsetting, which is a relatively new concept in literature. The concept is of relevance to both investors, who should consider impression offsetting as a warning signal for low CEO confidence in an acquisition (Gamache et al., 2019), and firms, as impression offsetting is a technique that is able to reduce a negative market reaction (Graffin et al., 2016).

Theoretical framework

Impression offsetting

Organizational impression management can be seen as any action which is purposefully designed and implemented to influence external viewers' perception of an organization (Elsbach et al., 1998). Within organizational impression management, a distinction can be made between reactive impression management and anticipatory impression management. Reactive impression management refers to actions that respond to image-threatening past events, whereas anticipatory impression management refers to positively influencing audiences' perceptions of upcoming events (Elsbach et al., 1998; Graffin et al., 2016; Whittington et al., 2015). Most impression management studies have focused on reactive impression management tactics, such as making apologies or providing justifications for certain negative events (Bolino et al., 2008).

The notion of anticipatory impression management was first introduced by Elsbach et al. (1998) as a means by which organisations can try to avoid unwelcome responses to upcoming events. Recently, research on anticipatory impression management has gained

some popularity, as several forms of anticipatory impression management have been introduced. One form of anticipatory impression management is strategic noise, in which organisations release confounding information about other events, thereby making the link between the event and the market reaction unclear (Graffin et al., 2011; Graffin et al., 2016). Another form of anticipatory impression management is impression offsetting. Impression offsetting is defined as ‘’organizational actions initiated to positively influence external perceptions by releasing positive but unrelated information, in anticipation of an event becoming known that may negatively violate external stakeholders’ expectations’’ (Graffin et al., 2016, p. 233). It is a form of anticipatory impression management as the organization is proactively shaping external perceptions before the possible expectancy violation occurs. The goal of impression offsetting is, as is the goal of strategic noise, to shift the focus away from the focal event (Graffin et al., 2016). In this study, one of the relationships of interest is the relationship between CEO narcissism and impression offsetting. This relationship is studied in the context of mergers and acquisitions. M&A announcements are a highly relevant context to further investigate this relationship, as capital markets often react negatively to acquisition announcements, plus research has suggested that acquisitions generally destroy shareholder value (Haleblian et al., 2009). In this vein, managers are likely to anticipate a negative stock market reaction. However, in this thesis it is hypothesized that CEO narcissism may be a distinguishing factor in the usage of impression offsetting. The next paragraph will introduce the concept of CEO narcissism after which the hypothesis for the relationship between CEO narcissism and impression offsetting is introduced.

CEO narcissism

In modern psychology, narcissism forms, together with Machiavellianism and psychopathy, the dark triad of personality traits (Paulhus & Williams, 2002). For a large number of years, narcissism was viewed solely as a clinical personality disorder. However, the notion of subclinical or normal narcissism has become established after its initial introduction by Raskin and Hall (1979). Interest in empirical research on narcissism increased after the development of the Narcissistic Personality Inventory (NPI), which aims to measure a person’s narcissism (Raskin & Terry, 1988). After the introduction of subclinical narcissism in psychology literature, the concept was also picked up by organizational scholars, through the concepts of leader narcissism and CEO narcissism. CEO narcissism is defined as a personality trait whereby CEOs have an excessively inflated view of themselves and are

constantly working to maintain and reinforce this image of themselves (Campbell et al., 2004; Chatterjee & Hambrick, 2007).

There is a discussion in the literature about whether CEO narcissism has a positive or negative impact on organizations, as research has shown both positive and negative consequences of CEO narcissism (Braun, 2017; Campbell et al., 2011; Cragun et al., 2020). On the positive side, CEO narcissism has been positively linked to a firm's return on assets (Reina et al., 2014), radical innovation and innovative performance (Kashmiri et al., 2017; Zhang et al., 2017). Moreover, combining several studies on CEO narcissism and firm financial performance, Cragun et al. (2020) reported a significant positive association.

However, there may be a darker side to the improved financial performance. Olsen et al. (2014) found that firms with a narcissistic CEO had higher earnings per share than firms with a non-narcissistic CEO. However, they also found that narcissistic CEOs are more likely to engage in activities to tweak the numbers so that this improves the reported earnings per share. Other studies have linked CEO narcissism to other types of questionable behaviour, such as over-engaging in earnings management to deliver good results (Capalbo et al., 2014) and even to clear unethical behaviour such as corporate fraud (Rijsenbilt & Commandeur, 2013).

To understand the psychological characteristics of narcissism and the hypothesized relationship with impression management, it is useful to discuss the narcissism dimensions. Narcissism is a multi-faceted personality trait, which combines grandiosity, attention-seeking, an unrealistically inflated self-view, a need to have this view reinforced via self-regulation and a general disregard of others (Cragun et al., 2020). Several of these dimensions are relevant to this thesis, these will be discussed in relation to several organizational outcomes.

The first important trait of narcissists is that narcissists have an unrealistically inflated self-view and an exaggerated self-belief, which leads narcissists into believing that they have superior capabilities (Asad & Sadler-Smith, 2020). Accordingly, narcissism was linked empirically in several studies to higher levels of confidence and self-esteem (Campbell et al., 2002; Raskin et al., 1991). Relating to CEO narcissism, narcissists' belief in superior capabilities is reflected in the overinvestment in R&D and M&A expenditures (Ham et al., 2018) and possibly is an explanation for the relationship between CEO narcissism and higher levels of risk-taking (Salehi et al., 2020)

A second important dimension is that narcissists are attention-seeking and have a continuous desire for attention to be focused on themselves (Bogart et al., 2004). This attention-seeking aspect of narcissists comes back in the fact that narcissistic CEOs are linked to a higher number and size of acquisitions (Chatterjee & Hambrick, 2007), and it also explains the relationship between CEO narcissism and corporate social responsibility (CSR). CSR activities can be a response to narcissists' need for attention and image reinforcement, and accordingly, the relationship between CEO narcissism and the amount of CSR activities was empirically established (Petrenko et al., 2016). Within CSR activities, narcissistic CEOs prefer externally oriented actions, such as corporate philanthropy, which serve to maintain and enhance a firm's reputation (Al-Shammari et al., 2019; Petrenko et al., 2016). This hints at the notion that for narcissists, a positive reputation for themselves and the firm they represent is important.

A combination of the dimensions of grandiosity and attention-seeking can be seen in the fact that CEO narcissism is positively related to the number and size of acquisitions, which are visible actions that attract attention (Chatterjee & Hambrick, 2007). Similarly, narcissists seem to constantly look for opportunities for possible gains but turn their attention away from recognizing potential losses (Braun, 2017). A consequence of this is that CEO narcissism seems to induce extreme organizational performance, i.e. high profits and high losses (Chatterjee & Hambrick, 2007). Similarly, CEO narcissism was, compared to firms with a non-narcissistic CEO, linked to a greater decline in performance at the beginning of an economic crisis, but it was also linked to an increased recovery after the crisis (Patel & Cooper, 2014).

Constantly looking for opportunities and gains, but failing to recognize potential losses can be explained by the concepts of approach and avoidance motivation. At a basic level, approach motivation refers to motivation by reward, while avoidance motivation refers to motivation by punishment (Foster et al., 2009). Narcissists are strongly motivated when it comes to reward, but they are weakly motivated when it comes to punishment. That is, narcissists are characterized by a strong approach motivation and a weak avoidance motivation (Foster et al., 2009). At the level of a CEO, avoidance motivation refers to behaviour that limits the possibility of occurrence or possible consequences of negative events (Patel & Cooper, 2014). In the context of this thesis, weak avoidance motivation might manifest itself in the fact that narcissistic CEOs are reluctant to use impression offsetting, even though impression offsetting might limit the negative stock market reaction. Patel &

Cooper (2014) even suggest that the strong approach motivation of narcissists might explain the bright side and positive effects of narcissism, while the weak avoidance motivation possibly explains the darker side and negative effects of narcissism on organizational outcomes. In line with the weak avoidance motivation of narcissistic CEOs, CEO narcissism and manager narcissism have been linked to selective hedging strategies (Bajo et al., 2021; Pelster et al., 2021). Besides limited financial hedging, narcissistic CEOs also limitedly hedge legal risk, as narcissistic CEOs were less likely to settle a lawsuit even when the risk of being sued increased (O'Reilly et al., 2018). This was especially problematic as in the same study, CEO narcissism was linked to a higher probability of getting involved in a lawsuit.

Limitedly hedging against risks can be problematic as narcissists have in general been linked to risky behaviours (Crysel et al., 2013), but considering a narcissistic CEO, hedging against risks is even more important. Due to their narcissistic tendencies, such as attention-seeking and believing in superior capabilities, narcissistic CEOs engage more in so-called risk-taking spending (Zhu & Chen, 2015). Indeed empirical evidence links CEO narcissism to several events that fall under the category of risk-taking spending, such as mergers and acquisitions (Chatterjee & Hambrick, 2007) and discontinuous technologies (Gerstner et al., 2013). Moreover, CEO narcissism has been linked to FDI risk-taking (Lee et al., 2022). In conclusion, narcissistic CEOs are motivated by reward, and not held back by a considerable amount of risk. Limited action is undertaken to protect or hedge against risks that are present.

CEO narcissism and impression offsetting

Based on the above discussion, companies with a narcissistic CEO are hypothesized to engage less in impression offsetting than companies that do not have a narcissistic CEO. There are three main arguments why this negative relationship is expected.

First of all, the attention-seeking dimension of narcissists is not compatible with the aim of impression offsetting, which is to turn the attention away from the focal event, which in this thesis is an acquisition. To gain the attention of other people, narcissists feel that they have to engage in attention-seeking behaviours in order to receive personal glory (Wallace & Baumeister, 2002). Grandiose strategic actions are a fitting way to get the attention of an audience and accordingly, CEO narcissism was linked to a higher number and size of acquisitions because acquisitions are one of the most visible actions a CEO can undertake (Chatterjee & Hambrick, 2007). It would be highly improbable that narcissists would want the

attention to get steered away intentionally by using impression offsetting, thereby placing the acquisition out of the spotlight.

Secondly, due to their strong approach motivation and weak avoidance motivation, narcissists are constantly looking for gains but fail to acknowledge potential losses (Foster et al., 2009; Patel & Cooper, 2014). As narcissistic CEOs constantly look for potential gains, they engage more in risk-taking spendings, such as M&A (Chatterjee & Hambrick, 2007; Zhu & Chen, 2015). Moreover, narcissistic CEOs only partially hedge against certain risks (Bajo et al., 2021). In the anticipation of a negative event happening, impression offsetting might be perceived as a way to hedge risks for a company. By steering the attention away from the acquisition, the negative market reaction to an acquisition announcement can be dampened, a relationship which was established empirically (Graffin et al., 2016). Thus, impression offsetting can be perceived as a hedging strategy for companies in anticipation of a negative market reaction. However, because narcissistic CEOs predominantly focus on gains instead of losses and only limitedly hedge against risks, it is expected that CEO narcissism is negatively related to impression offsetting.

Thirdly, narcissists have an unrealistically inflated self-view, which makes them believe that they have superior capabilities (Asad & Sadler-Smit, 2020). Similarly, narcissism has been linked to higher levels of confidence and self-esteem (Campbell et al, 2002). Moreover, narcissistic executives tend to overestimate their performance, which provides part of the reason why overconfidence and CEO narcissism are two closely related constructs (Brunzel, 2021). Because of their high level of self-esteem and their inherent belief in superior capabilities, narcissistic CEOs might argue that impression offsetting is not necessary, as the stock market reaction may not be so negative as other organizational members suggest. This would be in line with the finding that narcissism is negatively related to taking the advice of others (Kausel et al., 2015), although this study found that narcissists dismiss advice not because of their greater confidence, but because they think other people are incompetent. However, this does not change the limited propensity of narcissists to accept advice and does not take away their self-confidence. In line with the above arguments, the following hypothesis is proposed:

Hypothesis 1: Companies with a CEO high in narcissism engage less in impression offsetting compared to companies with a CEO low in narcissism.

Impression offsetting and the stock market reaction

The main reason why companies use anticipatory impression management in an M&A context is that a large part of M&A deals fail to live up to expectations and the market often reacts negatively to M&A announcements (Graffin et al., 2016; Haleblian et al., 2009). This negative market reaction is even more pronounced for targets that are large and publicly owned (Moeller et al., 2004). When a firm announces a large public acquisition, shareholders are likely to automatically react negatively to such acquisition announcements (Graffin et al., 2016). Firms recognize the possibility of a negative market reaction and therefore try to anticipate, for instance by using impression offsetting.

Because impression offsetting and anticipatory impression management in general, are relatively new to the literature, few studies have been carried out with regards to its effectiveness. However, in the study that was carried out, the evidence was clear: Graffin et al. (2016) showed that impression offsetting reduced the negative market reaction by more than 40 per cent, which in monetary terms translates into more than $200 million in market capitalization. More in general, there is ample evidence that CEO and organizational actions are effective in shaping external actors' perception of the company, triggering a positive market reaction or dampening a negative market reaction (Whittington et al., 2016; Westphal & Zajac, 1998). In line with this, it is expected that the use of impression offsetting will be effective in reducing a negative reaction of the stock market.

Hypothesis 2: Companies engaging in impression offsetting will experience a less negative stock market reaction to an acquisition announcement compared to companies that do not engage in impression offsetting.

CEO narcissism and the stock market reaction

In the introduction chapter of this thesis, signalling theory was discussed as a theoretical field that looks into cases where information between investors and the firm is both incomplete and asymmetrically distributed (Connelly et al., 2011). The firm was discussed as the intentional or unintentional sender of a signal, which serves as information to investors (Aalbers et al., 2021a). The notion of intentional or unintentional is key in this context. In the case of anticipatory impression management, such as impression offsetting, the firm is intentionally sending out certain signals to influence investors' perceptions. However, in signalling theory, the firm can also be the *un*intentional sender of signals. A possible way in which the firm can

function as an unintentional sender of a signal is via its CEO. From prior literature, it is known that certain CEO characteristics serve as risk signals to investors (Hayward & Hambrick, 1997). For example, Harrison et al. (2020) found that several observable CEO personality traits, such as neuroticism and conscientiousness, were influential to the market's perception of firm risk and shareholder returns. Similarly, another observable CEO trait, extraversion, was found to yield stronger returns following acquisitions (Malhotra et al., 2018). In line with this, several CEO traits which are perceived as negative traits, also yield a negative stock market reaction. CEO overconfidence, for instance, has been linked to a negative market reaction (Malmendier & Tate, 2008). Moreover, in a study done by Aabo et al. (2020), CEO narcissism was found to be linked to a negative stock market reaction. In another study, CEO narcissism was also linked to a negative market reaction, although in this case, the CEO in focus was the CEO of the target firm (Aktas et al., 2016). Following the above papers, it is argued that CEO narcissism can also function as a risk signal to investors. Hereby, it is argued that investors are able to observe the amount of narcissism that is present in a CEO. Possible indicators of CEO narcissism that can be identified include the prominence of a CEO in a company's press releases and several measures relating to CEO cash and non-cash compensation, as developed by Chatterjee & Hambrick (2007). In a similar vein, Marquez-Illescas et al. (2019) conclude that the market might take into account a bias a narcissistic CEO might bring into company announcements, thus suggesting that investors can indeed ascertain the degree to which a CEO is narcissistic. Although CEO narcissism has been linked to several positive outcomes such as overall financial performance (Cragun et al., 2020), narcissistic CEOs also bring with them a considerable amount of risk, as they are more involved in risk-taking spending (Zhu & Chen, 2015) and have a strong drive for gains, while limitedly focusing on potential losses (Patel & Cooper, 2014). The risk-seeking nature of narcissists is contrary to the general risk aversion that characterizes the stock market (Blagoeva et al., 2020). Taking the above arguments together, it is argued that CEO narcissism serves as a negative risk signal to investors.

Hypothesis 3: CEO narcissism is negatively related to the stock market reaction to an acquisition announcement.

CEO power, CEO narcissism and impression offsetting

Although the relationship between CEO narcissism and impression offsetting is expected to be negative, there might be several factors that strengthen or weaken the relationship. A possible moderator which is examined in this thesis is CEO power. Power is defined as ‘’the capacity of individual actors to exert their will.’’ (Finkelstein, 1992, p. 506). Generally, the CEO of an organization is seen as the most powerful and influential member of the organization (Daily & Johnson, 1997). Although the CEO often cannot take decisions completely on his/her own, a powerful CEO can nonetheless be a threat to the independent judgment of the board of directors (Dalton & Kesner, 1987).

A key issue in the literature is how to capture the concept of CEO power. Although the measures of the several concepts will be discussed in the next chapter, it seems adequate to already discuss the choice of measurements for CEO power in this chapter, as this concept is conceptualized in different ways in the literature. The first measure of CEO power which will be used is CEO duality. CEO duality refers to the situation in which the CEO carries both the title of CEO and at the same time is the chairman of the board of directors (Adams et al., 2005; Dalton & Kesner, 1987). CEO duality is a relevant dimension of CEO power, as a CEO who is not the chairman of the board usually has a less important role in taking strategic decisions (Adams et al., 2005), plus CEO duality may dampen the effectiveness of a board (Lim & McCann, 2013). Indeed, a CEO who also is chairman of the board has been found to reduce boards’ attention to monitoring, which is an essential task of a board (Tuggle et al., 2010). The second measure of CEO power which is used is whether the CEO is also the founder of the company. There is consensus in literature for the view that CEOs who founded the company are more influential (Adams et al., 2005), not least because these CEOs gain power through long-lasting relationships with the board, which often results in implicit control over other board members (Finkelstein, 1992). The last measure of CEO power which is used is CEO tenure, which is defined as the time a CEO spends in the position of CEO (Darouichi et al., 2021). CEO tenure is seen as a source of CEO power as CEOs with longer tenure have built relationships with the other board members, thereby earning their acceptance (Shen & Cannella, 2002). This is in sharp contrast to new CEOs who still have to build rapport with other board members, and have less managerial expertise and discretion which longer-tenured CEOs have built over time (Shen, 2003; Park et al., 2018). In sum, CEO tenure can be seen as a proxy for CEO power (Darouichi et al., 2021).

In general, a CEO with high power relative to other directors allows the CEO to influence many organizational decisions, among others corporate governance decisions such as selecting new directors (Westphal & Zajac, 1995; Zhu & Chen, 2015). Therefore, powerful CEOs can steer decisions in the direction they want, such as pursuing corporate strategies that these CEOs pursued earlier (Zhu & Chen, 2015). Accordingly, in several studies, limited CEO power was found to limit the negative effects of several CEO traits, while stronger CEO power tends to exacerbate the negative effects of CEO traits. For example, Park et al. (2018) found that a separate executive and chair position (no CEO duality) weakened the negative relationship between CEO hubris and firm financial performance. In another study, CEO power was found to interact with CEO narcissism such that narcissistic and powerful CEOs reduce the positive influence of other board members' experience on a firm's focal corporate strategy (Zhu & Chen, 2015). In a similar vein, it is argued in this thesis that CEO power can further reinforce the negative relationship between CEO narcissism and impression offsetting, such that narcissistic CEOs who are also powerful are more likely to 'get their way', thus to not engage in impression offsetting. With a less powerful CEO however, it is expected that CEO power moderates the relationship between CEO narcissism and impression offsetting such that impression offsetting is more likely when the CEO has less power.

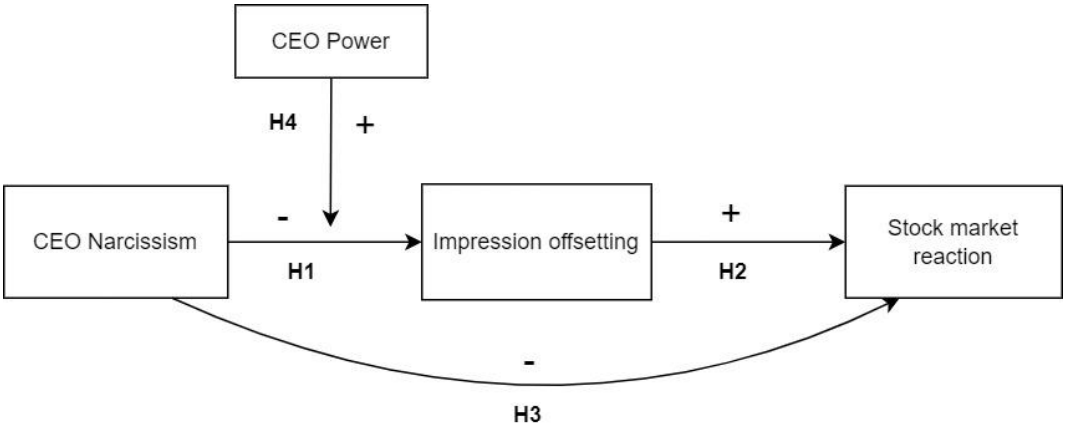
Hypothesis 4: CEO power moderates the relationship between CEO narcissism and impression offsetting such that companies with a narcissistic CEO who has low power will engage more in impression offsetting compared to companies with a narcissistic CEO who has high power.

Conceptual model

Based on the theoretical framework and the proposed hypotheses, the conceptual model can be modelled as follows:

Figure 2

Conceptual model with hypotheses



Methods

Sample and data collection

To test the hypotheses, a quantitative study was conducted. The context of the study was mergers & acquisitions. The sample which was used includes acquisitions of public targets by S&P 500 firms that were announced between 2010 and 2021. The sample size of these public targets was 268 deals. The rationale for focusing on public targets is to narrow the scope of data collection for this thesis. Public targets have been chosen as a subset because the market reaction is often larger and more negative for public targets (Moeller et al., 2004), which makes the use of impression offsetting more useful. Some of the variables that were analysed in this study were already present in an existing dataset, built by my thesis supervisor Jonas Röttger. The variables impression offsetting and CEO narcissism were not present in the current dataset. The CEO narcissism data was collected using a secondary database, whereas the impression offsetting variable was calculated by collecting press statements, a process which will be described in more detail in the next section. The press releases which relate to the variable impression offsetting were collected using the Business Wire and PR Newswire

databases available in LexisNexis. Regarding the CEO narcissism variable, the database Compustat – ExecuComp was used.

Measures

CEO narcissism. CEO narcissism was measured using the narcissism index developed by Chatterjee & Hambrick (2007). This narcissism index is widely used in CEO narcissism research and according to Cragun et al. (2020), it is the most validated unobtrusive measure for researchers in the field. Chatterjee & Hambrick (2007) use five indicators of narcissistic tendencies: the prominence of the CEO's photograph in the annual report, the CEO's prominence in company press releases, the CEO's use of first-person singular pronouns in interviews, the CEO's relative cash compensation and the CEO's relative non-cash compensation. Due to data limitations, only three of these indicators were used. These three indicators will now be briefly explained.

The first indicator which was used was the prominence of the CEO photograph in the annual report. A highly narcissistic CEO would seek visibility in the annual report, and therefore a larger photograph corresponds to a more narcissistic CEO (Chatterjee & Hambrick, 2007). The scores assigned to the different CEOs follow the scores used by Chatterjee & Hambrick (2007): four points were assigned if the CEO's photo was of him/her alone and occupied more than half a page; three points if the photo was of him/her alone and occupied less than half a page; two if the CEO was accompanied by fellow executives on the photo, and one point if there was no photograph of the CEO in the annual report. The data for this indicator was already present in the existing dataset, for which photographs in the annual report were analysed.

The second indicator of CEO narcissism which was used was the CEO's relative cash compensation. The compensation a CEO receives is reflective of his/her self-importance, which is part of narcissistic tendencies (Hayward & Hambrick, 1997). To determine a CEO's relative cash compensation, the Compustat ExecuComp database was used, which is a database that contains data about the most important executives of companies, including their compensation. The CEO's cash compensation was determined by adding up the base salary of the CEO plus bonuses that were paid that year (Chatterjee & Hambrick, 2007). After that, the second best-paid executive of that same year was identified, again using the base salary and

eventual bonuses. The total CEO cash compensation was then divided by the second best-paid executive's total cash compensation to arrive at the CEO's relative cash compensation.

The third indicator of CEO narcissism which was used was the CEO's relative non-cash compensation. The relative non-cash compensation consisted of three elements: deferred income, stock grants and stock options, which were valued using the Black-Scholes valuation, in line with Chatterjee & Hambrick (2007). The data was again retrieved from the ExecuComp database. The three elements were added up to determine the CEO's non-cash compensation, after which the second best-paid executive in terms of non-cash compensation was identified. Subsequently, the CEO's total non-cash compensation was divided by the executive with the largest non-cash compensation to arrive at the score of a CEO's relative non-cash compensation.

Initially, it was planned to also use the two other indicators included in the CEO narcissism index: the CEO's prominence in the company's press releases and the CEO's use of first-person singular pronouns in interviews. As the transcripts of CEO interviews were not available, it was decided to use the transcripts of earning calls. However, the computer-based scripts used were very slow: processing required more than 2 days, only one script could be processed at a time and produced various errors in collecting the data, taking up several days. Therefore, it was decided to abandon these measures and stick to the three aforementioned measures. As Cragun et al. (2020) in their CEO narcissism review note, it is not uncommon for researchers to employ only a subset of the items of the CEO narcissism index due to limited data availability. The three measures that are used in this thesis have been used simultaneously in CEO narcissism research before, for example by Ingersoll et al. (2019).

The mean, standard deviation and the correlations between the different CEO narcissism indicators can be seen in Table 1 below. This was done after removing some outliers for the cash and non-cash compensation, e.g. ratios of CEOs earning 127, 831 and 1774 times as much as the second best-earning executive. Moreover, only CEOs that had a valid score on each of the three indicators were included in the sample. As a consequence, the sample size decreased to 159. Mean imputation for CEOs that missed a score on one of the indicators was considered, however it was decided not to do this as the characteristics of other CEOs were not judged to be representative of other CEOs. It should be noted that the reduction of sample size due to data limitations was done after constructing the other variables. Therefore, in discussing the impression offsetting measure the larger sample is still used (268 deals).

Table 1

Statistics narcissism indicators (after removing outliers)

	Mean	**S.D.**	**1**	**2**	**3**
1. Prominence of CEO photograph	2.60	.91	1	.15*	.09
2. CEO relative cash compensation	1.01	.91	.15*	1	.21***
3. CEO relative non-cash compensation	2.43	1.75	.09	.21***	1

Note: N = 157. *** p < 0.01, * p <0.1

In line with Chatterjee & Hambrick (2007), these variables were standardized to yield a mean of 0 and a standard deviation of 1. It was decided to work with factor loadings to determine the narcissism score for each CEO. This deviates from the approach by Chatterjee & Hambrick (2007) who use -1 and 1 scores, but is in line with Ingersoll et al. (2019) who use the same indicators. It was decided to opt for factor loadings to take into account the relative importance of each indicator, as the importance of several indicators might differ. First of all, it was tested whether factor analysis was appropriate via the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity. This proved to be the case, as the KMO measure was 0.549, just above the threshold of 0.5, while Bartlett's test of sphericity was significant, with $p < 0.01$. Principal axis factoring was used as the goal was to identify the underlying dimensions of the factor. The factor loadings were 0.257, 0.58 and 0.366 for respectively the prominence of the CEO photograph, the CEO's relative cash and the CEO's relative non-cash compensation. These factor loadings were multiplied by the standardized scores on the different variables, which resulted in the CEO narcissism variable. A reliability analysis was carried out to assess the internal consistency of the measures. Cronbach's Alpha was very low, as it had a value of 0.349. Deleting one of the variables would not lead to a substantially higher value. Despite Cronbach's Alpha being low, it was decided to continue with the analysis. It does however hint at the limitations of the CEO narcissism measure that is employed, also because there is no significant correlation between the prominence of the CEO photograph and the CEO's relative non-cash compensation. In interpreting the results, this flawed measurement should be kept in mind.

Impression Offsetting. Impression offsetting was measured by counting the material and positive announcements, unrelated to the acquisition, made by the acquiring firm in a three-

day period around the announcement of the acquisition, thus one day before and after the announcement. The time window and measurement are consistent with earlier impression offsetting studies done by Graffin et al. (2016) and Gamache et al. (2019). The two main reasons for employing a three-day time window are that the announcements made in this window occur in the same cycle as the acquisition announcement, plus that the firm prepared the announcements in advance, as announcements are prepared with a buffer of more than a day (Gamache et al., 2019). The announcements are categorized into two grand categories: positive material announcements, which are of interest to this thesis, and other material announcements. Within these two categories, there are several subcategories, based on the categorization done by Graffin et al. (2016). Positive material announcements include earnings releases above expectations, a new product released and social good. The full table can be seen below.

Table 2

Categorization of firm announcements (Graffin et al., 2016; Gamache et al., 2019)

Positive firm announcements	**Other material firm announcements**
Earnings releases (above expectations)	Earnings release (at or below expectations)
Earnings guidance (above expectations)	Earnings guidance (at or below expectations)
Positive change in dividend rate	New executive or director
New product introduction	Divestiture or plant closure
Customer gained	Legal dispute
Social good, such as donations or sponsorship	Executive retirement
	Change of stock exchange listing
Third-party award	Debt issuance
Capital return, e.g. buyback or stock split	Other acquisition
Results of a sponsored study	Completion of another acquisition
	Recall or safety issue

To construct this variable, firm press statements were collected. The press statements from 2010 to 2021 by acquiring companies of the sample (268 deals) were collected. To this end, the database LexisNexis was used. For this thesis to be replicable, I will describe in some detail this data collection process.

First of all, there is some preparatory work before starting the actual data collection process. As there is no company search function in LexisNexis, some unique features about a company's press statements should be identified, to make sure that it was the company that released a press statement and not, for example, a news agency. Such unique features of company press statements can often be found at the end of the document. For example, for the company Berkshire Hathaway, a unique identifier was ''CONTACT: Berkshire Hathaway'' at the end of the document. For the company Southwest Airlines, the unique identifier was ''SOURCE Southwest Airlines''. A document was created with these identifiers as this did not exist yet. These identifiers were then used in combination with proximity connectors, as an exact search option in LexisNexis does not exist. For example, for the company Berkshire Hathaway, the search term ''CONTACT PRE/1 Berkshire Hathaway'' was used, which means that the word ''CONTACT'' should precede the company name with one word. Similarly, for the company Southwest Airlines, the search term ''SOURCE pre/1 Southwest Airlines'' was used. These proximity connectors were used to make sure that only press statements were shown as results, not other documents in which the words contact and Berkshire Hathaway appeared more distantly from each other.

After identifying the right search term, the search results were further narrowed by selecting only the category 'newswires & press releases' and by limiting the time frame from 1/1/2010 to 31/12/2021. After this, the press releases were ready to be downloaded. It should be noted that these can only be downloaded in batches of 100 documents, which should be selected manually (e.g. download search results 1-100, 101-200, etc.). After downloading, the press releases were put in separate company folders to simplify the analysis process. Some cleaning was performed to remove duplicates and non-English press releases. After the cleaning process, in total 95,222 press statements remained, which form the input for further analysis and ultimately for the impression offsetting variable.

With the data collection process complete, the next task which was completed was the categorization in order to construct the impression offsetting variable (the number of positive and material press statements). A computer-based script was run to facilitate the analysis process. This script, run by my supervisor Jonas Röttger, identified from the massive sample the press releases which fell into the three-day impression offsetting window. Subsequently, the categorization into the several categories was done manually. A small dictionary, which consisted of proximity connectors or strings, was made to simplify the process, as there was no existing dictionary yet. Here, several words or phrases which occurred often in the title of

a certain press statement were identified. For example, for the category dividend raise, the proximity connectors which were used were a combination of the words ‘increase*’ and ‘dividend’ or a combination of the words ‘raise*’ and ‘dividend’. Hereby, the * (asterisk) sign is used as a wildcard for other characters. The approach used to identify the subject of a press release is similar to string matching algorithms, which are often used by researchers for text mining purposes (Sheshasaayee & Thailambal, 2017). The press releases which could not be categorized using the dictionary (the large majority could not be easily categorized) were further inspected by looking at the title and possibly the content of the document. For the categories earnings releases and earnings guidance, additional information was needed to determine whether a press release could be labelled as positive. To determine whether an earnings release guidance was above expectations (positive) or at or below expectations (neutral or negative), analyst recommendations for S&P 500 companies were used. This follows prior research by Graffin et al. (2016), who used consensus estimates to categorize earnings releases. It was made sure that the date on which the recommendation was issued closely followed the date on which the earnings were released via the press statement. The recommendations done by analysts could be either one of the five categories: strong buy, buy, hold, sell and underperform. If the recommendation was buy or strong buy, the press release would be labelled as positive (it was assumed that earnings were above expectations) whereas for the other categories, it would be considered a neutral or negative press release.

In order to check the reliability of the coding, a subset of the press statements was coded by my supervisor Jonas Röttger. Of the subset, which consisted of 25 press statements, 84 per cent was categorized into the same grand category, i.e. positive material, neutral/negative or non-material. This was considered to be a reliable score.

In the table below, an overview of the categorization of the press releases within the impression offsetting time window can be found. It should be noted that for a large part of the deals (99 deals) no press releases were published in the three-day window around the acquisition. This means that the acquisition was not announced via a press release on the date that the acquisition was completed. For a subset of these 99 deals, it was checked whether indeed the company did not release a press statement regarding the acquisition. This was done by looking into the company folder on my computer where all press statements are stored. In many cases the company did indeed not publish a press statement, in other cases the acquisition was announced at a later point in time, e.g. a month after the acquisition was

completed. This check confirmed that indeed many companies did not issue a press statement at all during the impression offsetting window.

Table 3

Categorization of press releases within impression offsetting window

Category	Positive	Neutral or negative
Earnings releases	10	13
Earnings guidance	1	1
Positive change in dividend rate	1	
New product introduction	14	
Customer gained	10	
Social good (donations, sponsorship)	4	
Capital return (buyback or stock split)	2	
New executive or director		3
Divestiture or plant closure		2
Legal dispute		1
Debt issuance		1
Other acquisition		1
Completion of another acquisition		6
Recall or safety issue		1
Total	**41**	**29**
Non-material firm announcements: 38 Announcement of deal of interest: 146		

After categorizing all press releases, the number of positive material firm announcements was counted to arrive at an impression offsetting score for each firm.

Stock market reaction. To study the stock market's reaction to an acquisition announcement, an event study methodology was used, which has been used in various previous studies (Aalbers et al., 2021a; Aalbers et al., 2021b; Schijven & Hitt, 2012). Using a market model, the cumulative abnormal returns (CAR) were calculated, which are the returns that a firm gets in excess of what was expected and which can be attributed to the event in question (Aalbers et al., 2021b). A three-day window was used, i.e. the abnormal returns to the acquirer were measured in the period from one day prior, to one day after the acquisition announcement. It was decided to opt for a short time window to minimize possible confounding effects, which might lead to wrong conclusions (McWilliams & Siegel, 1997). Moreover, the three-day

window around the acquisition aligns with the three-day window that is considered for the impression offsetting variable.

The specific calculation of the variable, which was already present in the dataset, was done in three steps (see Aalbers et al., 2021a; Aalbers et al., 2021b). First of all, the daily return of the acquiring firm was calculated by subtracting the closing from the opening price, after which this result was standardized by the opening price. Secondly, the daily returns price was regressed, using trading data of 250 days of the respective stock market. Thirdly, the alpha and beta of the regression were used to estimate what the expected return for the acquiring firm was, this was subtracted from the actual return in order to arrive at a final CAR value.

CEO power. As explained in the last chapter, the concept of CEO power was split up into three different measures. The first measure of CEO power was CEO duality, which refers to cases in which the CEO is also the chairman of the board of directors (Adams et al., 2005). This measure was a dummy variable, in which a CEO who also was chairman of the board received the coding 1 and a CEO who at the same time was not the chairman of the board received the coding 0. The second measure of CEO power was whether the CEO also was the founder of the company. This was also a dummy variable; a CEO who also was the founder received coding 1, a CEO who was not the founder received coding 0. The last measure of CEO power was CEO tenure, which was calculated as the number of years the CEO has been in the position of CEO of the company (Darouichi et al., 2018).

Although these various measures of CEO power have been used together in the same study (e.g. Adams et al., 2005), it is not common to merge the scores of the different indicators of CEO power into one variable. For example, Adams et al. (2005) separately tested the effects of CEO duality and CEO founder on corporate performance. A similar approach was used in this thesis; the different indicators were not put together to form one measure, but were rather analysed separately. Consequently, in testing hypothesis 4, the three different variables were tested as separate moderators of the relationship between CEO narcissism and impression offsetting.

Control variables

Several variables were taken into account as control variables. These variables can be distinguished into three categories: CEO-level control variables, firm-level control variables and acquisition-level control variables. Lastly, there is a separate control variable which does not belong to either of the categories and which will be discussed first, which is the baseline for positive material announcements.

Baseline positive announcements. To account for the average number of positive material announcements that a firm issues, the baseline of positive announcements was included as a control variable. To determine this baseline, the press releases which were issued in the 90-day (three-month) period prior to the acquisition were analysed. This was done in the same way as the categorization of the impression offsetting measure. As with the impression offsetting press statements, a computer-based script was run to identify the press releases which fell into the 90-day window. An overview of the categorization of the press releases into the different categories can be found in table 4 below.

The number of material positive announcements per firm was then divided by 63, which is the average number of business days in three months, and consequently multiplied by three to arrive at a number which captures the average number of positive material announcements for a three-day time window. This measure follows earlier impression offsetting studies by Graffin et al. (2016) and Gamache et al. (2019). Previous robustness checks by Graffin et al. (2016) have shown that using a six-month or twelve-month window in order to identify the baseline for positive announcements is strongly correlated to the three-month measure, thereby suggesting that a three-month period accurately identifies the baseline. It goes beyond the scope of this thesis to verify whether the six and twelve-month baseline measures indeed correlate with the three-month window, and therefore, the three-month measure is assumed to be a valid time period.

Similar to the impression offsetting press releases, also a subset of the baseline press releases was coded by my supervisor to check the reliability of the coding. The subset consisted of 24 press statements, of which 79 per cent was categorized into the same grand category, i.e. positive material, neutral or negative and non-material. Although this score was somewhat lower than for the impression offsetting variable, the coding was still considered to be sufficiently reliable.

Table 4

Categorization of baseline positive announcements

Category	Positive	Neutral / Negative
Earnings releases	69	86
Earnings guidance	4	3
Positive change in dividend rate	23	
New product introduction	383	
Customer gained	272	
Social good (donations, sponsorship)	139	
Third-party award	114	
Capital return (buyback or stock split)	16	
Results of a sponsored study	61	
New executive or director		93
Divestiture or plant closure		18
Legal dispute		18
Executive retirement		9
Debt issuance		55
Other acquisition		16
Completion of another acquisition		111
Recall or safety issue		4
Total	**1081**	**413**
Non-material firm announcements: 1757		

CEO-level control variables. There are several control variables at the CEO level which were taken into account: CEO age, CEO tenure, CEO gender, CEO acquisition experience and CEO power. First of all, CEO age was taken into account as narcissistic behaviour tends to become less pronounced when narcissists get older (Cramer, 2011; Foster et al., 2003). Moreover, CEO age was found to be an influential factor in earlier research into the tone of earnings announcements (Marquez-Illescas et al., 2019). Secondly, CEO tenure was taken into account as CEO tenure has been shown to be an influential factor in many upper echelon studies (Darouichi et al., 2021), plus CEO tenure was found to be an influential factor in earlier anticipatory impression management research (Graffin et al., 2011). Thirdly, CEO gender was taken into account, as female CEOs are less likely to exhibit narcissistic tendencies compared to male CEOs (Ingersoll et al., 2019) and research has found differing risk preferences for male and female CEOs (Jeong & Harrison, 2007). Fourthly, CEO acquisition experience was taken into account. Firms often adapt their behaviour when they gain acquisition experience (Haleblian et al., 2006) but as this thesis focuses on the role of the CEO, it seems appropriate to include CEO acquisition experience as a control variable, as CEOs might also change their behaviour when they gain acquisition experience. The variable

was measured as the number of acquisitions in which the CEO has been involved during his/her career. Lastly, CEO power, which will be included as a moderator in hypothesis 4, was included as a control variable in the other analyses. Some research has suggested that CEO power influences firm performance and the variability of stock returns (Adams et al., 2005), whereas another study did not find significant results of CEO power on company performance (Tien et al., 2013). However, this thesis wants to control for the possible influence of CEO power on impression offsetting and the stock market reaction and therefore, CEO power is included as a control variable in these analyses. The three measures of CEO power were, as in the moderation analysis, included as separate variables, i.e. the scores of CEO duality, CEO founder and CEO tenure (which was already included as a separate control variable) were not merged.

Firm-level control variables. Several firm-level control variables were taken into account. First of all, acquirer size, measured by the number of employees, was taken into account, as several scholars have argued that firm size possibly influences the performance of acquisitions (Haleblian et al., 2009). Secondly, the acquiring firm's prior performance, measured by its return on assets (ROA) of the last year (lagged variable) was taken into account (Aalbers et al., 2021b, Graffin et al., 2016). Lastly, the acquirer's debt-to-equity ratio was taken into account (Schijven & Hitt, 2012).

Acquisition-level control variables. The last category of control variables are control variables at the acquisition level. First of all, the payment method of the acquisition was taken into account, as an acquisition with stock is associated with the managerial belief that the firm's share price is overvalued (Rau & Vermaelen, 1998). The payment method was measured by the percentage of stock the acquiring company used to pay for the acquisition. Secondly, the total deal value of the acquisition was taken into account (Aalbers et al., 2021a; Gamache et al., 2019).

Research ethics

In doing research, the researcher has the responsibility to comply with ethical standards and to ensure the integrity of the research. Five central principles form the basis of integrity in

research: honesty, scrupulousness, transparency, independence and responsibility (VSNU, 2018). I have adhered to all these principles. First of all, I have been honest during the writing of this thesis and when conducting the research, whereby I have reported the research process and results accurately and truthfully. Secondly, I have been scrupulous by only employing scientific methods and making sure my research is reproducible. Thirdly, the research process is made transparent and the sources and references used are included. Lastly, I have acknowledged the principles of independence and responsibility. Concerning independency, it has to be mentioned that this thesis builds on the research of one of my supervisors, Jonas Röttger, who is a PhD candidate at Radboud University. It builds on the research of Jonas as a large part of the data that was analysed stems from an existing dataset by Jonas. Moreover, several scripts which were run by Jonas helped in selecting the right press releases, in this way data analysis was done more efficiently. This thesis also contributes to Jonas' work, as the 95.000 press releases which were downloaded and systemized can be analysed for future research.

Analytical approach and assumption checks

Before the analyses were carried out, all variables were inspected and if necessary, outliers were removed and/or variables were transformed. The variables which were transformed and the assumption checks which were performed will be described briefly.

First of all, the impression offsetting variable had a kurtosis statistic which was too high (11.01). Several steps were taken to resolve this: an outlier (the only company with impression offsetting score of 3) was removed, then a square root transformation was performed. This however did not resolve the issue, also not after other outliers were removed. The variable was also log transformed, but this did also not resolve the issue. It was decided to proceed with the analysis with the square root variable, which had a kurtosis value of 6.41, while the skewness value was 2.82 and therefore not too high. The P-P and Q-Q plot also revealed that the impression offsetting variable was not normally distributed (Appendix 1). This was problematic as one of the assumptions of regression analysis is that the dependent variable is normally distributed. Moreover, the assumption of homoscedasticity was violated, as there was no constant variance within the residuals. All in all, several assumptions of regression analysis were violated. However, this can be explained. There are only three valid scores for the impression offsetting variable: 0, 1 and 2. The respective frequencies for these

values are 141, 12 and 4. This means that there are 141 deals in the sample in which the acquiring company did not engage in impression offsetting. This has an effect on the normal distribution of the variable, but also on the variance of the residuals. No transformation can resolve these problems: it is a fundamental issue which is rooted in the fact that many companies in the sample did not engage in impression offsetting, and that there are few values for the variable. Not meeting the assumptions of regression analyses limits the generalizability of my results, although I will perform some additional analyses whereby impression offsetting is used as a dummy variable, with score of 0 meaning that the company did not engage in impression offsetting, and a score of 1 meaning that the company did engage in impression offsetting.

For the other dependent variable analysed in this thesis, stock market reaction (measured by CAR – cumulative abnormal return), the assumptions of homoscedasticity and normality were met (see Appendix 1). Moreover, in all analyses, the VIF values were all below 5, which indicates that there were no problems regarding multicollinearity.

Some control variables were transformed to reduce extreme amounts of skewness and kurtosis. The square root version of the variables CEO tenure, debt ratio, baseline positivity and CEO acquisition experience was used to resolve positive kurtosis. These variables are indicated in the correlation matrix and tables of regression results with the sign √. Moreover, a log transformation was conducted for the variables acquirer size and deal value. It was decided to leave out CEO founder as a control and moderating variable, as only 2 CEOs (out of 157) were founder CEOs. Moreover, it was decided to maintain a ratio of 10 observations to each variable, which limited the number of variables which could be included. This will be discussed in more detail at the end of the results chapter, as leaving out some control variables was a decision made during the analysis process.

Little's MCAR test was performed to confirm whether the missing values in the analysis were missing completely at random (MCAR). The test yielded X^2 (91) = 93.06, p = 0.42. Consequently, it was concluded that the missing values were MCAR.

All hypotheses were tested using SPSS. Linear regression was used to test the several hypotheses. In building the interaction terms for hypothesis 4, CEO tenure and CEO narcissism were mean-centred to diminish possible multicollinearity, as these were both metric independent variables.

Results

In the correlation matrix below, the means, standard deviations and the correlations between the different variables used in this thesis can be seen. There are some significant correlations, such as the significant correlation between CEO narcissism and the stock market reaction (hereafter called CAR). However, there are no significant correlations between CEO narcissism and impression offsetting, and impression offsetting and CAR.

Table 5

Correlation matrix

Variable name		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
(1)	CAR	-0.01	0.04												
(2)	CEO narcissism	0.02	0.85	-0.25***											
(3)	Impression offsetting (√)	0.13	0.37	-0.14	0.03										
(4)	CEO age	58.12	6.14	-0.09	0.03	0.02									
(5)	CEO gender (0 = male)	0.96	0.19	-0.01	-0.06	0.07	0.04								
(6)	CEO tenure (√)	2.49	1.10	-0.13	-0.02	-0.09	0.42***	-0.01							
(7)	Baseline positive (√)	0.28	0.25	-0.04	-0.14	0.20**	0.09	-0.05	0.08						
(8)	Lagged ROA	0.07	0.05	0.03	-0.06	0.07	-0.03	0.02	-0.21**	0.07					
(9)	Deal value (log)	16.15	7.63	0.01	0.14	-0.02	0.04	-0.07	0.23***	0.19**	0.04				
(10)	Debt ratio (√)	0.72	0.81	-0.07	-0.01	0.03	-0.12	-0.09	0.05	-0.01	-0.25***	-0.16*			
(11)	Percentage stock	21.38	36.47	-0.26***	0.16*	0.11	0.21**	0.01	0.20**	-0.01	-0.33***	-0.06	0.20**		
(12)	CEO acquisition experience (√)	2.13	1.45	0.01	0.33***	0.13	-0.26***	0.00	0.03	-0.04	-0.01	0.17*	-0.09	-0.13	
(13)	Acquirer size (Log)	9.89	1.66	0.10	0.01	0.20**	-0.02	0.19**	-0.15*	0.35***	0.14	0.03	-0.09	-0.32***	0.03

Note: N = 131 (listwise deletion – based on data availability for H1)

*** p < 0.01, ** p < 0.05, * p <0.1

Table 6

Results of regression analyses – dependent variable impression offsetting

	H1 Impression offsetting (√) Base model B (standard error)	**H1 Impression offsetting (√)** B (standard error)	**H4 Impression offsetting (√)** B (standard error)	**H4 Impression offsetting** B (standard error)
Intercept	-0.724 (0.417)*	-0.762 (0.427)*	-0.728 (0.427)*	-0.735 (0.432)*
CEO age	0.005 (0.006)	0.005 (0.006)	0.005 (0.006)	0.005 (0.006)
CEO gender	0.078 (0.168)	0.070 (0.169)	0.060 (0.169)	0.058 (0.170)
CEO tenure (√)	-0.045 (0.034)	-0.047 (0.034)	-0.043 (0.035)	-0.043 (0.035)
Baseline positive (√)	0.236 (0.137)*	0.223 (0.141)	0.213 (0.141)	0.214 (0.141)
Acquirer size (log)	0.038 (0.022)*	0.039 (0.022)*	0.037 (0.022)*	0.037 (0.022)
Deal value (log)	-0.002 (0.004)	-0.002 (0.004)	-0.002 (0.004)	-0.002 (0.005)
Lagged ROA	0.629 (0.637)	0.629 (0.639)	0.697 (0.640)	0.694 (0.643)
Debt ratio (√)	0.023 (0.042)	0.023 (0.042)	0.026 (0.042)	0.026 (0.042)
CEO acquisition experience (√)	0.049 (0.023)**	0.053 (0.025)**	0.052 (0.025)**	0.052 (0.025)**
Percentage of stock	0.002 (0.001)**	0.002 (0.001)**	0.002 (0.001)**	0.002 (0.001)**
CEO narcissism		-0.020 (0.042)	-0.007 (0.043)	-0.016 (0.078)
CEO tenure * CEO narcissism			0.008 (0.007)	0.008 (0.007)
CEO duality * CEO narcissism				0.013 (0.089)
Adjusted R^2	0.070	0.064	0.067	0.060
F	1.983**	1.812*	1.782*	1.633*

*Note: N= 131, *** p < 0.01, ** p < 0.05, * p <0.1*

Table 7

Results of regression analyses – dependent variable CAR

	H2 CAR Base model B (standard error)	**H2 CAR** B (standard error)	**H3 CAR** B (standard error)
Intercept	0.010 (0.047)	0.000 (0.048)	-0.016 (0.047)
CEO age	-0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
CEO gender	-0.004 (0.019)	-0.003 (0.019)	-0.010 (0.018)
CEO tenure (√)	-0.003 (0.004)	-0.004 (0.004)	-0.005 (0.004)
Baseline positive (√)	-0.008 (0.016)	-0.005 (0.016)	-0.017 (0.015)
Acquirer size (log)	0.001 (0.002)	0.001 (0.003)	0.002 (0.002)
Deal value (log)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Lagged ROA	-0.063 (0.072)	-0.055 (0.072)	-0.064 (0.070)
Debt ratio (√)	-0.002 (0.005)	-0.002 (0.005)	-0.002 (0.005)
CEO acquisition experience (√)	-0.001 (0.003)	0.000 (0.003)	0.002 (0.003)
Percentage of stock	0.000 (0.000)**	0.000 (0.000)**	0.000 (0.000)*
Impression offsetting		-0.013 (0.010)	
CEO narcissism			-0.013 (0.005)***
Adjusted R^2	0.008	0.013	0.067
F	1.099	1.151	1.850*

*Note: N= 131, *** p < 0.01, ** p < 0.05, * p <0.1*

The results of the regression analyses conducted can be found in table 6 and table 7 above. Per hypothesis, the results will be discussed.

Hypothesis 1 stated that CEO narcissism is negatively related to impression offsetting. The model, consisting of CEO narcissism and the several control variables was weakly significant, with an adjusted R^2 of 0.064, F(11, 119) = 1.812, p = 0.06. However, CEO narcissism was not found to be a significant predictor of impression offsetting, with B = -0.020, SE = 0.042, p = 0.64. Therefore, hypothesis 1 was rejected.

Hypothesis 2 stated that impression offsetting is positively related to CAR. This hypothesis was rejected, as impression offsetting was not found to significantly predict CAR, with B = -0.013, SE = 0.010, p = 0.21. Despite the relationship not being significant, it is remarkable that the results indicate a negative relationship between impression offsetting and CAR, contrary to expectations. In addition to the relationship between impression offsetting and CAR, the model itself was also not significant, with an adjusted R^2 = 0.013, F(11, 119) = 1.151, p = 0.33.

Hypothesis 3 proposed that CEO narcissism is negatively related to CAR. A significant relationship was found, with B = -0.013, SE = 0.005, p < 0.01. However, the regression model itself was only weakly significant, with an adjusted R^2 of 0.067, F(11, 119) = 1.850, p = 0.05. Therefore, the results indicate only partial support for this relationship, so the results should be interpreted with some caution. The beta values of CAR can, in line with earlier research (Paruchuri et al., 2021), be multiplied by 100 to yield percentages. Accordingly, the results indicate that having a narcissistic CEO leads to 1.3 per cent less cumulative abnormal return around an acquisition, everything else in the model remaining constant.

The last hypothesis, hypothesis 4, proposed CEO power as a moderator of the relationship between CEO narcissism and impression offsetting, such that higher CEO power reinforces the relationship between CEO narcissism and impression offsetting. Two different analyses were performed to test this hypothesis, with two different interaction terms. The first interaction term consisted of CEO narcissism and CEO tenure. No significant interaction effect was found, with B = 0.008, SE = 0.007, p = 0.24. The regression model was weakly significant, with an adjusted R^2 of 0.067, F (12, 118) = 1.782, p = 0.06. Subsequently, the interaction term of CEO duality and CEO narcissism was added to the model. Both interaction terms were not significant, with the interaction term of CEO narcissism and CEO tenure

having a beta of 0.008, SE = 0.007, p = 0.26, while the interaction term of CEO narcissism and CEO duality had a beta of 0.013, SE = 0.089, p = 0.89. The regression model itself, including the two interaction terms, was weakly significant, with an adjusted R^2 of 0.060, F (13, 117) = 1.633, p = 0.09. This regression model had a lower adjusted R^2 compared to only including the interaction term of CEO tenure and CEO narcissism. Lastly, the interaction term of CEO tenure and CEO narcissism was left out of the model, while the interaction term of CEO duality and CEO narcissism was included. This did not yield a significant interaction effect, with B = 0.033, SE = 0.087, p = 0.71. The regression model itself was weakly significant with an adjusted R^2 of 0.057, F (12, 118) = 1.661, p = 0.08. Compared to all other models, this model had the lowest adjusted R^2. Interpreting the results of the several models, H4 was rejected.

As the main effects of CEO narcissism and impression offsetting, and impression offsetting and CAR were not significant, the proposed conceptual model with impression offsetting being a mediator of the relationship between CEO narcissism and CAR is, based on the results, rejected. Moreover, the moderating role of CEO power in the relationship between CEO narcissism and impression offsetting was not supported by the results.

As a final note it should be said that as it was decided to maintain a ratio of 10 observations to each variable, the number of control variables which could be included was limited. Several versions of the different models were run to achieve the highest possible amount of explained variance. The variables presented in the tables above represented the optimal solution. Thereby, it was decided to leave out some variables. As said earlier, it was decided to leave out CEO founder as a control and moderating variable, as only 2 CEOs (out of 157) were founder CEOs. Moreover, CEO duality was not found to be a significant predictor in each of the models and reduced the adjusted R-squared compared to the models present in the table above. Therefore, it was decided to leave out this variable as control variable in the regression model. It is however important to note that CEO duality was not left completely out of the analysis and therefore its possible influence on the dependent variables was established. The same applies to the control variables stock appreciation over the last twelve months, and the acquiring company's relative cash flow (compared to other firms in the same industry) which were included in an earlier version of this thesis as control variables. These were left out of the final model as these were both not significant and reduced the adjusted R^2 of the different models. The acquiring firm's acquisition experience was also left

out of the final analysis in order to maintain the ratio of 10 to 1, also because acquisition experience was already captured by the CEO's acquisition experience.

Robustness check

As a robustness check, the effect of CEO narcissism on CAR was examined using a 5-day CAR instead of a 3-day CAR. The 5-day CAR runs from 2 days before to 2 days after the acquisition. When employing a five-day CAR, the effect of CEO narcissism was only weakly significant, with B = -0.010, SE = 0.005, p = 0.05. However, the regression model itself was not significant anymore, with an adjusted R square of -0.001, F (11,119) = 0.994 p = 0.46. This was quite a disappointing finding, however, at least the main effect of CEO narcissism was still weakly significant.

Additional analyses

As an additional analysis regarding hypothesis 1, a logistic regression analysis was performed, in which impression offsetting was included as a dichotomous dependent variable. As part of the assumption testing of logistic regression, the hypothesis of equality between observed and predicted frequencies was not rejected, with the Hosmer and Lemeshow test having a significance of p = 0.32, thus this assumption was met. The logistic regression model was found to be weakly significant, with X^2 (11, N = 126) = 18.48, p = 0.07. The Nagelkerke R square of this model was 0.25, and the model correctly predicted 90,1 per cent of the observations. However, the predictor variable CEO narcissism was not significant, with OR = 0.873, p = 0.75. The odds ratio thus stated that a one-unit increase in CEO narcissism leads to a 12.7 per cent decrease in the odds of engaging in impression offsetting (1 - 0.873 = 0.127). However, this effect was not significant. Two of the control variables were significant: percentage of stock, OR = 1.02, p = 0.05 and CEO acquisition experience OR = 1.60, p = 0.04. Regarding the last variable, it is quite interesting to note that a one-unit increase in the variable CEO acquisition experience leads to a 60 % increase in the odds of engaging in impression offsetting. Of main interest however was the effect of CEO narcissism on impression offsetting, however, no significant relationship was found.

The second analysis which was performed was examining whether there was a nonlinear effect of CEO narcissism on impression offsetting. This was done by including the CEO narcissism variable as a squared variable, i.e. a quadratic term. The quadratic term was

not significant, with B = -0.042, SE = 0.034, p = 0.22. The regression model itself was weakly significant with an adjusted R^2 of 0.068, F (12, 118) = 1.794, p = 0.06.

A nonlinear effect of CEO narcissism on CAR was also examined. Again, CEO narcissism was included as a quadratic term. This time, the quadratic term proved to be significant with B = 0.008, SE = 0.004, $p < 0.05$. Moreover, the regression model itself was also significant, with the adjusted R^2 explaining significantly more variance than the model without the quadratic term. The adjusted R^2 for this model was 0.093, with F(12, 118) = 2.117, $p < 0.05$. However, the linear term of CEO narcissism was also a significant predictor of CAR, with B = -0.018, SE = 0.005, $p < 0.001$. The standardized beta coefficients of the two terms were compared to determine which variable contributed more to the model. The standardized beta coefficient of the linear term was -0.379, while for the quadratic term it was 0.204. Thereby, the linear term contributed more to the model. Therefore, it would be premature to conclude that there is a nonlinear effect of CEO narcissism on CAR. However, it is remarkable to note that the unstandardized beta coefficient and the slope of the quadratic curve (see Appendix 2) imply that either a low degree of narcissism or a high degree of narcissism is most beneficial to CAR, while a moderate amount produces a slightly negative CAR value. This is quite a surprising finding, as CEO narcissism was hypothesized to be a negative signal, and therefore a moderate amount of CEO narcissism which is beneficial to CAR would be more in line with expectations instead of a higher amount. However, the effect was only weakly significant and therefore the results should be interpreted with caution.

As an additional analysis regarding hypothesis 2, the variable impression offsetting was transformed into a dummy variable, as explained earlier. The dummy variable was not found to be a significant predictor of CAR, with B = -0.014, SE = 0.011, p = 0.23. On top of this, the regression equation was not significant, with an adjusted R^2 of 0.011, F(11, 119) = 1.137, p = 0.34. This analysis was run with the same data as the CEO narcissism analyses, however, there was a fallback option for a larger sample size. Due to the limited number of valid CEO narcissism observations, the sample size had been greatly reduced. However, the initial sample (268 deals) had valid scores for impression offsetting and it was decided to run analyses to determine whether results would change with a larger sample size. The first analysis included impression offsetting as a continuous variable, while the second analysis included impression offsetting as a dummy variable. The same control variables as in the other analyses were used. With an enlarged sample size of N = 194, because of missing values for some control variables, impression offsetting did not significantly predict CAR, with B =

-0.004, SE = 0.008 and p = 0.61. The regression equation was also not significant with an adjusted R^2 of 0.017, F(11, 182) = 1.305, p = 0.23. Including impression offsetting as a dummy variable produced almost the same results, with the regression model not being significant: the adjusted R^2 was 0.017, F(11, 182) = 1.302, p = 0.23. Impression offsetting was not a significant predictor of CAR, with B = -0.004, SE = 0.009, p = 0.62.

Another additional analysis was carried out which examined the possible moderating effect of CEO power on the relationship between CEO narcissism and CAR. This was not a hypothesized relationship, however, there is some discussion in the literature on whether CEO power influences a company's performance (Adams et al., 2005; Tien et al., 2013). Again, the two indicators of CEO power, CEO duality and CEO tenure, were used as two separate measures for CEO power. Considering hypothesis 3, in which it was hypothesized that investors do not approve of a narcissistic CEO, it is expected that investors will not approve of a narcissistic CEO who is also powerful. Regarding the interaction between CEO tenure and CEO narcissism, a significant interaction effect was found, with B = -0.002, SE = 0.001 and p < 0.01. The regression equation was also significant, with an adjusted R^2 of 0.138, F(12, 118) = 2.739, p < 0.01. However, the main effect of CEO narcissism was also significant, with B = -0.017, SE = 0.005, p < 0.001. Comparing the standardized beta coefficients, CEO narcissism contributed more to the model with a standardized beta of -0.365, while the standardized beta of the interaction term was -0.283, indicating that the main effect was contributing more to the model. An attempt was made to interpret the interaction term via a plot (only a scatterplot is possible in SPSS for continuous predictors), however, the plot produced some results which were not useful in interpreting the interaction effect (see Appendix 2). It seems like most observations are around a value of 0, with a few values that are either to the left or the right of the centre. All in all, it seems premature and speculative to draw conclusions regarding this non-hypothesized effect.

The interaction term of CEO duality and CEO narcissism was also checked. No significant relationship was found, with B = -0.011, SE = 0.009, p = 0.25. The regression equation was weakly significant, with the adjusted R^2 being 0.070, F(12, 118) = 1.812, p = 0.05. Including both interaction terms in the model resulted in a significant regression model, with an adjusted R^2 of 0.133, F(13, 117) = 2.535, p < 0.01. Only the interaction term of CEO tenure and CEO narcissism was significant, with B = -0.002, SE = 0.001, p < 0.01. The main effect of CEO narcissism was not significant anymore, with B = -0.014, SE = 0.008, p = 0.10. This suggests there may be a moderating effect of CEO tenure, albeit a very small one.

Similar to the robustness check for the effect of CEO narcissism on CAR, a robustness check was also performed for the interaction effect of CEO tenure on the relationship between CEO narcissism and CAR, again employing a 5-day CAR. Both the regression model and the interaction effect were significant. The regression model had an adjusted R^2 of 0.080, with $F(12, 118) = 1.943$, $p < 0.05$. The interaction was significant with $B = -0.003$, $SE = 0.001$, $p = 0.001$. Multiplying this beta by 100 yielded a percentage of change in CAR of -0.3 % for every unit increase in the interaction term of tenure and narcissism. It should be noted that the main effect of CEO narcissism was also significant in this interaction model (compared to being weakly significant when included without the interaction term), with $B = -0.015$, $SE = 0.005$, $p < 0.01$. However, the standardized beta coefficient of the interaction term was larger than the standardized beta coefficient of the main effect (-0.301 compared to -0.288) thus indicating that for the 5-day CAR, the interaction term contributed more to the model. This hints at the notion that CEO tenure might moderate the relationship between CEO narcissism and CAR.

Conclusion and discussion

The goal of this thesis was to gain insight into the relationships between CEO narcissism, impression offsetting, and the stock market reaction. To this end, the following research question was proposed:

To what extent does impression offsetting mediate the relationship between CEO narcissism and the stock market reaction to an acquisition announcement?

It was hypothesized that CEO narcissism is negatively related to the stock market reaction to an acquisition announcement, but that impression offsetting would mediate this relationship such that companies that engaged in impression offsetting experience a less negative market reaction. CEO narcissism in turn was hypothesized to be negatively related to impression offsetting. The hypothesized relationships between CEO narcissism and impression offsetting and impression offsetting and the stock market reaction were not supported by the data. Evidence for the negative relationship between CEO narcissism and the stock market reaction was found, although it should be noted that the regression model was only weakly significant.

Several additional analyses were performed. A logistic regression analysis with impression offsetting as a dichotomous dependent variable did not result in a significant

relationship between CEO narcissism and impression offsetting. Moreover, including impression offsetting as a dummy predictor variable did not yield a significant relationship between impression offsetting and the stock market reaction. As the direct relationships between CEO narcissism and impression offsetting and impression could not be established, the mediation effect of impression offsetting could also not be established. Therefore, the answer to the research question is that, based on the results of this thesis, impression offsetting does not mediate the relationship between CEO narcissism and the stock market reaction to an acquisition announcement.

In addition to the main research question, the following sub-question served to take into account the moderating variable:

To what extent does CEO power moderate the relationship between CEO narcissism and impression offsetting?

This hypothesis was tested by using both CEO tenure and CEO duality as two separate measures for CEO power. Although the regression model itself was significant, none of the two variables resulted in a significant moderation effect. The answer to this sub-question is that CEO power does not moderate the relationship between CEO narcissism and impression offsetting.

Theoretical implications

Despite three out of four hypotheses being rejected, this thesis contributes to several strands of literature.

First of all, this thesis contributes to literature on anticipatory impression management and impression offsetting. In previous impression offsetting studies, impression offsetting has been found to be able to reduce the negative market reaction to an acquisition announcement (Graffin et al., 2016), while another study found that it may serve as a signal of low CEO confidence in an acquisition (Gamache et al., 2019). This thesis did not find a significant relationship between impression offsetting and the stock market reaction to an acquisition announcement. Thereby, this thesis could not underline the importance of impression offsetting. Moreover, this thesis looked into the influence of CEO narcissism on impression offsetting, as the influence of CEO characteristics on the usage of anticipatory impression management is not well researched. However, no significant relationship was found. One

possible explanation which will be discussed later in this chapter is the flawed measurement of CEO narcissism, but it may also well be that there simply is no relationship between CEO narcissism and impression offsetting, which would hint at the fact that narcissistic CEOs are not that busy with firm communication. However, this is not a satisfying explanation as Chatterjee & Hambrick (2007) verified with several communication experts that CEOs are very much occupied with external announcements and personally review most of these. All in all, more research into the relationship between CEO characteristics and the usage of impression offsetting is needed to be able to draw generalizable conclusions.

Secondly, this thesis contributes to the literature on CEO narcissism and more broadly to upper echelon theory. Upper echelon theory states that organizational outcomes such as firm performance are partially determined by the manager's background. CEO narcissism is an example of a CEO characteristic that is relevant to firm outcomes. In line with expectations, a significant negative relationship between CEO narcissism and the stock market reaction to an acquisition announcement was found. By finding this relationship, this thesis adds to the discussion in CEO narcissism literature on whether CEO narcissism is beneficial or harmful to organizations, as narcissism seems to have a positive effect on some firm outcomes, such as financial performance metrics (Cragun et al., 2020) but CEO narcissism also has a negative effect on organizations, e.g. being linked to corporate fraud (Rijsenbilt & Commandeur, 2013). This thesis contributed by finding a negative effect of CEO narcissism on the stock market reaction to an acquisition announcement.

Thirdly, this thesis contributes to literature on signalling theory. Based on signalling theory, it was expected that CEO narcissism, similar to other CEO characteristics (Hayward & Hambrick, 1997; Malmendier & Tate, 2008) can serve as a negative signal to the stock market. This thesis found a significant negative relationship between CEO narcissism and the stock market reaction to an acquisition announcement, which indicated that a one-unit increase in CEO narcissism leads to a 1.3 per cent decrease in cumulative abnormal return, with everything else in the model remaining constant. Even though 1.3 per cent does not seem a lot, it is still quite striking that a CEO trait has an influence on the reaction of the stock market to a company's acquisition announcement. However, an additional analysis revealed that CEO tenure was a significant moderator of this relationship, albeit a very small interaction effect. This moderation effect should be interpreted with caution as the interaction effect of CEO tenure and CEO narcissism had a smaller standardized beta compared to the main effect of CEO narcissism, which indicates a smaller relative importance.

Practical implications

As many of the proposed effects were not supported by the results, the practical implications of this thesis are relatively limited. The relationship between impression offsetting and the stock market reaction which could not be established does not mean that impression offsetting is not effective at all in dampening a negative market reaction. More research on impression offsetting should be conducted to give a definitive answer. However, a cautious practical implication is that impression offsetting should not be considered a panacea for companies to mitigate a negative market reaction around an acquisition announcement, as no effect of impression offsetting was found in this thesis.

Another practical implication is that companies with a narcissistic CEO have some reason to be wary of possible negative effects of a narcissistic CEO. Even though several studies have linked CEO narcissism to positive financial performance (e.g. Cragun et al., 2020; Reine et al., 2014), this thesis found a negative relationship between CEO narcissism and the stock market reaction to an acquisition announcement. Therefore, the shareholders and stakeholders of the company have some reason to be wary of a narcissistic CEO.

Limitations and future research

This thesis is not without its limitations. Several limitations of this study will be discussed, together with possible directions for future research.

First of all, three of the four hypotheses were rejected. No significant relationship between impression offsetting and the stock market reaction to an acquisition announcement was established. Moreover, the results of this thesis indicated a (non-significant) negative relationship between impression offsetting and the stock market reaction, whereas, based on previous research (Graffin et al., 2016), a positive relationship was expected. The relationship remained negative after impression offsetting was included as a dummy predictor variable. There are several possible explanations for this unexpected sign and the non-significance of the relationship between impression offsetting and the stock market reaction. Compared to earlier impression offsetting studies (Gamache et al., 2019; Graffin et al., 2016), a lower mean of impression offsetting was observed in the sample, meaning that fewer press statements issued by companies in the sample could be categorized as impression offsetting. Many companies in the sample did not engage in impression offsetting, which resulted in an average of 0.13, compared to an average of 0.55 that was reported by Graffin et al. (2016). The means

for baseline positivity on the other hand were comparable, with this thesis reporting a mean of 0.12 (before the square root of this variable was taken) compared to 0.09 reported by Graffin et al. (2016). Relatively few companies engaging in impression offsetting in the sample may have been the cause of not being able to find a significant relationship between impression offsetting and the stock market reaction. Moreover, the relatively low number of press statements that could be labelled as impression offsetting meant that some of the assumptions of regression analysis were not met, for example a high kurtosis statistic due to the relatively high number of companies with score 0. The relatively few companies with score 1 and 2 also had consequences for equal variances between groups, as the assumption of homoscedasticity was violated. Not meeting these assumptions could influence the results of the regression analysis. Future research should aim to further investigate the relationship between impression offsetting and the stock market reaction, thereby proving (or disproving) the usefulness of impression offsetting.

The second limitation of this thesis is the incomplete measurement of CEO narcissism. Due to limited data availability, not all five dimensions of the CEO narcissism index could be included. The Cronbach's alpha of the three measures employed was low (0.35) which means that the measures are not internally consistent. Moreover, the items CEO relative non-cash compensation and prominence of CEO photograph did not correlate significantly with each other. In addition, the data regarding the indicator measuring the prominence of the CEO photograph was not available for all CEOs, which greatly reduced the sample size. Due to the smaller sample size and incomplete measurement, the results of this thesis should be interpreted with caution. Future research might use all five indicators of the CEO narcissism index to provide a more complete measurement of CEO narcissism. Alternatively, another type of measurement of CEO narcissism could be used, which is the thin-sliced video metric approach. This is an unobtrusive measurement of CEO narcissism in which a third-person rates the degree of narcissism by watching selected videos of the CEO, using survey items from the Narcissistic Personality Inventory (Gupta et al., 2019). By measuring CEO narcissism more completely, future research might be able to establish a significant relationship between CEO narcissism and impression offsetting.

The third limitation of this study is the small sample size. Due to limited data availability and some missing values for the control variables, the N of this study was only 131. Therefore, keeping in mind a ratio of 10 for the number of observations to the number of variables, the number of control variables which could be included was relatively limited. As

explained earlier, several control variables had to be excluded to maintain the ratio of 10 to 1. Future research might aim for a larger sample size in order to be able to include more control variables into the model. For example, the control variable industry similarity might be included as a control variable or even as a moderator of one of the relationships, as relatedness is an influential factor in acquisition performance prediction (King et al., 2021). In an earlier version of this thesis, industry similarity was included as a control variable, however it had many missing values which led to the decision to exclude it from the model.

Another limitation was that the robustness checks and additional analyses produced some unexpected results. After employing a 5-day CAR instead of a 3-day CAR, the regression model for H3 was not significant anymore, plus the main effect of CEO narcissism on CAR was only weakly significant which partly undermines the support for hypothesis 3. Moreover, an additional analysis of the nonlinear effect produced some strange results, as both the quadratic and linear term were significant. Moreover, the nonlinear effect indicated that either a low or high degree of narcissism was beneficial to CAR, contrary to expectations. Future research might look into the possibility of a nonlinear effect of CEO narcissism on CAR and the nonlinear effect of CEO narcissism on other financial performance indicators.

A fifth limitation is that as a large part of the initial sample (N = 268) was disregarded because of data availability for the CEO narcissism variable, a selection bias may have occurred. A possible way to check whether a selection bias has occurred is the Inverse Mills Ratio (IMR). It was planned to calculate this ratio using SPSS, however within SPSS it is not possible to calculate this ratio, as this function is not present within SPSS. Therefore, this thesis cannot account for the possibility that due to limited data availability, a selection bias has occurred in the formation of the CEO narcissism variable.

The last limitation of this study is that it only takes into account acquisitions done by S&P 500 companies. By including only these American companies, the findings of this study may not apply to other cultural contexts. For future research, it would be interesting to for instance examine whether impression offsetting is also present and effective in European stock markets.

References

Aabo, T., Als, M., Thomsen, L., & Wulff, J. N. (2020). Watch me go big: CEO narcissism and corporate acquisitions. *Review of Behavioral Finance, 13*(5), 465-485.

Aalbers, R.H., McCarthy, K.J., Heimeriks, K.H. (2021a). Market reactions to acquisition announcements: The importance of signaling 'why' and 'where'. *Long Range Planning, 54*(6), 1-22.

Aalbers, R. H., McCarthy, K., Huisman, M., & Roettger, J. (2021b). Moving motives: How past and present strategy influence the market. *Plos one*, *16*(12), e0259660.

Adams, R. B., Almeida, H., & Ferreira, D. (2005). Powerful CEOs and their impact on corporate performance. *The Review of Financial Studies*, *18*(4), 1403-1432.

Aktas, N., De Bodt, E., Bollaert, H., & Roll, R. (2016). CEO narcissism and the takeover process: From private initiation to deal completion. *Journal of Financial and Quantitative Analysis, 51*(1), 113-137.

Al-Shammari, M., Rasheed, A., & Al-Shammari, H. A. (2019). CEO narcissism and corporate social responsibility: Does CEO narcissism affect CSR focus? *Journal of Business Research, 104*, 106-117.

Asad, S., & Sadler-Smith, E. (2020). Differentiating leader hubris and narcissism on the basis of power. *Leadership*, *16*(1), 39-61.

Bajo, E., Jankensgård, H., & Marinelli, N. (2021). Me, myself and I: CEO narcissism and selective hedging. *European Financial Management*, 1-25.

Bassyouny, H., Abdelfattah, T., & Tao, L. (2020). Beyond narrative disclosure tone: The upper echelons theory perspective. *International Review of Financial Analysis*, *70*, 101499.

Blagoeva, R. R., Kavusan, K., & Jansen, J. J. (2020). Who violates expectations when? How firms' growth and dividend reputations affect investors' reactions to acquisitions. *Strategic Management Journal, 41*(9), 1712-1742.

Bogart, L. M., Benotsch, E. G., & Pavlovic, J. D. P. (2004). Feeling superior but threatened: The relation of narcissism to social comparison. *Basic and applied social psychology*, *26*(1), 35-44.

Bolino, M. C., Kacmar, K. M., Turnley, W. H., & Gilstrap, J. B. (2008). A multi-level review of impression management motives and behaviors. *Journal of management, 34*(6), 1080-1109.

Boudt, K., & Thewissen, J. (2019). Jockeying for position in CEO letters: Impression management and sentiment analytics. *Financial Management*, *48*(1), 77-115.

Braun, S. (2017). Leader narcissism and outcomes in organizations: a review at multiple levels of analysis and implications for future research. *Frontiers in psychology, 8*, 773.

Brunzel, J. (2021). Overconfidence and narcissism among the upper echelons: a systematic literature review. *Management Review Quarterly, 71*(3), 585-623.

Campbell, W. K., Rudich, E. A., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: Two portraits of self-love. *Personality and Social Psychology Bulletin, 28*(3), 358-368.

Campbell, W.K., Goodie, A.S., & Foster, J.D. (2004). Narcissism, confidence and risk attitude. *Journal of Behavioural Decision Making, 17*(4), 297-311.

Capalbo, F., Frino, A., Lim, M. Y., Mollica, V., & Palumbo, R. (2018). The impact of CEO narcissism on earnings management. *Abacus, 54*(2), 210-226.

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.

Chatterjee, A., & Hambrick, D. C. (2011). Executive personality, capability cues, and risk taking: How narcissistic CEOs react to their successes and stumbles. *Administrative science quarterly*, *56*(2), 202-237.

Connelly, B.L., Certo, S.T., Ireland, R.D., & Reutzel, C.R. (2011). Signaling theory: A review and assessment. *Journal of Management, 37*(1), 39-67.

Cragun, O.R., Olsen, K.J., Wright, P.M. (2020). Making CEO narcissism great: A review and meta-analysis of CEO narcissism. *Journal of Management, 46*(6), 908-936.

Cramer, P. (2011). Narcissism through the ages: What happens when narcissists grow older? *Journal of research in personality, 45*(5), 479-492.

Crysel, L. C., Crosier, B. S., & Webster, G. D. (2013). The Dark Triad and risk behavior. *Personality and individual differences*, *54*(1), 35-40.

Daily, C. M., & Johnson, J. L. (1997). Sources of CEO power and firm financial performance: A longitudinal assessment. *Journal of management, 23*(2), 97-117.

Dalton, D. R., & Kesner, I. F. (1987). Composition and CEO duality in boards of directors: An international perspective. *Journal of International Business Studies, 18*(3), 33-42.

Darouichi, A., Kunisch, S., Menz, M., & Cannella Jr, A. A. (2021). CEO tenure: An integrative review and pathways for future research. *Corporate Governance: An International Review, 29*(6), 661-683.

Elsbach, K. D., Sutton, R. I., & Principe, K. E. (1998). Averting expected challenges through anticipatory impression management: A study of hospital billing. *Organization Science, 9*(1), 68-86.

Finkelstein, S. (1992). Power in top management teams: Dimensions, measurement, and validation. *Academy of Management Journal, 35*(3), 505-538.

Foster, J. D., Campbell, W. K., & Twenge, J. M. (2003). Individual differences in narcissism: Inflated self-views across the lifespan and around the world. *Journal of research in personality, 37*(6), 469-486.

Foster, J. D., Misra, T. A., & Reidy, D. E. (2009). Narcissists are approach-oriented toward their money and their friends. *Journal of research in personality, 43*(5), 764-769.

Gamache, D.L., McNamara, G., Graffin, S.D., Kiley, J., Haleblian, J., Dever, C.E. (2019). Impression offsetting as an early warning signal of low CEO confidence in acquisitions. *Academy of Management Journal, 62*(5), 1307-1332.

Gerstner, W.-C., König, A., Enders, A., & Hambrick, D. C. (2013). CEO narcissism, audience engagement, and organizational adoption of technological discontinuities. *Administrative science quarterly, 58*(2), 257-291.

Graffin, S.D., Carpenter, M.A., & Boivie, S. (2011). What's all that (strategic) noise? Anticipatory impression management in CEO succession. *Strategic Management Journal, 32*(7), 748-770.

Graffin, S.D., Haleblian, J., & Kiley, J.T. (2016). Ready, AIM, acquire: Impression offsetting and acquisitions. *Academy of Management Journal, 59*(1), 232-252.

Gupta, A., Nadkarni, S., & Mariam, M. (2019). Dispositional sources of managerial discretion: CEO ideology, CEO personality, and firm strategies. *Administrative science quarterly, 64*(4), 855-893.

Haleblian, J., Kim, J.-Y., & Rajagopalan, N. (2006). The influence of acquisition experience and performance on acquisition behavior: Evidence from the US commercial banking industry. *Academy of Management Journal, 49*(2), 357-370.

Haleblian, J., Devers, C. E., McNamara, G., Carpenter, M. A., & Davison, R. B. (2009). Taking stock of what we know about mergers and acquisitions: A review and research agenda. *Journal of management, 35*(3), 469-502.

Ham, C., Seybert, N., & Wang, S. (2018). Narcissism is a bad sign: CEO signature size, investment, and performance. *Review of Accounting Studies, 23(*1), 234-264.

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.

Harrison, J. S., Thurgood, G. R., Boivie, S., & Pfarrer, M. D. (2020). Perception is reality: How CEOs' observed personality influences market perceptions of firm risk and shareholder returns. *Academy of Management Journal*, *63*(4), 1166-1195.

Hayward, M. L., & Hambrick, D. C. (1997). Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative science quarterly*, 103-127.

Highhouse, S., Brooks, M. E., & Gregarus, G. (2009). An organizational impression management perspective on the formation of corporate reputations. *Journal of management*, *35*(6), 1481-1493.

Hooghiemstra, R. (2000). Corporate communication and impression management–new perspectives why companies engage in corporate social reporting. *Journal of business ethics*, *27*(1), 55-68.

Ingersoll, A. R., Glass, C., Cook, A., & Olsen, K. J. (2019). Power, status and expectations: How narcissism manifests among women CEOs. *Journal of business ethics*, *158*(4), 893-907.

Jeong, S.-H., & Harrison, D. A. (2017). Glass breaking, strategy making, and value creating: Meta-analytic outcomes of women as CEOs and TMT members. *Academy of Management Journal*, *60*(4), 1219-1252.

Kashmiri, S., Nicol, C. D., & Arora, S. (2017). Me, myself, and I: influence of CEO narcissism on firms' innovation strategy and the likelihood of product-harm crises. *Journal of the Academy of Marketing Science*, *45*(5), 633-656.

Kausel, E. E., Culbertson, S. S., Leiva, P. I., Slaughter, J. E., & Jackson, A. T. (2015). Too arrogant for their own good? Why and when narcissists dismiss advice. *Organizational Behavior and Human Decision Processes*, *131*, 33-50.

King, D. R., Wang, G., Samimi, M., & Cortes, A. F. (2021). A meta-analytic integration of acquisition performance prediction. *Journal of Management Studies*, *58*(5), 1198-1236.

Leary, M. R., & Kowalski, R. M. (1990). Impression management: A literature review and two-component model. *Psychological bulletin*, *107*(1), 34.

Lee, J. Y., Ha, Y. J., Wei, Y., & Sarala, R. M. (2022). CEO Narcissism and Global Performance Variance in Multinational Enterprises: The Roles of Foreign Direct Investment Risk-Taking and Business Group Affiliation. *British Journal of Management*, *0*, 1-24.

Lim, E. N., & Mccann, B. T. (2013). The influence of relative values of outside director stock options on firm strategic risk from a multiagent perspective. *Strategic Management Journal*, *34*(13), 1568-1590.

Liu, P., & Nguyen, H. T. (2020). CEO characteristics and tone at the top inconsistency. *Journal of Economics and Business*, *108*, 105887.

Malhotra, S., Reus, T. H., Zhu, P., & Roelofsen, E. M. (2018). The acquisitive nature of extraverted CEOs. *Administrative science quarterly*, *63*(2), 370-408.

Malmendier, U., & Tate, G. (2008). Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of financial Economics*, *89*(1), 20-43.

Marquez-Illescas, G., Zebedee, A. A., & Zhou, L. (2019). Hear me write: does CEO narcissism affect disclosure? *Journal of Business Ethics*, *159*(2), 401-417.

McWilliams, A., & Siegel, D. (1997). Event studies in management research: Theoretical and empirical issues. *Academy of Management Journal*, *40*(3), 626-657.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions. Journal of financial Economics, 73(2), 201-228.

Olsen, K. J., Dworkis, K. K., & Young, S. M. (2014). CEO narcissism and accounting: A picture of profits. *Journal of management accounting research*, *26*(2), 243-267.

O'Reilly III, C. A., Doerr, B., & Chatman, J. A. (2018). "See You in Court": How CEO narcissism increases firms' vulnerability to lawsuits. *The leadership quarterly*, *29*(3), 365-378.

Pan, L., McNamara, G., Lee, J. J., Haleblian, J., & Devers, C. E. (2018). Give it to us straight (most of the time): Top managers' use of concrete language and its effect on investor reactions. *Strategic Management Journal*, *39(*8), 2204-2225.

Paruchuri, S., Han, J.-H., & Prakash, P. (2021). Salient expectations? Incongruence across capability and integrity signals and investor reactions to organizational misconduct. *Academy of Management Journal*, *64*(2), 562-586.

Park, J.-H., Kim, C., Chang, Y. K., Lee, D.-H., & Sung, Y.-D. (2018). CEO hubris and firm performance: Exploring the moderating roles of CEO power and board vigilance. *Journal of business ethics*, *147*(4), 919-933.

Patel, P. C., & Cooper, D. (2014). The harder they fall, the faster they rise: Approach and avoidance focus in narcissistic CEOs. *Strategic Management Journal*, *35*(10), 1528-1540.

Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of research in personality, 36*(6), 556-563.

Pelster, M., Hofmann, A., Klocke, N., & Warkulat, S. (2021). Dark Triad Personality Traits and Selective Hedging. *Journal of Business Ethics, 1-26*.

Petrenko, O. V., Aime, F., Ridge, J., & Hill, A. (2016). Corporate social responsibility or CEO narcissism? CSR motivations and organizational performance. *Strategic Management Journal*, *37*(2), 262-279.

Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of personality and social psychology, 54*(5), 890.

Rau, P. R., & Vermaelen, T. (1998). Glamour, value and the post-acquisition performance of acquiring firms. *Journal of financial Economics*, *49*(2), 223-253.

Rijsenbilt, A., & Commandeur, H. (2013). Narcissus enters the courtroom: CEO narcissism and fraud. *Journal of Business Ethics, 117*(2), 413-429.

Schijven, M., & Hitt, M. A. (2012). The vicarious wisdom of crowds: Toward a behavioral perspective on investor reactions to acquisition announcements. *Strategic Management Journal*, *33*(11), 1247-1268.

Shen, W. (2003). The dynamics of the CEO-board relationship: An evolutionary perspective. *Academy of management review*, *28*(3), 466-476.

Shen, W., & Cannella Jr, A. A. (2002). Power dynamics within top management and their impacts on CEO dismissal followed by inside succession. *Academy of Management Journal, 45*(6), 1195-1206.

Sheshasaayee, A., Thailambal, G. (2017). Performance of Multiple String Matching Algorithms in Text Mining. In: Satapathy, S., Bhateja, V., Udgata, S., Pattnaik, P. (eds) Proceedings of the 5th International Conference on Frontiers in Intelligent Computing: Theory and Applications . Advances in Intelligent Systems and Computing, vol 516. Springer, Singapore.

Tien, C., Chen, C.-N., & Chuang, C.-M. (2013). A study of CEO power, pay structure, and firm performance. *Journal of Management & Organization*, *19*(4), 424-453.

Tuggle, C. S., Sirmon, D. G., Reutzel, C. R., & Bierman, L. (2010). Commanding board of director attention: investigating how organizational performance and CEO duality affect board members' attention to monitoring. *Strategic Management Journal*, *31*(9), 946-968.

VSNU (2018). *Nederlandse gedragscode wetenschappelijke integriteit*. https://doi.org/10.17026/dans-2cj-nvwu

Wallace, H. M., & Baumeister, R. F. (2002). The performance of narcissists rises and falls with perceived opportunity for glory. *Journal of personality and social psychology*, *82*(5), 819.

Westphal, J. D., & Zajac, E. J. (1995). Who shall govern? CEO/board power, demographic similarity, and new director selection. *Administrative science quarterly*, *40*(1), 60-83.

Westphal, J. D., & Zajac, E. J. (1998). The symbolic management of stockholders: Corporate governance reforms and shareholder reactions. *Administrative science quarterly*, *43* (1), 127-153.

Westphal, J. D., Park, S. H., McDonald, M. L., & Hayward, M. L. (2012). Helping other CEOs avoid bad press: Social exchange and impression management support among CEOs in communications with journalists. *Administrative science quarterly*, *57*(2), 217-268.

Whittington, R., Yakis-Douglas, B., & Ahn, K. (2016). Cheap talk? Strategy presentations as a form of chief executive officer impression management. *Strategic Management Journal*, *37*(12), 2413-2424.

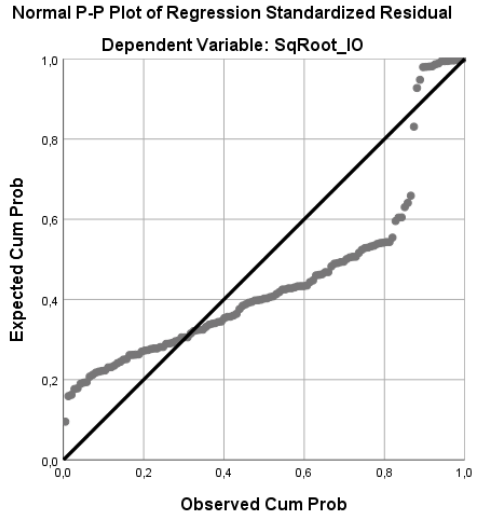
Zhang, H., Ou, A. Y., Tsui, A. S., & Wang, H. (2017). CEO humility, narcissism and firm innovation: A paradox perspective on CEO traits. *The leadership quarterly*, *28*(5), 585-604.

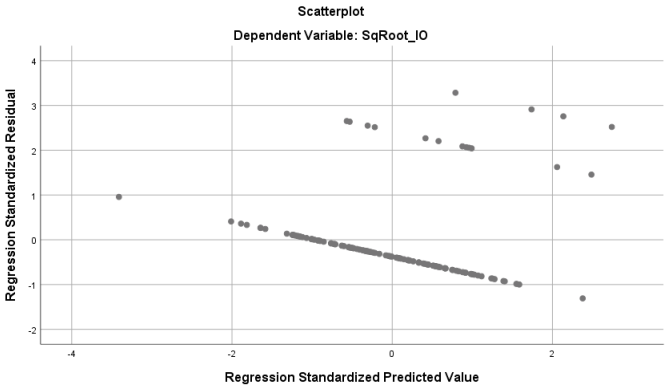
Zhu, D. H., & Chen, G. (2015). Narcissism, director selection, and risk-taking spending. *Strategic Management Journal*, *36*(13), 2075-2098.

Appendix 1 – Selection of assumptions checks regression analysis

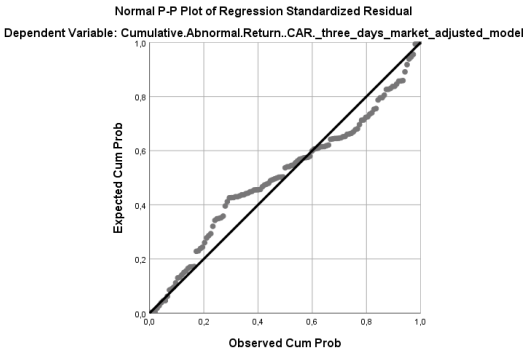
Hypothesis 1 (assumptions not met)

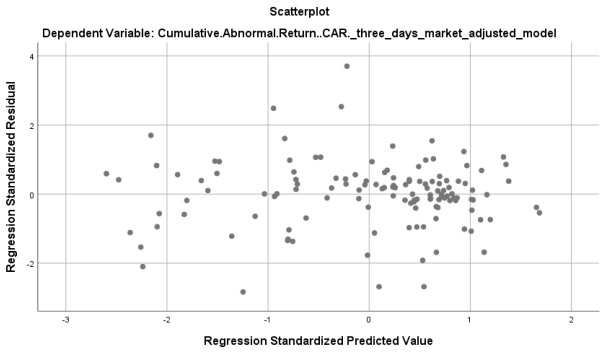
P-P plot (to assess normality) and scatterplot (to assess homoscedasticity)



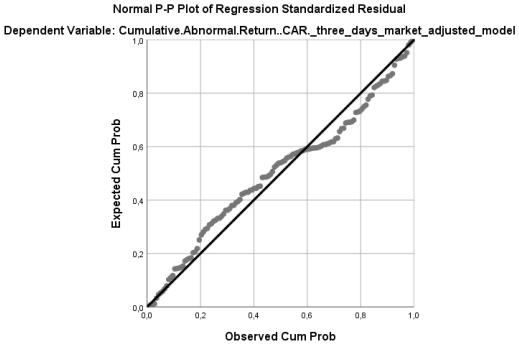


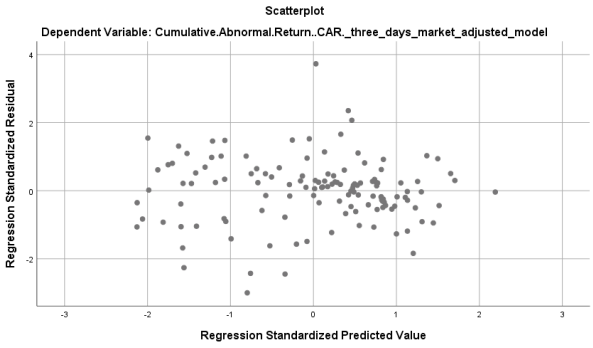
Hypothesis 2 (assumptions met)



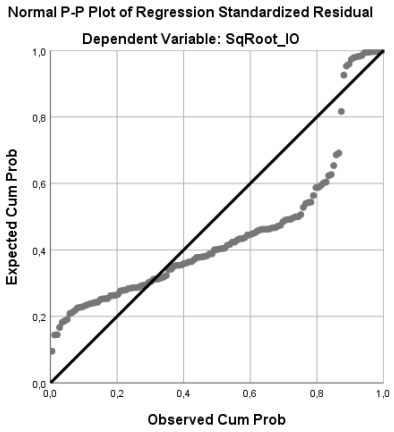


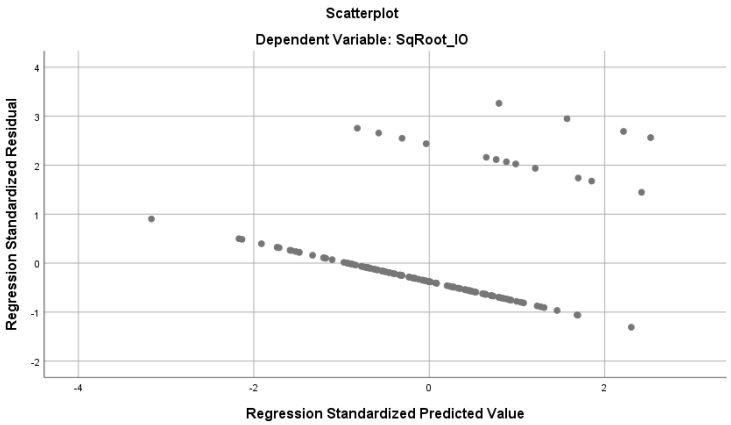
Hypothesis 3 (assumptions met)





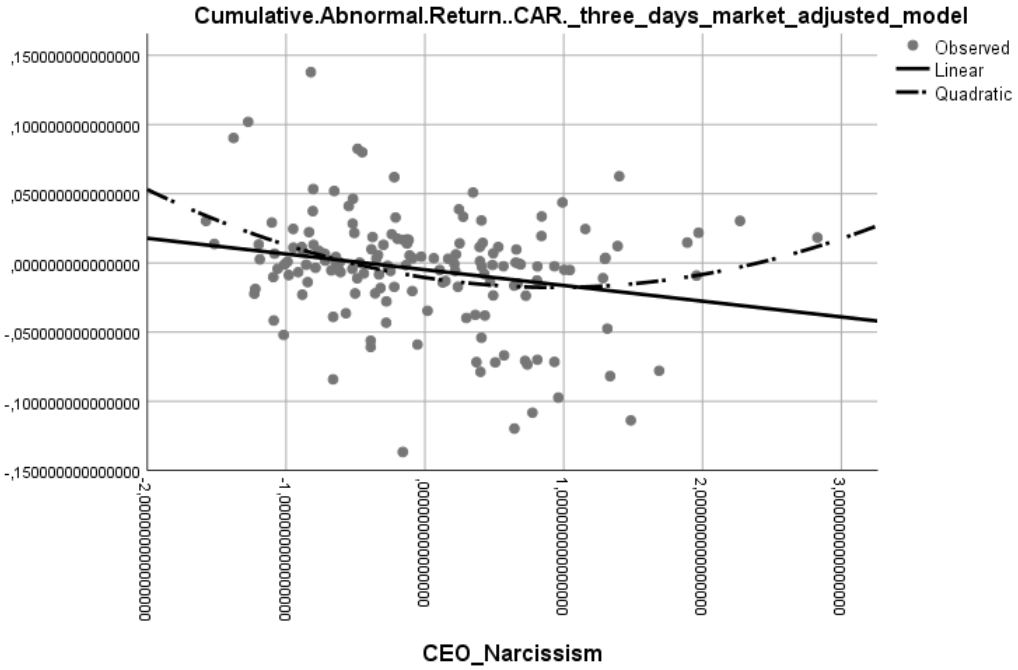
Hypothesis 4 – Interaction CEO tenure and CEO narcissism (assumptions not met)





Appendix 2 – Output of selection of additional analyses

Nonlinear effect of CEO narcissism on CAR



Interaction effect CEO tenure & CEO narcissism on CAR