ERASMUS UNIVERSITY ROTTERDAM

ERASMUS SCHOOL OF ECONOMICS

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# The Relationship between CSR Performance and M&A Deal Returns

# The effect of acquirer and target CSR performance on the announcement returns of the acquirer

Master Thesis Economics and Business Economics

Author:	Joost Dorhout Mees
Student number:	523850
Supervisor:	Dr. J. Kil
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Co-reader:	Dr. J. Lemmen

## Abstract

This study examines the relationship between corporate socially responsible (CSR) performance and abnormal returns in a merger and acquisition (M&A) context. CSR performance is measured by its Environmental, Social, and Governance (ESG) score; this ESG is derived by certified rating agencies. A sample of international M&A deals is used to test the relationship between acquirer and target CSR performance and acquirer cumulative abnormal returns (CARs) at the announcement date. By using event studies and fixed effect regressions, the hypothesized predictions are examined through the scope of shareholder and stakeholder view, organizational learning theory, and organizational compatibility theories. The findings of this paper show that target CSR performance has a positive relationship with acquirer CAR and that this positive impact increases when the target has higher CSR performance than the acquirer. Furthermore, CSR compatibility between the acquirer and the target resulted in the highest positive impact on acquirer CAR. Overall, the results suggest that target CSR performance and CSR compatibility have a positive impact on M&A performance.

Key words: M&A, CSR, ESG, CAR

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## 1. Introduction

Starting in the 1990s, Socially Responsible Investing (SRI), an investment strategy where next to providing financial benefits to investors the environment and society benefits as well became an increasingly popular investment opportunity (Benson & Humphrey, 2008). The increase of assets held under professional management, which are subject to SRI criteria, is an indicator of this phenomena. According to the US Sustainable, Responsible and Impact Investing report (2018) there were \$12 trillion SRI assets held under professional management at the end of 2017 in the US, which is eighteen times as much as the \$0,6 trillion SRI assets under professional management in 1995. This increase in popularity to invest in assets bound to SRI criteria suggests that investors are not just concerned with maximizing their returns, but also with how socially firms operate in the market environment. The relationship and the increased interest from the investment community between corporate social responsibility and financial performance is interesting for academics to research, because it can reveal if investors can exploit this relationship. However, only a few studies consider the possible effects of CSR on financial performance. For instance, Velte (2017) found an ambiguous effect of ESG performance, in which ESG has a positive impact on return on assets (ROA) but it has no impact on Tobin's q. Reveli and Viviani (2015) confirm these findings in their meta-analysis on ESG stock performance. The authors found insignificant values and therefore conclude that investing in ESG stocks does not create abnormal returns. On the other hand, Friede et al. (2015) found in their meta-analysis a significantly positive relationship between CSR and financial performance. Subsequently, the authors conclude that ESG performance is an indicator of financial performance and that it is value-enhancing.

Research done on the relationship between ESG and financial performance is mostly studied via accounting factors. As previously mentioned, Velte (2017) looks at the relationship between ESG and the accounting measurements ROA and Tobin's q. However, there is only a handful of research done on the effect of ESG on financial performance in an M&A context. When looking at acquirer CSR performance Deng et al. (2013) found that acquirer CSR performance has a positive impact on the CAR of the acquirer and therefore conclude that CSR is value-enhancing. Contradicting the results of Deng et al. (2013), Meckl and Theuerkorn (2015) found that high acquirer CSR performance leads to lower CARs at the announcement date and therefore state that CSR is value-destroying. Furthermore, the research of Aktas et al. (2010) looked at the same relationship, but then through the lens of the target and found that the CAR of the acquirer buys a high CSR performing target.

Because there are only a few studies done on the CSR and M&A relationship, these findings remain under discussion. This paper will try to further explore the impact of acquirer and target CSR performance levels on M&A announcement returns. Rather than only looking at individual CSR performance levels this paper will also consider different combinations of acquirer and target CSR performance levels. Secondly, this paper does not only look at short-term effects but also looks at the long-term implications of CSR on M&A deal returns. Subsequently, the research question of this paper is as follows: *Do acquirer and target CSR performance levels M&A deal returns?* 

This paper makes several contributions to the existing literature. Previous studies only look at the sole influence of either acquirer or target CSR performance on M&A returns. This paper is first to look at the effect of differences and similarities between acquirer and target CSR performance levels on M&A returns. The different ways in which the CSR performance levels of the acquirer and target can influence M&A deal performance are based on valid economic theories, which have until this point never been applied in research on the effect of CSR on M&A deal performance. In case the target has superior CSR performance, organizational learning theory is applied. The organizational learning theory predicts that the buyer can learn good practices from the target, which will lead to better performance (Cangelosi & Dill, 1965). Secondly, in case the acquirer and target CSR performance levels are compatible this paper looks at organizational compatibility theories. Organizational compatibility theories suggest that having organizational similarities will increase financial performance after an M&A (Bereskin et al, 2018). In the relationship between CSR and M&A organizational CSR compatibility is found to be an important factor for facilitating a well performing integration stage (De Roeck & Swaen, (2010). Bereskin et al. (2018) adds to this finding and found that a well performing integration stage can increase abnormal returns at the announcement date. Furthermore, this paper uses the ThomsonOne ASSET4 database which measures CSR performance for an international sample of firms on 400 CSR measures. This allows to move beyond the traditional US focus found in alternative databases. Finally, this paper will look beyond the short-run effect of CSR on M&A returns and will test if the shortrun effects hold in the long-run, this is done by looking at long-run stock performance of the acquirer.

The findings indicate that after robustness checks there is a significantly positive effect of target CSR performance on acquirer CAR and that this positive impact increases when the acquirer has low CSR performance, because this leads to an increased learning opportunity for the acquirer. Moreover, CSR compatibility is found to have a significantly positive impact on acquirer CAR, meaning that the market values deals in which the acquirer and target show similarities on CSR because this indicates a better chance of a well-organized integration process (Bereskin et al., 2018). However, not all hypothesized predictions were found to have a significant impact and certain results even indicate an opposite effect of what was hypothesized.

This paper proceeds as follows. The next section provides a review of the literature on the determinants of CSR, the M&A performance relationship, and the theories which explain the relationship between CSR and M&A. Based on this review the hypotheses are derived. In the third section, methodology and data used to test the hypotheses is described. In the fourth section, the empirical results are reported. Lastly, in section five, the results are discussed while mentioning certain limitations, and providing suggestions for further research. In order to avoid confusion between the terms CSR and ESG, except for the description of the different ESG pillars, this paper refer to CSR in relation to ESG, because ESG is a form of measuring CSR.

## 2. Literature Review and Hypotheses Development

In the past decade, there has been an increase in consumer willingness to pay a premium for products made by companies which act in a sustainable matter (Kum et al., 2016; Renneboog et al., 2008). Although there is this increase in awareness of social responsibility, only a few studies tried to explain the direct effect of CSR on M&A-returns. In the following section, an overview of CSR literature and the M&A-performance relationship are provided, including an overview of the effects of CSR in a M&A context.

## 2.1 Corporate Social Responsibility

CSR is a term that originated in the 1960s, and its definition remains complex. One of the reasons for this is that CSR is a dynamic phenomenon in which the literature is still developing. Furthermore, CSR is considered an umbrella term because it overlaps with other business-society relationships (Matten & Moon, 2008). Therefore, there are many formats of how to define CSR. For example, Davis (1973) defines CSR as the responsibility of the firm where the law does not reach and Frooman (1997) defines CSR as the actions done by a firm to benefit all stakeholders. Therefore, the problem is not that there is no definition possible but that many of the definitions are biased towards a specific interest (Van Marrewijk, 2003). However, not having one general definition of CSR is not a problem because the similarities between the different CSR definitions are large (Dahlsrud, 2008). Dahlsrud (2008) performed a meta-analysis on the similarities in CSR definitions and found five dimensions in which these similarities could be divided. The different dimensions are stakeholder, social, economic, voluntariness, and environmental which were found to be the base of almost all CSR definitions. Dahlsrud (2008) found that there was a 50% chance that all dimensions were represented in a CSR definition and a 97% chance that at least three dimensions were represented. This paper uses the Thomson One ASSET4 database for its CSR data and all the 5 CSR dimensions are represented in this CSR score. Previous studies done on the relationship between CSR and M&A returns use CSR scores provided by the Intangible Value Assessment (IVA) or Kinder, Lydenber, and Domini (KLD) databases which also represent all 5 dimensions (Aktas et al., 2010; Deng et al., 2013). This means that the different ways in which CSR is measured could still be compared. However, the databases use different selection methods for which companies to include. Therefore, the overall CSR scores of the different databases first need to be standardized to be compared. A more thorough explanation of this will be explained in the limitation section.

## 2.2.1 Stakeholder and Shareholder theory

There are two contrasting views, namely the stakeholder maximization or the shareholder expense view, that form the debate if CSR is value-enhancing or that it is valuedestroying. According to the stakeholder maximization view, the corporation should act in the interest of all stakeholders and not only the shareholders. To do so, management should consider all stakeholders when making decisions (Jensen, 2001). Due to the fact that it is impossible to maximize the value for every single stakeholder, it is essential to find a balance between the interests of the firm and those of the stakeholders (Tse, 2011; Jensen, 2001). When a firm only takes its profits into consideration stakeholders could act in ways that harm this objective, such as strikes or fines (Ruf, 2001). Therefore, acting in the interest of multiple stakeholders instead of only the shareholders could lead to an increase in shareholder value. As an example, Deng et al. (2013) found that in an M&A context engaging in CSR is not only maximizing stakeholder wealth but also increases shareholder value. One of the reasons of this is that the alignment of the interests of multiple stakeholders will increase their support of the firm. This increase in support will lead to more trust, which will lead to lower transaction costs between stakeholders (Donaldson & Preston, 1995). Furthermore, the way contracts are set up also influences the trust stakeholders have in the firm. This is because there are explicit and implicit claims. While explicit claims hold in court, implicit claims do not and therefore are more subject to the trust and expectations of the parties involved (Cornell and Shapiro, 1987). When trust in another is low, these implicit agreements will even further lower trust and will lead to actions done by the parties involved to ensure their part of the deal. This will lead to higher transaction costs and a negative impact on profit maximization.

The second view is the shareholder expense view, which means that firms engaging in CSR activities, to increase stakeholder wealth, are doing so at the expense of shareholders (Lopez et al., 2007; Friedman, 1998). Being socially responsible brings extra costs, such as leaving no CO2 footprint by planting trees for every product sold or paying farmers in third world countries a fair price for their products. Walley and Whitehead (1994) found that these extra costs are not profit-maximizing and so engaging in socially responsible activities decreases corporate profitability. A second factor that withholds management for engaging in CSR activities is that a large part of management pay schemes is incentive-based (Carpenter & Sanders, 2002). This incentive-based payment means that management is paid based on specific results, and most of the time this is linked to share price or specific financial metrics. Therefore, management doesn't want to partake in activities that don't enhance firm value

(Jensen, 1994). This is supported by the agency cost theory, were due to misalignment of interest managers fail to achieve maximum shareholder value (Jensen & Mecklings, 1979).

While both these contradicting theories are backed with literature, only a small amount of research has been done on the implications on M&A performance. This paper follows the stakeholder view, which sees CSR as an indication of value enhancement by maximizing total stakeholder value.

## 2.2 M&A-performance relationship

Mergers and Acquisitions are among the riskiest decisions a corporate management team can take (Betton et al., 2008). Because of the economic impact of performing an M&A, it is one of the most intensively studied topics in financial research. Previous research found that, when looking at the stock price reaction around the announcement, acquirers on average lose value doing an M&A (Datta et al., 1992; Jarrel & Poulsen, 1989), while for targets on average an M&A is value-enhancing (Moeller et al., 2003; Hansen and Lott, 1996; Datta et al., 1992). Although academics have widely researched this phenomenon, there is no undisputed answer. In explaining the moderators that influence the M&A-performance relationship, Haleblian et al. (2009) organize these different moderators into four levels: deal characteristics, managerial effects, firm characteristics, and environmental factors.

Deal characteristics are found to have an impact on the M&A-performance relationship through the payment method. For instance, the choice of paying with stock instead of cash has an adverse market reaction (Shleifer & Vishny, 2003; Hansen, 1987). The reason for this is that the market assumes that management would only use stock-based payment if they perceive their stock as overvalued. Otherwise, it would not make sense to use stock instead of cash. Secondly, managerial effects, ownership and the management compensation are found to have a nonlinear influence on the M&A-performance relationship (Wright et al., 2002). The authors found that under moderate levels of CEO ownership, the announcement returns were positive for both the bidder and the target (Wright et al., 2002). This is because, moderate ownership tends to have the highest level of interest alignment between management and shareholders (Hubbard & Palia, 1995). Thirdly, the main firm characteristics that affect acquisition performance are historical performance and firm size. Rhodes-Kropf and Viswanathan (2004) found that historical performance measured by the market-to-book ratio has a positive impact on acquisition performance. Secondly, when looking at another performance measure such as Tobin's Q, Lang et al. (1991) found indeed that bidders with a high Tobin's Q can expect positive returns. An explanation for these results could be that high performing firms can leverage their capabilities on lower-performing firms and therefore are capable of generating synergies. Indeed, research literature can confirm that this organizational learning has a significant influence on M&A success (Gomez et al., 2013; Trichterborn et al., 2016). Next, the way firm size affects M&A performance is not undisputed in research. Some research found that firm size has a negative impact on M&A performance (Ramaswany & Waegelein, 2003; King et al., 2003; Moeller et al., 2004). These authors found that reaping the benefits of the firm's internal growth through economies of scope/scale are hard to match with uncertain external activities such as M&A. Moreover, other studies found that firm size can have a positive impact on M&A performance due to increased asset productivity (Healy et al., 1992). Again, the way firm characteristics influence M&A performance is highly debated in the literature. Finally, Haleblian et al. (2009) studied environmental characteristics that impact the M&A-performance relationship. Scholars examined the effect of temporal effects and their influence on how the market reacts to M&A deals. Betton et al. (2008) showed that M&A activity comes in waves wherein certain periods, due to temporal market effects, there is a sharp increase in M&A activity.

M&A literature agrees on the four levels of deal characteristics (Haleblian et al., 2009; Das & Kapil, 2012) that have an impact on acquisition performance. However, many moderators have been offered that improve acquisition performance but until this day it is unclear which of these moderators improve shareholder value the most. Secondly, even though there is some knowledge of which conditions lead to higher acquire value, on average acquisitions still perform poorly. Therefore, this paper suggests CSR as an extra moderator that tries to explain acquire returns in an M&A context.

## 2.3 The relationship between CSR & M&A

Looking at the CSR performance level of the acquirer Deng et al. (2013) studied the relationship between acquirer CSR performance and acquirer M&A announcement returns. The authors found significant evidence that acquirer CSR performance has a positive effect on M&A returns. They base their findings on the stakeholder view and show that for their sample, the market reacts positively to deals in which the acquirer is known for maximizing stakeholder value. To check if this result holds in the long-run, the authors also examined the long-term effects and found higher long-term stock-returns/operational performance for high CSR scoring acquirers. Apart from research that studies the direct impact of acquirer CSR

performance on acquirer shareholder value, there is also research done on the indirect impact. For instance, De Roeck and Swaen (2010) found that similarity in the CSR performance of the acquirer and target target leads to a well-performing integration process. Subsequently, this better-performing integration process leads to higher deal returns (Bereskin et al., 2018)

When looking at the direct relationship between target CSR performance and M&A announcement returns, Aktas et al. (2010) found that buying a target with high CSR performance has a positive effect on cumulative abnormal returns for the acquirer. They link their findings to the organizational learning theory, which states that learning certain practices by buying a particular target could be value-enhancing (Cangelosi & Dill, 1965). Therefore, Aktas et al. (2010) state that purchasing a high CSR performing target allows the acquirer to learn from its CSR practices, which could create value. In their sample the authors indeed found that the market reacts positively to these deals, because of the increased abnormal returns at the announcement date (Aktas et al., 2010). A second explanation on how target CSR performance can influence acquirer returns is through the concept of "greenwashing". Greenwashing is the concept of looking more environmentally friendly than firms actually are (De Vries et al., 2015). One way to look more environmentally friendly is by buying high environmental scoring targets (Gomes, 2019). Salvi et al (2018) found that acquirers which buy 'green' targets have better financial performance.

To shed some light on the implications of the theories used by the papers mentioned above on the relationship between CSR and M&A, the opposite views of stakeholder and shareholder theory and the organizational learning theory used by Deng et al. (2013) and Aktas et al. (2010) respectively, are further examined in the next section.

## 2.3.1 M&A and Stakeholder/Shareholder theory

As mentioned above the study of Deng et al (2013) looked at the relationship between acquirer CSR performance and acquirer shareholder value. Deng et al. (2013) based their study on the two opposing views of stakeholder maximization and shareholder expense. These two contrasting views form the debate if CSR is value-enhancing for a firm or that it is value-destroying. As mentioned in the previous section, the stakeholder view sees CSR practices to have a positive effect on shareholder wealth because it maximizes total shareholder value. This increase in shareholder value results from focussing on the interest of other stakeholders, which will lead to an increase in their support for the firm's operations. This is in line with contract theory, which views a firm as a nexus of contracts between shareholder supplies the firm with

resources in exchange for claims which were agreed on in explicit and implicit contracts (Deng et al., 2013). As stated in the previous section, implicit contracts do not hold up in court. Therefore, the trust in each stakeholder is essential for the firm to operate. Donaldson and Preston (1995) found that high CSR performance indicates the trustworthiness of the firm to live up to their contracts. Being seen as a trustworthy firm is important during an M&A because it is likely that long-term contracts have to be renegotiated with the new owner or combined entity (Deng et al., 2013). Hence, the reputation for living up to agreements and keeping long term relations with critical stakeholders are crucial for M&A success. This suggests that M&A's are an important channel through which CSR can have an impact on shareholder wealth.

While Deng et al. (2013) found a significantly positive effect between acquirer CSR performance and acquirer CAR, Meckl and Theuerkorn (2015) found a significantly negative relationship between CSR performance and acquirer CAR. Meckl and Theuerkorn (2015) also found that the market does not recognize the value-enhancing potential of investing in a high CSR scoring M&A. The authors base their finding on the shareholder view and state that the market assumes that investing in a high CSR scoring firm will lead to extra costs and therefore will be value destroying (Meckl & Theuerkorn, 2015).

## 2.3.2 M&A and the Organizational Learning Theory

The organizational learning (OL) theory was found in 1965 by Cangelosi and Dill (1965). One of the authors' findings was that learning is not continuous but stepwise. This finding is supported by several studies done on different financial performance indicators (Hussam et al., 2008; Gomes et al., 2013). For example, Hussam et al. (2008) found that, while doing a stock trading exercise to dampen financial bubbles, students showed the same behaviour twice and only changed their behaviour at the third attempt. Several other studies define organizational learning as a process through either social interactions or because of certain aspirations (Ostroff & Kozlowski, 1992; Holland & Salma, 2010). Despite the debate on how organizational learning precisely works, there is consensus that it happens and that it has an impact on certain financial objectives (Gomes et al., 2013).

There is only a small amount of literature that bridges the gap between OL and CSR. For instance, research states that integrating CSR practices into decision-making requires major changes in values and strategies because CSR practices asks the firm to do business unconventionally (Jonker & de Witte, 2006; Lindgreen et al, 2009). In line with this thought, firms that want to start operating in a socially responsible way need to gain new knowledge (Cramer, 2005). This could be in the form of gaining new knowledge on how to incorporate stakeholders into decision-making (Preuss et al., 2016) or how to reduce operating cost while protecting the environment by gaining new knowledge in sustainable production processes (Christmann, 2009). Therefore, the relationship between OL and CSR development exists but due to the complexity of CSR, it is hard for firms to develop CSR knowledge organically. Fortis et al. (2018) state that the firm should look beyond their internal capabilities and try to attain new CSR knowledge either by attaining the right people or acquiring firms. Because this paper is M&A orientated, we will follow the view at achieving new CSR knowledge through M&A.

The relationship between OL theory and M&A has been studied in several ways. First of all, firms can grow organically through internal capabilities (Holland & Selma, 2010) or by acquiring knowledge through M&A (Heller et al., 2005; Gomes et al., 2013; Trichterborn et al., 2016). In support for the view to acquire knowledge through M&A in order to grow, Vermeulen and Barkema (2001) state that organic growth isn't sustainable and that external growth through acquisitions is necessary to be competitive. This argument is supported by Ranft and Lord (2000), who claim that in some industries, the knowledge of the target is the prime reason for doing the acquisition. Secondly, Gomes et al. (2013) did a meta-analysis on factors that influence M&A success and found OL through prior M&A experience to be an essential factor. This is supported by the study of Trichterborn et al. (2016), who not only found evidence for the relationship between prior M&A experience and M&A success but also state that an M&A capability can be developed due to learning in prior M&A deals. Finally, research found that organizational learning also has an impact on the likelihood firms engage in subsequent acquisitions (Collins et al., 2009; Greenberg et al., 2005).

## 2.4 Hypotheses Development

This paper aims to provide more insight into the effect of CSR performance on M&Aperformance. Deng et al. (2013), by using a sample consisting only out of mergers, found that CSR performance of the acquirer increases the acquirer's CAR. Contrary to this, Meckl and Theuerkorn (2015) found a negative impact of acquirer CSR on acquirer's CAR. The authors found that high involvement in CSR brings extra costs which lead to a higher rate of M&A failure and value-destruction (Meckl & Theuerkorn, 2015). Aktas et al. (2010) is the only current study to consider the target CSR performance, and found a positive effect of target CSR performance on acquirer CAR in a merger context. The main reason for this finding is that the acquirer can learn from the target's CSR practices. Unfortunately, Aktas et al. use a sample of 106 deals, so it is difficult to make hard conclusions out of this study.

To explain which individual CSR factors explain the positive effect on M&A announcement returns found by Deng et al. (2013) and Aktas et al. (2010), it is better to first look at the individual pillars, which are environmental, social, and governance (ESG). For the environmental part of CSR Derwall et al. (2005) found that firms that have an eco-efficient production process experience higher stock returns. An explanation for this positive relationship is that good environmental performance is related to better risk management (Schneider, 2011). Risk management in M&A is important because M&A's are risky business decisions with a high failure rate. Therefore, firms that score high on the environmental dimension of CSR signal better risk management and this leads to an increase in shareholder value (Stulz, 1996). Secondly, for the social dimension of CSR Edmans (2012) showed that firms which score high on social standards have more motivated employees which result in higher valuations and stock returns. This is supported by Lin and Wei (2006) who found that ethical standards during an M&A have a positive effect on employee satisfaction, which in turn leads to higher stock returns and productivity (Edmans, 2012). Therefore, in the case of an M&A, high social standards can signal to shareholders that the firm is capable of maintaining employee satisfaction and subsequently, it has a positive effect on shareholder value. Thirdly, Hayward and Hambrick (1997) found that managerial hubris leads to managers doing acquisitions for personal gain. The authors found a decrease in shareholder wealth when an acquisition was made by a CEO with hubris. Good corporate governance mechanisms can mitigate this agency problem because when good corporate governance mechanisms are in place, the CEO is not able to act in a hubris fashion. Core et al. (1999) supports this finding and provided evidence that weakly governed firms have more agency problems. Therefore, good corporate governance can reduce agency costs during an M&A, which signals to shareholders that the M&A is done to improve shareholder wealth and not for personal gain. Masulis (2007) found that this reduction of agency costs through good corporate governance mechanisms indeed leads to higher announcement returns.

In line with this reasoning, Aktas et al. (2010) found that acquiring high CSR performing targets leads to a higher CAR for the acquirer. The authors found that the acquirer is able to learn from the environmental and social capabilities of the target, which leads to synergies and therefore, an increase in shareholder value. Furthermore, in line with the stakeholder theory, high CSR performance indicates that both entities can have more trust in each other and so the impact of implicit and explicit contracts is less influential (Donaldson &

Preston, 1995). This can lower transaction cost and therefore can increase M&A returns (Deng et al., 2013). In line with this reasoning, the following predictions are hypothesized:

Hypothesis 1a: Stronger acquirer CSR performance has a positive effect acquirer announcement returns

Hypothesis 1b: Stronger target CSR performance has a positive effect on acquirer announcement returns

Hypothesis 1c: The effect of CSR performance on acquirer announcement returns is the strongest when both the acquirer and the target have strong CSR performance

The positive relationship between high target CSR performance and acquirer CAR could be affected by the way the target is already performing before the merger or acquisition. To measure how well a firm is performing Tobin's q can be used because it shows how management decisions paid off over the years (Jovanovic & Rousseau, 2002). Tobin's q is measured by dividing the market value of the firm's equity by the book value of assets (Doukas, 1995). Lang et al. (1989) found a positive relationship between acquirer returns and low target Tobin's q ratios for deals involving public firms. The authors found that this positive relationship existed because a well-managed acquirer can leverage its capabilities on the target and increase its performance (Lang et al., 1989). Moreover, Moeller et al. (2004) found a negative relationship between target Tobin's q ratios and acquirer CAR because of the higher acquisitions' premiums paid for targets with high Tobin's q ratios. In addition to these effects target Tobin's q can have on acquirer CAR, previous literature found a positive effect of CSR performance on the ability of the firm to attain higher levels of financial performance measured by its Tobins's q after the deal is completed (Choi et al., 2010; King & Lenox, 2001; Dowell et al., 2000). In line with these findings this paper suggests that a target with high CSR performance and a low Tobin's q ratio has a positive impact on acquirer CAR at the announcement date, because low Tobin's q decreases the acquisition premium, increases the opportunity for the acquirer to leverage its capabilities on the target, and high CSR performance increases the ability to improve financial performance after the deal. This results in the following hypothesis:

Hypothesis 1d: The positive effect high CSR performing targets have on acquirer CAR is stronger for targets with low Tobin's q

As mentioned earlier in this paper, CSR knowledge can be attained internally (Holland & Selma, 2010) or externally (Trichterborn et al., 2016). Vermeulen and Barkema (2001) found that external knowledge acquisitions are necessary to stay competitive. Therefore, acquirers can improve their CSR practices by M&A. Aktas et al. (2010) found that indeed acquirer CAR increases when the CSR performance of the target is high. They contribute their finding to the fact that investors notice that the acquirer can learn and improve their own CSR practices from the target. In line with the previous reasoning, the acquirer can learn good CSR practices by acquiring or merging with the target. However, when the acquirer already has good CSR practices, this learning effect would be lesser than when an acquirer has low CSR performance. This way of reasoning is supported by several studies, including Berchicci et al. (2012) who found that through the transfer of environmental knowledge and capabilities synergies are created and that this will lead to higher announcement returns. The reason for this is that shareholders see this learning of environmental capabilities as a positive signal (Berchicci et al., 2012). Secondly, Wang and Xie (2008) found that firms that have different levels of corporate governance mechanisms have higher abnormal returns in an acquisition. This is due to the fact that, a firm with poor corporate governance mechanisms can learn from the firm with good corporate governance mechanisms. Wang and Xie (2008) also found that this synergy effect is shared between the target and the acquirer, therefore the well and poor performing firm gain value through organizational learning. Therefore, in line with the reasons mentioned above the following hypothesis arises:

Hypothesis 2a: *High target CSR performance results in more positive abnormal returns for low-CSR acquirers than for high-CSR acquirers.* 

Moreover, target CSR performance could influence acquirer announcement returns through the integration process of an M&A deal. This is because the integration process is found to be the biggest challenge in the M&A process and often leads to M&A failure (Koi-Akrofi, 2016). Koi-Akrofi (2016) found that the problems that arise during the integration stage mostly had to do with coping with cultural differences. De Roeck and Swaen (2010) studied the effect of CSR and the integration process in M&A, and they found that good CSR practices is important in facilitating a well-performing integration process. This was because during M&A deals, employees suffer from anxiety through potential job losses and good CSR practices mitigate these employee anxieties through good work standards (De Roeck & Swaen, 2010). On the contrary, Bereskin et al. (2018) state that it does not matter how good CSR practices are in both parties, but how similar both firms are in CSR practices that reduce the problems in the integration stage. They found that two CSR similar firms are more likely to merge, and that CSR similarity is a good proxy for cultural similarity which was found to have a positive impact on M&A synergies. This CSR similarity contributed to a 3,5% increase in combined announcement returns (Bereskin et al., 2018). Even though Bereskin et al. (2018) looked at the combined announcement returns, they state that the increase in abnormal returns is distributed over acquirer and target returns. Therefore, the same reasoning can be used to explain CSR similarity and its impact on acquirer returns. Following this way of reasoning it is less important to have two firms with a high CSR score, but the additional value is created through CSR similarity between the two parties. This leads to the following hypothesis:

Hypothesis 3: Compatible CSR performance levels between acquirer and target has a positive effect on acquirer abnormal returns

## 3. Methodology

This section first describes the databases utilized to obtain the corresponding data. Secondly, this section discusses the CSR scores used. Thirdly, this section provides information on the M&A performance measurement —CAR—used in this paper. Fourthly, this section provides information on the control variables used in the empirical model and the correlation between the dependent, independent, and control variables.

## 3.1 Data Sources

To test the hypothesis if CSR performance of both the target and the acquirer have an effect on M&A deal performance, a database is needed which offers both M&A-deal data and ESG performance data. All M&A deal data is retrieved from the ThomsonOne Eikon Securities Data Company (SDC) Platinum M&A database and the CSR performance data is retrieved from the ThomsonOne ASSET4 database. The ASSET4 database provides a sample of around 9000 firms with CSR scores starting from 2002. The ThomsonOne ASSET4 database is chosen, because it provides CSR scores of companies all over the world, instead of only U.S. based companies. Secondly, the ASSET4 database assesses CSR on 800 data points. In comparison, the KLD database used by Deng et al. (2013) only has 250 data points. Also, the CSR scores in the ASSET4 database range from zero to 100, while the IVA database used by Aktas et al. (2010) uses a discrete seven-point scale. Utz (2019) state that assigning scores from zero to 100 allows for a more detailed examination of rating changes. The ASSET4 database is made by 160 CSR research analysts that collect company information on 400 ESG measurements. All these measurements are standardized into ten categories, and these categories are in turn aggregated to the three main pillars: environmental, social, and governance. An overview of the way the overall CSR score is computed can be found in Appendix B. The combined CSR score is calculated by applying the proportionally weighted score for each category. The CSR score of a company is yearly updated after its annual report is made public. This is because most of the CSR measurements are based on financials and information provided by the company.

The sample retrieved from the ASSET4 database includes both inter- and cross-border deals provided that both target and acquiring company have a CSR score at the announcement date. The sample focusses on the period 2004 trough 2019. This period is chosen because the database does not provide data for the sample selected before 2004. Furthermore, based on

prior studies (Deng et al., 2013; Aktas et al., 2010) this study applies a number of deal selection criteria as specified below:

- I. The deal value retrieved from ThomsonOne Eikon SDC Platinum M&A for any company *i* is greater than USD\$ 5 million;
- II. Companies that operate in financial or utilities industry—that is, companies with a SIC between 6000-6999 or 4900-4999 are excluded from the sample<sup>1</sup>;
- III. The shares of both the target and the acquirer are publicly traded such that stock price data and financial statement data is available;
- IV. The acquirer can only hold up to 40 per cent of the target's publicly traded shares before the announcement date and has to own a majority—that is, larger than 50 per cent, of the publicly traded shares after deal completion;
- V. Both the target and acquiring company have available a recent ESG score at the deal announcement date.

## 3.2 CSR (ESG) performance measurement

In this paper, CSR performance is measured following the Thomson Reuters Refinitiv ASSET4 ESG score. This dataset offers comprehensive data on environmental, social, and governance aspects of the firm. ESG scores were brought to existence in the 1980s, because CSR measurements were too vague and non-unilateral (Eccles & Viviers, 2011). ESG separates the broad definition of CSR into the three pillars: Environmental, Social, and Governance.

The environmental pillar contains a firm's activities in reducing its environmental impact. The environmental dimension affects a firm's financial performance through better reputation and risk management (Schneider, 2011). Chava (2014) provides evidence for this and state that investors demand higher returns for stocks which are influenced by environmental concerns. The reason for this is that environmental catastrophes can have a huge impact on shareholder value. The most profound example is the near bankruptcy of BP after the oil spin in the Gulf of Mexico. Secondly, environmental performance has been found to have an effect on brand reputation. This is because, brands which are found environmentally friendly experience greater customer satisfaction (Bloom et al., 2006).

<sup>&</sup>lt;sup>1</sup> Companies in these industries are subject to specific regulatory frameworks and these companies are different in terms of leverage ratio compared to companies operating in other industries and are therefore not compatible to compare (Kalemli-Ozcan, Sorensen and Yesiltas, 2012)

The social pillar is about how a firm act against its employees and the communities it operates in. Treating your employees well, such as paying them a fair salary or good health conditions lead to a better reputation as an employer, which enables the firm to attain better talent and better-motivated employees (Edmans 2012). This increase in better-motivated employees improves their productivity, and this results in higher long-term stock returns and valuations (Edmans 2012). Finally, (Marsat & Williams, 2014) provide further evidence for the positive effect social performance can have on financial performance. The authors found that certain social variables such as human rights, community, product responsibility, employment quality, training and development, diversity and opportunity, and health and safety, are all positively related to market value.

The governance pillar concerns how a firm tries to take the interest of all stakeholders into account. The major component of how the governance pillar influences firm performance is agency theory. Due to the separation of ownership and control the decision-makers at a firm have the ability to not always act in the best interest of the shareholders. This agency problem can lead to lower firm performance because it can lead to agency costs (Jensen & Meckling, 1976). Firms that have strong corporate governance controls will have less of these agency problems. Ammann et al., (2014) found evidence for this statement and proved that there is positive relationship between corporate governance and firm value.

## 3.3 CAR

To analyse M&A deal performance with respect to CSR scores, this paper utilizes a standard event study approach as first introduced by Fama et al. (1969) to estimate cumulative abnormal returns (CARs). The event study methodology is a statistical method developed to measure market reactions to a particular event, such as a merger or an acquisition, on the market value of a company (Binder, 1998). It is important to note that the event study methodology assumes that financial markets are efficient—that is, asset prices reflect all available information. This implies that at the announcement date the effect of an M&A is directly incorporated in the stock price of both the target and acquirer.

Following Aktas et al. (2010) and Deng et al. (2013), the first step in conducting an event study is to determine the event window and estimation window. The former refers to the period in which the particular event occurs and typically is a relatively short period of time. To compute the required parameters for obtaining abnormal returns, the estimation window is set before the event window. Aktas et al. (2010) and Deng et al. (2013) set the estimation window

at 205 trading days that end 50 days prior to the announcement. Typically, in an M&A event study, the days surrounding the announcement date (t=0) are included to control for information leakages and market inefficiencies in the days prior to the announcement date. Following the same reasoning, post-M&A performance may be driven by delayed response to the M&A announcement (Busse & Green, 2002). Consequently, to account for the abovementioned problems this paper sets the event window at a day prior to the actual announcement date (t-1) and one-day post the announcement day (t+1), resulting in a three-day event window [t-1; t+1]. Secondly, following MacKinlay (1997) to account for potential price run-up effects, a 50-day gap is chosen to ensure an unbiased sample. Therefore, the estimation window of 205 days will cover the period [ $t_{-255}$ ;  $t_{-50}$ ].

#### Cumulative Abnormal returns

All event studies rely on a benchmark that proxies for normal market return. McKinlay (1997) provided a market model that estimates this normal market return and removes the parts of returns that are caused by variations in the overall market return. This market model will reduce the variance of abnormal returns. The following regression equation is made to calculate normal market returns:

$$E(R_{i,t}) = \alpha_i + \beta_i R_{M,t} + \varepsilon_{i,t}$$

Where  $E(R_{i,t})$  represents the expected return of firm *i* at time *t*. Moreover,  $\alpha_i$  and  $\beta_i$  are the ordinary least squared (OLS) regression intercept in the form of the market mean return and the OLS regression slope in the form of the stock volatility to the market. Finally,  $\varepsilon_{i,t}$  is the zero-mean error term. There are multiple benchmarks used in this study to approximate the market portfolio based on the acquirer country of origin, which as previously mentioned can be found in Appendix B.

To measure the return that represents the difference between the observed returns during the event window and the expected returns when the deal doesn't occur, abnormal returns are needed. Abnormal returns are calculated through the following equation:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{M,t})$$

Where  $AR_{i,t}$  represents the abnormal returns of firm *i* on day *t* and is calculated by subtracting the estimated return using the market model ( $\alpha_i + \beta_i R_{M,t}$ ) from the observed return  $R_{i,t}$ . Having computed the abnormal returns, the following step is that all abnormal returns from all acquiring companies are aggregated. This is done to examine the combined announcement effect on stock market CARs.

$$CAR_i = \sum_{t=-1}^{+1} AR_{i,t}$$

## 3.3.1 Short-run empirical method

To test the hypotheses stated in this study, a couple of regression analyses are performed. Hypothesis 1a, which predicts that acquirer CSR performance has a positive impact on acquirer announcement returns, is tested through regressing acquirer CAR on the independent variable acquirer CSR and the control variables. To account for variation over the years, countries, and industries, a fixed-effects model is employed:

 $\begin{aligned} & Acquirer \ Car_i = \ \alpha_o + \ \beta_1 Acquirer \ CSR + \ \beta_2 Deal \ Controls + \\ & \beta_3 Acquirer \ and \ Target \ Firm \ Controls + \ Fixed \ Effects + \ \varepsilon_i \end{aligned}$ 

Hypothesis 1b, which predicts that target CSR performance has a positive impact on acquirer announcement returns, is tested through regressing acquire CAR on the independent variable target CSR score and control variables. As mentioned above, to account for variation over the years, countries, and industries, a fixed-effects model is employed:

Acquirer  $Car_i = \alpha_o + \beta_1 Target CSR + \beta_2 Deal Controls + \beta_3 Acquirer and Target Firm Controls + Fixed Effects + <math>\varepsilon_i$ 

Combining hypotheses 1a and 1b gives the prediction that the positive relationship between acquirer and target CSR performance is stronger when both the acquirer and the target have higher CSR performance levels. This prediction is tested by adding a dummy variable which contains a 1 when both the acquirer and target have a high CSR score. Strong CSR performance is defined as an acquirer or target that performs better than the median of the sample of acquirers and targets respectively. Subsequently, acquirer CAR is regressed on this dummy variable. Again, to account for variation over the years, within acquirer countries, and within acquirer industries, a fixed-effects model is employed to regress hypotheses 1c: Acquirer  $Car_i = \alpha_o + \beta_1 dummy Both High CSR + \beta_2 Deal Controls + \beta_3 Acquirer and Target Firm Controls + Fixed Effects + <math>\varepsilon_i$ 

In addition to the above-mentioned prediction of hypothesis 1b this paper also suggests that a combination of strong target CSR performance levels and a low target Tobin's q enhances the positive impact mentioned in hypothesis 1b. To test for this effect, an interaction term between high target CSR performance and Tobin's q is added to the regression.

Acquirer  $Car_i = \alpha_o + \beta_1 dummyTarget High CSR * Target Tobin's q + \beta_2 Deal Controls + \beta_3 Acquirer and Target Firm Controls + Fixed Effects + <math>\varepsilon_i$ 

The second hypothesis, which predicts that for M&A deals in which the target has higher CSR performance than the acquirer will result in higher acquirer announcement returns than in M&A deals in which the acquirer has higher CSR performance than the target. To test this prediction, a dummy variable is added which contains a 1 for deals in which target CSR performance is higher than acquirer CSR performance and a 0 when this is vice versa.

Acquirer  $Car_i = \alpha_o + \beta_1 dummy Target Higher CSR + \beta_2 Deal Controls + \beta_3 Acquirer and Target Firm Controls + Fixed effects + <math>\varepsilon_i$ 

Hypothesis 3 predicts that the similarity of CSR performance between the acquirer and the target has a positive effect on acquirer announcement returns. To test this hypothesis, the median CSR score of the acquirer and target is calculated as with hypothesis 1c. Subsequently, a dummy variable is added which contains a 1 for deals in which the acquirer and the target have compatible CSR performance levels and a 0 for deals in which they have incompatible CSR performance levels. Acquirer Car will be regressed on the sample, and this will be done via the same regression method as with hypothesis 2.

Acquirer  $Car_i = \alpha_o + \beta_1 dummy Compatible CSR + \beta_2 Deal Controls + \beta_3 Acquirer and Target Firm Controls + Fixed Effects + <math>\varepsilon_i$ 

## 3.3.2 Long-run empirical method

In addition to looking at the short-run effect through abnormal returns analyses of CSR practices on M&A performance this paper also examines the long-term effects through post-M&A stock returns. This paper follows a calendar-time portfolio regression to compare the post-M&A stock returns to check if the hypotheses predictions hold in the long-term (Fama, 1998; Ikenberry et al., 2002). Following Moeller et al. (2004) equally weighted portfolios are formed for firms that have completed an acquisition or merger for each calendar month from 2004 to 2016. Subsequently, those portfolios are kept for a holding period of 12/24/36 months relative to the announcement month. To rebalance the portfolio, every month firms are dropped that are at the end of their holding portfolio and firms that announce an acquisition or merger are added. Fama and French's (1992,1993) four factors models are used to regress the time series of portfolio excess returns:

$$R_{p,t} - R_{f,t} = \alpha + \beta_1 (R_{m,t} - R_{f,t}) + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 UMD_t + \varepsilon_t$$

 $R_{p,t} - R_{f,t}$  is the excess return of the acquirer portfolio and  $(R_{m,t} - R_{f,t})$  is the excess return on the market portfolio. Secondly,  $SMB_t$  is the size factor,  $HML_t$  is the book-to-market factor, and  $UMD_t$  is the momentum factor. Finally,  $\alpha$  is the intercept and measures the average monthly abnormal return of the sample.

To examine whether the long-term post-M&A abnormal stock returns are different between low and high CSR performing acquirers, the sample is divided into two subsamples. According to the median CSR value of the acquirers the sample is divided into a subsample with high CSR performing targets and a subsample with low CSR performing acquirers. This process is repeated for acquirers that bought a high or low scoring target firm. According to the median CSR score at the announcement date, the sample is divided either into acquirers that bought a low or high CSR scoring target. Furthermore, to see if strong CSR performance of both the acquirer and the target have a long-term impact on stock-performance, the sample is divided into a subsample in which both the acquirer and the target have high CSR performance levels and a subsample in which either one or both have low CSR performance.

Secondly, to check whether the learning effect holds in the long-term, the sample is again divided into two subsamples. However, this time the division of the two samples is made on the prerequisite if the target has a lower or higher CSR score than the acquirer at the announcement date.

Finally, to check whether the similarity of CSR scores has an effect in the long run, the sample is divided into two subsamples. Targets and acquirers that both score high or low in CSR form the first subsample and in the other subsample the target and acquirer have different CSR scores. Subsequently, the four factors model is used to re-estimate all portfolios for the different holding periods.

## 3.4 Control variables

In addition to the main independent variables, control variables are included. There is much research done on the determinants of deal performance, this paper will follow the empirical research of Masulis et al (2007) for selecting control variables. Masulis et al. (2007) categorized the control variables into firm- and deal-specific controls.

## 3.4.1 Acquirer and Target Characteristics

## Firm size

Moeller et al. (2004) examined the effect of firm size on acquirer returns and found that acquiring firms of smaller size achieve higher returns at the announcement date than large firms do. This implies that there is a negative relationship between firm size and announcement returns. The authors attribute this finding to the fact that bigger firms pay higher premiums and have a higher level of negative deal synergies. Because of this, a control variable for acquirer and target firm size is included in the regression. This control variable is measured by the market value of equity.

## Free Cash Flow

Jensen (1986) state that managers of firms with high free cash flows (FCF) are more likely to engage in value-destroying deals because these managers have the opportunity to engage in empire-building. This implies a negative relationship between the level of FCF and acquisition returns. Lang et al. (1991) found supporting evidence, because they empirically proved this negative relationship. This study controls for this effect by adding acquirer free cash flow to the regression, which is calculated as the operating income before depreciation minus interest expenses, income taxes and capital expenditures, scaled by the book value of total assets.

## Leverage

A firm's leverage is found to have a positive impact on acquirer announcement returns because firms with a high level of leverage are constrained in their financial ability to invest in negative NPV projects (Jensen, 1986). Masulis et al. (2007) add to this finding that a higher level of leverage reduces the future FCFs and therefore, the ability of management to engage in future empire building. To control for this relationship, acquirer leverage as a control variable is included. Following Deng et al. (2013), leverage is calculated by dividing the book value of outstanding debt by the market value of shareholder's equity.

## Tobin's Q

Servaes (1991) found a positive relationship between the Tobin's q levels of the acquirer and acquirer CAR for public deals. Moreover, Moeller et al. (2004) and Lang et al. (1989) found that target Tobin's q has a negative impact on acquirer CAR. Therefore, the relationship between target Tobin's q is, and announcement returns is ambiguous, but because both studies found a relationship a control variable for acquirer and target Tobin's q levels will be included. Tobin's q is calculated by the market value of equity divided by the book value of the assets.

## 3.4.2 Deal characteristics

## Deal value

There are conflicting findings on the relationship between deal value and acquirer announcement returns. Bruner (2002) found a negative relationship, while Moeller et al. (2004) found a positive relationship. Both studies identify deal size as an important determinant of announcement returns. Therefore, a control variable is included for deal size, which is measured as deal value divided by the acquirer market value.

## Method of payment

Myers and Majluf (1984) hypothesized that an offer which exists only out of stocks sends a negative signal to investors. This is because the market perceives this offer as if the stock of the acquirer is overvalued. Datta et al. (1992) provided evidence for this hypothesis and found that indeed an all stock-financed deal has a negative impact on acquirer announcement returns. Subsequently, a dummy variable is included, in which the dummy=1 when the deal is all-cash.

## Industry relatedness

According to research, diversifying M&A's are value-destroying for shareholders (Masulis et al., 2007; Morck et al., 1990). To control for this effect, a dummy variable will be included where dummy=1 when the acquirer and the target are operating in the same industry. SIC codes are used to identify industry relatedness.

## Cross border deals

Moeller et al. (2004) found that domestic deals yield higher returns than cross-border deals. Contrary, Doukas and Travlos (1988) found that cross-border deals show higher acquirer returns. Therefore, to control for a potential influence of this relationship, a dummy variable is included. The dummy variable is assigned a one if the deal is cross-border, meaning that the headquarter of the acquirer and the target are in different countries.

After all the deal data is retrieved from the Thomson Platinum SDC database, it is merged with the ASSET4 database to attain a sample where both the target and the acquirer have a CSR score. Deals are excluded where no financial information is provided on the acquirer or target and if there is not a CSR score provided at the announcement date. This resulted in a sample of 394 deals for which both parties have a CSR score at the announcement date. Through Datastream, an event study is done to obtain the CARs of the acquirer at the announcement date. In Datastream the event window and the benchmarks used to approximate the market returns are filled in to retrieve the required data from the acquirers to measure their CAR. Lastly, the control variables are retrieved from Datastream by using their unique identifiers. An overview of the benchmarks used to approximate the market returns can be found in Appendix C.

## 3.4.3 Descriptive statistics and correlation of variables

Table 1 below shows the descriptive statistics of the sample variables and the control variables. The sample CARs have a negative mean which is in line with the findings of Moeller et al. (2003), who found that acquirer announcement returns are on average negative. The seven-day CAR has the lowest mean of -0.0110 and the twenty-one-day CAR has the highest mean of -0.0158. The standard deviation is increasing when the event window length increases.

The CSR score of the acquirer is on average 48.25 out of 100, while the average CSR score of the acquirer is 40.62. A possible explanation for this could be that on average acquirers are bigger and have more capital than targets to invest in CSR enhancing activities. The sample

of deals in which both the acquirer and the target have high CSR performance levels contains 143 deals. Secondly, the sample produces 197 deals in which the target has high CSR performance and out of these 197 deals there are 106 deals in which the target also has a high Tobin's q and 91 deals in which the target has a low Tobin's q ratio. Thirdly, the sample of deals where the target has a higher CSR score than the acquirer is 268 out of the total sample of 394 deals. Conversely, the sample where the acquirer has a higher CSR score than the target is 126. Secondly, when the sample is divided on compatible or incompatible CSR performance levels deals in which the acquirer and the target have compatible CSR scores consists of 56% of the total sample, which contributes to a total of 220 completed deals. Subsequently, deals in which the acquirer and the target have incompatible CSR scores contribute to 174 completed deals.

Variable	Obs.	Mean	Median	SD	Min	Max
Dependent Variable						
CAR(-1,1)	394	-0.0124	-0.0097	0.077	-0.3118	0.3613
CAR(-3,3)	394	-0.011	-0.005	0.0837	-0.3082	0.3681
CAR(-5,5)	394	-0.0134	-0.0138	0.0918	-0.3754	0.428
CAR(-10,10)	394	-0.0158	-0.0147	0.1028	-0.3239	0.4497
Independent Variable						
ACQ_CSR	394	48.2552	44.81	16.7122	15.42	88.93
TAR_CSR	394	40.6152	38.7	15.1223	10.59	89.46
BOTH_HIGH	394	0.3594	0	0.5342	0	1
TAR_TOBQ*TAR_CSR	394	0.6357	1	0.4818	0	1
TAR_CSR_HIGHER	394	0.6797	1	0.4672	0	1
CSR_COMPATIBLE	394	0.5672	1	0.4961	0	1
Firm-Specific						
ACQ_SIZE	394	1,294,769	19,326	17,865,071	0,12	359,380,500
ACQ_FCF	394	170,656,129	1,263,400	2,347,507,816	-6,756,821	46,887,228,000
ACQ_LEVERAGE	394	105	66.13	388.3	-583.75	1071.61
ACQ_TOBIN'S Q	394	1.4518	1.152	1.3438	0.34	21.652
TAR_SIZE	394	79,772	3,507	570,362	6	9,721,092
TAR_TOBIN'S Q	394	2.0894	1.486	1.1656	0.173	36.47
Deal-Specific						
DEALSIZE	394	6389	2854	10969	18	101476
CASH	394	0.1614	0	0.3683	0	1
REL_INDUSTRY	394	0.6944	1	0.4612	0	1
CROSSBORDER	394	0.357	0	0.4797	0	1

**Table 1**: This table shows the descriptive statistics of the dependent and independent variables. Secondly, it shows the descriptive statistics of the firm-specific and deal-specific control variables. The sample consists out of 394 deals where both the acquirer and the target have available deal and CSR data.

Acquirer size has a wide dispersion ranging from 0.12 million to 36 billion and an average value of 1,3 billion. Similarly, the acquirer free cash flow ranges from -6,7 million to 46 billion and an average of 171 million. Thirdly, acquirer leverage is measured as total debt as a percentage of common equity, which has a mean of 105%. This meant that on average acquirers had slightly more total debt than common equity. Moreover, the acquirers Tobin's Q has an average value of 1.45, and for the target this is 2.05. This is in line with Rhodes-Kropf and Viswanathan (2004) who found that on average it is more likely that firms with low Tobin's Q buy firms with higher Tobin's Q because these target firms have more growth potential.

Finally, target size is substantially smaller on average than acquirers' size, which is also in line with Rhodes-Kropf and Viswanathan (2004) who found that high market value firms buy low market value firms.

The deal-specific control variables show that minimal deal size was 18 million and the max was 101.5 billion. The other control variables are all dummy variables and for instance, show that only 16% of the deals were paid all in cash. Similarly, 69% of the deals were conducted in the same industry and 36% of all deals were international deals. Finally, the whole sample of the deals were done on a friendly basis.

Table 2 shows the correlation between all the variables used in the empirical model. Pallant (2005) stated that if correlations exceed -0.5 or 0.5 indicates moderate multicollinearity, and if the correlation level exceeds -0.7 or 0.7 it indicated a high correlation. The different event windows are highly correlated because they use almost the same input except for the time period. However, this is not important because these are individual dependent variables and will not be used together in a single regression. Secondly, the dummy variable for when the acquirer and target both have high CSR scores shows moderate multicollinearity with high target CSR performance. Again, this is not a problem because these independent variables will not be used in a regression simultaneously. The results of the correlation matrix show no serious issues of correlation, therefore the variables are all included in the regression.

Variables	-1	-2	-3	-4	-5	-6	-7	-8	-9
(1) CAR1	1.000								
(2) CAR3	0.883***	1.000							
(3) CAR5	0.821***	0.907***	1.000						
(4) CAR10	0.694***	0.783***	0.860***	1.000					
(5) ACQ_CSR	0.000	-0.038	-0.004	-0.021	1.000				
(6) TAR_CSR	0.047	0.061	0.081*	0.095*	0.198***	1.000			
(7) BOTH_HIGH	0.016	0.024	0.052	0.068	0.419***	0.645***	1.000		
(8) TAR_TOBQ*TAR_CSR	0.030	0.017	-0.014	-0.006	0.025	-0.011	0.034	1.000	
(9) TAR_CSR_HIGHER	0.026	0.032	0.052	0.094*	-0.444***	0.472***	0.043	-0.038	1.000
(10) CSR_COMPATIBLE	0.074	0.065	0.067	0.099**	-0.135***	0.204***	0.397***	-0.003	0.050
(11) ASIZE	0.014	0.005	0.008	0.031	0.141***	0.105**	0.100**	0.071	-0.031
(12) InATOBINQ	0.035	0.019	0.006	-0.031	-0.070	-0.057	-0.039	0.301***	-0.020
(13) ALEVERAGE	-0.022	-0.023	0.003	0.010	0.053	0.030	0.040	0.050	0.024
(14) AFCF	0.031	0.011	0.015	0.033	0.166***	0.118**	0.134***	-0.018	-0.061
(15) TSIZE	0.043	0.010	0.010	0.008	0.129***	0.186***	0.143***	0.049	0.034
(16) InTTOBINQ	-0.012	-0.050	-0.063	-0.041	-0.016	-0.053	0.003	0.715***	-0.008
(17) CROSSBORDER	0.041	0.050	0.030	0.023	0.106**	0.078	0.048	0.049	0.003
(18) REL_INDUSTRY	0.062	0.027	0.009	-0.012	-0.110**	-0.094*	-0.078	0.060	-0.022
(19) DEALVALUE	0.009	-0.011	0.002	-0.023	0.043	0.057	0.028	0.177***	-0.018
(20) CASHPAID	0.036	0.053	0.017	0.010	-0.005	0.009	-0.038	0.039	-0.016

1.000										
0.000	1.000									
0.001	0.149***	1.000								
-0.052	-0.029	-0.014	1.000							
0.027	0.847***	0.066	-0.002	1.000						
-0.015	0.620***	0.077	-0.065	0.556***	1.000					
-0.029	0.120**	0.367***	0.009	0.021	0.077	1.000				
-0.070	0.104**	0.046	0.037	0.138***	-0.076	0.027	1.000			
-0.001	-0.021	0.000	-0.042	-0.027	-0.020	0.059	0.073	1.000		
-0.066	0.372***	0.157***	-0.104**	0.268***	0.582***	0.210***	-0.056	0.033	1.000	
0.008	0.173***	0.013	0.027	0.202***	0.048	-0.009	0.131***	-0.099**	-0.235***	1.000

-15

-16

-17

-18

-19

**Table 2**: This table shows the Pearson's correlation matrix between all variables used in the analysis.

-10

-11

-12

-13

-14

-20

## 4. Results

CAR3

CAR5

CAR10

Observations

-0.0110

-0.0134

-0.0158

394

-0.0050

-0.0138

-0.0147

### 4.1 Univariate Analysis

Multiple univariate analyses are performed for the different hypotheses. For all univariate analysis CARs for the different event windows are calculated via the market-adjusted return model and these results are shown in table 3, 4, and 5. These results show the relationship between M&A deal announcement and the CARs of the acquirer. A t-test is used to measure significance for the mean values of the CARs, and for the median values a Wilcoxon sign test is used. For the hypothesis 1a, 1b, 1c, and 1d table 3 shows the relationship between acquirer and target CSR performance and acquirer CAR. Initially the sample is divided between having a CSR score above or below the median for the acquirer and target respectively. Secondly, for the impact of a stronger positive relationship when both the acquirer and the target have high CSR performance a divide is made between both having a high CSR score and none or either one has a low CSR score. Thirdly, as was hypothesized that Tobin's q and target CSR have a stronger impact on acquirer CAR when target CSR performance is high, the sample is divided into deals in which the target has high CSR performance and high Tobin's q and a sample which consists out of deals in which the target has high CSR performance and low Tobin's q. Next, for hypothesis 2, table 4 shows the results for the different samples in which subsample A consist out of deals in which the target has higher CSR score than the acquirer and subsample B where this vice versa. Finally, for hypothesis 3, the sample is again split into two subsamples. In which subsample A consists of deals in which the target and the acquirer have the same level of CSR performance and subsample B in which the acquirer and the target have incompatible CSR performance levels. The results of the findings of hypothesis 3 are shown in table 5.

Acquirer CARs	Full	Full Sample		Acquirer CSR score is above the median		Acquirer CSR score is below the median		test of differences	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	
CAR1	-0.0124	-0.0097	-0.0140	-0.0099***	-0.0091	-0.0089	-0.0050	0.5066	
CAR3	-0.0110	-0.0050	-0.0134	-0.0056	-0.0060	-0.0042	-0.0074	0.5190	
CAR5	-0.0134	-0.0138	-0.0148	-0.0160***	-0.0106	-0.0103	-0.0042	0.5106	
CAR10	-0.0158	-0.0147	-0.0184	-0.0183***	-0.0105	0.0000	-0.0079	0.5260	
Observations	394		197		197				
Acquirer CARs	er Full Sample		Target CSR s the m	Target CSR score is above the median		score is below redian	test of differences		
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	
CAR1	-0.0124	-0.0097	-0.0116	-0.0087***	-0.0132	-0.0109***	0.0015	0.4888	

-0.0017

-0.0136\*

 $-0.0136^{*}$ 

-0.0141

-0.0196

-0.0237

197

-0.0090

-0.0146\*

-0.0174\*\*\*

0.0061

0.0123

0.0159

0.4698

0.4689

0.4619

-0.0079

-0.0073

-0.0078

197

Acquirer CARs	Full	ample Target and acquirer CSR score is above the median		Target and CSR score me	Target and/or acquirer CSR score is below the median		test of differences	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
CAR1	-0.0124	-0.0097	-0.0108	-0.0069***	-0.0133	-0.0115***	0.0025	0.4822
CAR3	-0.0110	-0.0050	-0.0083	-0.0014	-0.0125	$-0.0076^{*}$	0.0042	0.4813
CAR5	-0.0134	-0.0138	-0.0071	-0.0134	-0.0170	-0.0153***	0.0099	0.4760
CAR10	-0.0158	-0.0147	-0.0064	-0.0141***	-0.0210	$-0.0152^{*}$	0.0146	0.4683
Observations	394		143		251			
			Target CSR so	core is above	Target CSR s	core is above		
Acquirer	Full Sa	mple	Target CSR so the median	core is above and a high	Target CSR s the median an	core is above d a low value	test of di	fferences
Acquirer CARs	Full Sa	mple	Target CSR so the median value of T	core is above and a high Cobin's Q	Target CSR s the median an of Tob	core is above d a low value in's Q	test of di	fferences
Acquirer CARs	Full Sa Mean	mple Median	Target CSR so the median value of T Mean	core is above and a high 'obin's Q Median	Target CSR s the median an of Tob Mean	core is above d a low value in's Q Median	test of di	fferences Median
Acquirer CARs CAR1	Full Sa <u>Mean</u> -0.0124	mple <u>Median</u> -0.0097	Target CSR so the median value of T Mean -0.0143	core is above and a high Tobin's Q Median -0.0074 <sup>*</sup>	Target CSR s the median an of Tob Mean -0.0087	core is above d a low value in's Q Median -0.0099	test of dis Mean -0.0056	fferences Median 0.5144
Acquirer CARs CAR1 CAR3	Full Sa Mean -0.0124 -0.0110	mple <u>Median</u> -0.0097 -0.0050	Target CSR so the median value of T Mean -0.0143 -0.0112	core is above and a high 'obin's Q Median -0.0074* -0.0029	Target CSR s the median an of Tob Mean -0.0087 -0.0044	core is above d a low value in's Q Median -0.0099 -0.0017	test of dis Mean -0.0056 -0.0068	fferences <u>Median</u> 0.5144 0.5096
Acquirer CARs CAR1 CAR3 CAR5	Full Sa Mean -0.0124 -0.0110 -0.0134	mple <u>Median</u> -0.0097 -0.0050 -0.0138	Target CSR so the median value of T Mean -0.0143 -0.0112 -0.0126	core is above and a high 'obin's Q Median -0.0074 <sup>*</sup> -0.0029 -0.0167	Target CSR s the median an of Tob Mean -0.0087 -0.0044 -0.0015	core is above d a low value in's Q <u>Median</u> -0.0099 -0.0017 -0.0091	test of di Mean -0.0056 -0.0068 -0.0111	fferences <u>Median</u> 0.5144 0.5096 0.5126
Acquirer CARs CAR1 CAR3 CAR5 CAR10	Full Sa Mean -0.0124 -0.0110 -0.0134 -0.0158	mple <u>Median</u> -0.0097 -0.0050 -0.0138 -0.0147	Target CSR sc the median value of T Mean -0.0143 -0.0112 -0.0126 -0.0111	core is above and a high 'obin's Q Median -0.0074* -0.0029 -0.0167 -0.0122	Target CSR s the median an of Tob Mean -0.0087 -0.0044 -0.0015 -0.0042	core is above d a low value in's Q Median -0.0099 -0.0017 -0.0091 -0.0149	test of di <u>Mean</u> -0.0056 -0.0068 -0.0111 -0.0069	fferences <u>Median</u> 0.5144 0.5096 0.5126 0.5135

**Table 3**: This table reports the mean and median CARS of the acquirer for the different event window time periods. The mean and median CARs are shown for the full sample (n=394) as well as for the different subsamples. The mean test of differences is based on a two-sample t test and the median test of differences is based on Wilcoxon equality of medians test. The \*, \*\*, and \*\*\*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

For the full sample, the mean values are all statistically insignificant, which indicates that the average CAR of the acquirers is not significantly different from zero. This insignificance holds for all different event window lengths. The directional relationship between an acquisition and the CAR is negative, which is in line with previous findings such as Moeller et al. (2004) and Deng et al. (2013), who both found that the market reacts negatively to an announcement of an acquisition.

When looking at the results for hypotheses 1a, 1b, 1c, and 1d in table 3, all mean values are statistically insignificant. However, the test of differences suggests some interesting findings. For example, the test of differences is negative for acquirer CSR, which means that acquirers with high CSR scores on average have lower CAR than acquirers with a low CSR score. This is in line with Meckl and Theurkorn (2015) who also found a negative relationship between acquirer CSR and acquirer CAR. Secondly, the results give an indication that acquirers which buy a target with high CSR performance perform better than those that buy low CSR performing targets. This can be seen by the positive value of the test of difference and this finding could be an indication that acquirers can indeed green wash themselves by buying a high CSR performing target. This suggests that the findings for this sample are in line with the findings of Aktas et al (2010) who found a positive relationship between target CSR and acquirer CAR. Thirdly, when both the acquirer and the target have strong CSR performance the average CAR of the acquirers is less negative than when only the acquirer or target has a high CSR score. Finally, when looking at the test of differences for the interaction term of Tobin's Q and target CSR performance the results indicate that Tobin's q has a negative

impact on acquirer CAR. This could be an indication that indeed a high Tobin's q results in higher acquisition premiums and a smaller leveraging opportunity for the acquirer, and therefore leads to lower acquirer CAR (Moeller et al., 2004; Lang et al., 1989).

In table 4 the full sample is again split into two subsamples to see the results of the mean and median values for hypothesis 2, which state that investing in a target that has a higher CSR performance level leads to an increase in abnormal returns at the announcement date. Again, all mean values are statistically insignificant. The test of differences only gives a statistically significant value for the twenty-one-day event window. The comparison between the two subsamples resulted in findings that suggest that the market values deals in which the target has a lower CSR score than the acquirer as to deals in which the target has a higher CSR score. The findings of this sample are in contradiction to the predictions of hypothesis 2, which state that the acquirer can increase its value by learning from the CSR practices of the target. The results suggest that the market sees CSR practices of the target as value-destroying, because they see CSR as an increase in expenses which do not lead to higher returns (Lopez et al., 2007; Friedman, 1998.

Acquirer CARs	Full Sample		Target CSR score is higher than acquirer CSR score		Target CSR score is lower than acquirer CSR score		test of differences	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
CAR1	-0.0124	-0.0097	-0.0138	-0.0103***	-0.0095	-0.0022	-0.0043	0.4819
CAR3	-0.0110	-0.0050	-0.0129	$-0.0069^{*}$	-0.0071	-0.0020	-0.0058	0.4673
CAR5	-0.0134	-0.0138	-0.0167	-0.0148***	-0.0064	-0.0101	-0.0103	0.4673
CAR10	-0.0158	-0.0147	-0.0224	-0.0176***	-0.0017	-0.0050	$-0.0207^{*}$	$0.4473^{*}$
Observations	394		268		126			

**Table 4**: This table reports the mean and median CARS of the acquirer for the different event window time periods. The mean and median CARs are shown for the full sample (n=394) as well as for subsample A (n=268) where the target has a higher CSR score than the acquire and for subsample B (n=126) where the acquirer has a higher CSR score than the target. The mean test of differences is based on a two-sample t test and the median test of differences is based on Wilcoxon equality of medians test. The \*, \* \*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

For hypothesis 3, which state that deals which are CSR compatible have higher abnormal returns, the sample is again split into two subsamples (table 5). For both subsamples, the mean values for all event window lengths produce insignificant results. As for hypothesis 2, only the (-10,10) event window produces significant mean results for the test of differences. For hypothesis 3, the test of differences gives the largest positive value, which indicates that the market values deals in which compatible CSR performance levels show the ability to perform a well-organized integration process (Bereskin et al., 2018).

Overall, based on the univariate analyses no clear conclusions can be drawn and all the hypotheses cannot be answered with complete confidence.

Acquirer CARs	Full Sample		Acquirer and target have compatible CSR scores		Acquirer and target have incompatible CSR scores		Test of differences	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
CAR1	-0.0124	-0.0097	-0.0074	$-0.0060^{*}$	-0.0190	-0.0222***	0.0115	0.4443*
CAR3	-0.0110	-0.0050	-0.0063	-0.0001	-0.0172	-0.0135***	0.0110	0.4622
CAR5	-0.0134	-0.0138	-0.0081	-0.0082	-0.0204	-0.0196***	0.0123	0.4634
CAR10	-0.0158	-0.0147	-0.0069	-0.0064	-0.0274	-0.0233***	$0.0205^{***}$	$0.4464^{*}$
Observations	394		220		174			

**Table 5**: This table reports the mean and median CARS of the acquirer for the different event window time periods. The mean and median CARs are shown for the full sample (n=394) as well as for subsample A (n=220) where the target and the acquirer have compatible CSR score and therefore score both high or low on CSR. Secondly, the table also show results for subsample B (n=174) where the acquirer and the target have different CSR scores, measured by have higher or lower than the median. The mean test of differences is based on a two-sample t test and the median test of differences is based on Wilcoxon equality of medians test. The \*, \* \*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

## 4.2 Cross-Sectional Regression Analyses

In order to test hypotheses 1a, 1b, 1c, and 1d in which the impact of acquirer and target CSR performance on acquirer CAR is predicted an OLS regression is run and to control for possible variation across year, industry, and country fixed effects a second OLS regression is conducted. It is important to control for these fixed effects because of the variation that can occur across years, industry, and different nations. Especially, the inclusion of fixed years effect is important because the sampling period includes the years 2007 and 2008 in which the financial crisis occurred. The regression results are shown in table 6, in which the standard errors are shown below every variable.

Column 1 indicates a positive relationship (0,0001) between acquirer CSR performance and acquirer CAR. However, this is not a significant result and therefore it can't be concluded that acquirer CSR performance is responsible for that positive relationship. Contrary, to the findings of Deng et al. (2013) the results of this analysis do not find a significant positive effect between acquirer CSR performance and acquirer CAR. The positive direction suggests that the market values acquire CSR practices and see it as an indication of the firm to maximize stakeholder value in which the shareholders will also benefit (Deng et al., 2013).

Secondly, column 2 indicates a positive relationship (0.0003) between target CSR performance and the CAR of the acquirer. As in the case of acquirer CSR performance, the results show insignificant findings. The finding of this paper is in support with the findings of Aktas et al. (2010), who found significant evidence that investors reward buyers that invest in socially responsible operating firms because the buyer can learn from the target's CSR practices. This learning opportunity gives rise to knowledge and capabilities synergies which lead to higher announcement returns for the acquirer (Berchicci et al., 2012).

	(1)	(2)	(3)	(4)
ACQUIRER CSR	0.0001			
	(0.0003)			
TARGET CSR		0.0003		
		(0.0003)		
BOTH HIGH CSR			0.0065	
			(0.0087)	
TARGET HIGH CSR				0.0092
				(0.0100)
TARGET HIGH CSR*.lnTTOBINQ				-0.0056
				(0.0105)
Firm-Specific Control Variables				
ASIZE	0.0016	0.0015	0.0017	0.0015
	(0.0053)	(0.0052)	(0.0052)	(0.0052)
InATOBINQ	0.0065	0.0070	0.0067	0.0070
	(0.0092)	(0.0092)	(0.0093)	(0.0093)
ALEVERAGE	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
AFCF	-0.0013	-0.0014	-0.0016	-0.0011
	(0.0040)	(0.0040)	(0.0040)	(0.0040)
TSIZE	0.0021	0.0014	0.0018	0.0019
	(0.0030)	(0.0030)	(0.0034)	(0.0030)
InTTOBINQ	-0.0089	-0.0084	-0.0090	-0.0058
	(0.0057)	(0.0058)	(0.0057)	(0.0071)
Deal-Specific Control Variables				
CROSSBORDER	0.0011	-0.0003	0.0008	0.0002
	(0.0108)	(0.0108)	(0.0108)	(0.0107)
REL_INDUSTRY	0.0124	0.0131	0.0126	0.0125
	(0.0100)	(0.0099)	(0.0099)	(0.0099)
DEALVALUE	0.0033	0.0035	0.0037	0.0034
	(0.0042)	(0.0042)	(0.0043)	(0.0043)
CASHPAID	0.0165	0.0168	0.0174	0.0166
	(0.0119)	(0.0117)	(0.0119)	(0.0121)
Contstant	-0.0162	-0.0263	-0.0200	-0.0274
	(0.0736)	(0.0720)	(0.0708)	(0.0734)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Adjusted R-Squared	0.1694	0.1729	0.1707	0.172
Observations	394	394	394	394

**Table 6**: This table reports the OLS with fixed effect regression results. The dependent variable is the CAR (-1,1) of the acquirers and the independent variables are acquirer CSR, target CSR, and the interaction effect of target CSR performance and target Tobin's q. The robust standard errors are presented below each regression coefficient. The \*, \* \*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

Thirdly, when looking at the combination of acquirer and target CSR performance the positive relationship remains insignificant. However, the coefficient sharply increases (0.0065) when comparing to the individual positive effects of acquirer and target CSR performance on acquirer CAR. The sharp increase in positivity of the coefficient suggest that indeed the market values deals in which both the acquirer and the target have high CSR scores because they are seen as trustworthy (Donald & Preston, 1995). This appearance of trustworthiness leads to lower transaction cost which lead to higher returns (Deng et al., 2013). Because it is not a significant finding it can only be seen as an indication.

Finally, interaction effect between target CSR and target Tobin's q on acquirer CAR is insignificantly negative (-0.0056). The regressions results provide support for the findings of the univariate analysis, which also found that acquirers which buy high CSR performing targets with high Tobin's q ratios perform worse than acquirers who buy high CSR performing targets with low Tobin's q ratios. A possible explanation could be derived from Moeller et al. (2004), who found that high target Tobin's q ratios lead to overvaluation and therefore higher acquisition premiums. This increase in the acquisition premiums paid lead to a negative market reaction of the bidder's shareholders (Moeller et al., 2004).

All the firm-specific control variables have an insignificant effect and small coefficients with small standard errors. Therefore, it is not possible to make conclusive statements about these firm-specific control variables. However, the direction these results are in show that the relationship between the firm-specific control variables and the dependent variable is in some cases in line with prior studies and in some cases they aren't. Acquire firm size (ASIZE) and target firm size (TSIZE) both show a positive relationship with acquirer CAR, which is in line with the findings of Aktas et al. (2010), who found that bigger buyers and bigger targets realise higher announcement returns.

Similarly, acquirer Tobin's q (InATOBINQ) has a positive coefficient, which is in contrast with prior findings. For instance, Deng et al. (2013) found that acquirer Tobin's q has a negative effect on announcement returns. Contrary to acquirer Tobin's q, target Tobin's q (InTTOBINQ) has a negative impact on acquirer CAR. This is in line with the findings of Moeller et al. (2004) who found that this relationship is negative. Finally, as found by Lang et al (1991) the results show a negative relationship between acquirer free cash flow (AFCF) and announcement returns.

The deal-specific control variables all have insignificant and again with small coefficients and standard errors. The variable for international deals (CROSSBORDER) has a positive relationship; this is in accordance with Doukas and Travlos (1988), who found that international mergers have a positive impact on acquirer announcement returns. The variable to account for M&A deals done in the same industry (RELATED INDUSTRY) has a positive coefficient. This finding is in line with other studies, who found that intra-industry deals have a positive effect on acquirer announcement returns (Aktas et al., 2010; Masulis et al., 2007). In contradiction with the findings of Aktas et al. (2010) deal value (DEALVALUE) the regression results show a positive relationship between the value of the deal and acquirer announcement returns. The deals in this sample which were paid all in cash (CASH ONLY) show that there is a positive relationship between the all-cash method of payment and acquirer announcement

returns. This is in line, with the findings of Aktas et al. (2010) and Deng et al. (2013) who found that there indeed is a positive relationship with cash payment and acquirer announcement returns.

The regression results for the second hypothesis, which predicts that deals in which the target has a higher CSR score than the acquirer will have higher acquirer announcement returns than deals in which the acquirer has a higher CSR score than the target, are shown in table 8. To attain these results, a dummy variable is used in which the dummy=1 when the target has higher CSR performance than the acquirer. Subsequently, acquirer CAR is regressed on this dummy variable. As for hypothesis 1, an OLS regression is run and the standard errors are shown under the coefficient of each variable. The regression results for buying a target that has superior CSR performance shows an insignificantly positive effect (0,0055). When fixed effects are included in the regression, the positive effect decreases slightly (0,0036). Moreover, the coefficients and the standard errors are small. Furthermore, when fixed effects are included the adjusted R-Squared of both subsamples increases substantially, which indicates a better model fit.

The results do not provide evidence to support the prediction that deals in which the target has a higher CSR score than the acquirer have higher announcement returns than deals in which the acquirer has a higher CSR score than the target. Aktas et al. (2010) found supporting evidence that acquirers can learn socially responsible practices from targets that they acquirer. Subsequently, they found that this organizational learning has a positive reaction by the market because investors value this learning opportunity. However, the authors didn't look at differences between acquirer and target CSR performance levels. In fact, there is no paper that provides any findings on the matter if superior target CSR leads to higher abnormal returns at the announcement date for the acquirer.

The third hypothesis predicts that deals in which both the acquirer and the target have compatible CSR scores have higher announcement returns than if the deal consists of incompatible CSR performing firms. To test this hypothesis, an OLS regression is performed. Column 3 of table 7 shows a significantly positive effect of CSR compatibility on acquirer CAR (0.0129\*).

	(1)	(2)	(3)	(4)
TARGET_HIGHER	0.0055	0.0036		
	(0.0089)	(0.0103)		
CSR_COMPATIBLE			0.0129*	0.0164*
			(0.0078)	(0.0085)

Firm-Specific Control Variables				
ASIZE	0.0013	0.0016	0.0016	0.0018
	(0.0043)	(0.0053)	(0.0042)	(0.0051)
InATOBINQ	0.0045	0.0065	0.0041	0.0062
	(0.0079)	(0.0093)	(0.0079)	(0.0092)
ALEVERAGE	-0.0000*	0.0000	-0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
AFCF	-0.0022	-0.0012	-0.0028	-0.0017
	(0.0036)	(0.0040)	(0.0035)	(0.0039)
TSIZE	0.0030	0.0020	0.0032	0.0019
	(0.0023)	(0.0029)	(0.0023)	(0.0029)
InTTOBINQ	-0.0051	-0.0087	-0.0050	-0.0091
	(0.0052)	(0.0058)	(0.0051)	(0.0056)
Deal-Specific Control Variables				
CROSSBORDER	0.0100	0.0007	0.0111	0.0017
	(0.0082)	(0.0107)	(0.0082)	(0.0107)
REL_INDUSTRY	0.0086	0.0122	0.0083	0.0122
	(0.0089)	(0.0099)	(0.0090)	(0.0099)
DEALVALUE	0.0012	0.0033	0.0016	0.0043
	(0.0031)	(0.0042)	(0.0032)	(0.0042)
CASHPAID	0.0095	0.0164	0.0094	0.0171
	(0.0086)	(0.0119)	(0.0086)	(0.0118)
Contstant	-0.0403	-0.0104	-0.0457	-0.0366
	(0.0313)	(0.0734)	(0.0316)	(0.0695)
Year fixed effects	No	Yes	No	Yes
Industry fixed effects	No	Yes	No	Yes
Country fixed effects	No	Yes	No	Yes
Adjusted R-Squared	0.019	0.170	0.025	0.179
Observations	394	394	394	394

**Table 7**: This table reports the OLS and fixed effects regression results for hypothesis 2 and 3. Column 1 and 2 show the OLS regression and the fixed effects regression for hypothesis 2 in which a dummy variable is used to split the sample in deals in which the target has higher CSR performance than the acquirer and vice versa. Secondly, column 3 and 4 show the OLS regression and the fixed effects regression for hypothesis 3 in which a dummy variable is used to split the sample into deals in which the target and the fixed effects regression for hypothesis 3 in which a dummy variable is used to split the sample into deals in which the target and the acquirer have compatible CSR performance and vice versa. The dependent variable is the CAR (-1,1) of the acquirer, which is measured by the market adjusted model. The robust standard errors are presented below each regression coefficient. The \*, \*\*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

This is in line with the findings of Bereskin et al. (2018) who found that CSR similarity contributed to a 3,5% increase in combined announcement returns. Bereskin et al. (2018) based their predictions on the literature of integration processes that suggests that firms with a similar corporate culture can avoid problems that arise during the integration stage (Koi-Akrofi, 2016). In addition, De Roeck and Swaen (2010) found that good CSR practices are important in facilitating a well-organised integration process. In line with the previous reasoning, the results of the analysis performed provides evidence that the market reacts positively to deals in which the acquirer and target are compatible based on their CSR performance.

## 4.3 Robustness Checks

To check for robustness of the results, this paper follows the method of Meckl and Theurkorn (2015) who performed multiple OLS regressions with different event windows length. The OLS regressions with event windows of seven days (-3,3), eleven days (-5,5), and twenty-one days (-10,10) are performed to check the hypotheses. An overview of these results is shown in Appendix D-I. Secondly, to check if the findings hold in the long-term, a calendartime portfolio regression is conducted.

For hypothesis 1a the insignificant small positive effect of acquirer CSR performance on acquirer CAR changes to an insignificant negative relationship when the event window increases. For all different event window lengths, the coefficients are negative. This is in sharp contrast of the findings of Deng et al. (2013), who found significant evidence of the positive relationship between acquirer CSR performance and acquirer CAR. The results of the longer event windows indicate that instead of the previously mentioned stakeholder maximization view the market sees acquirer CSR performance as value-destroying. This entails that the market sees CSR practices as an increase in operational expenses which lead to lower returns (Lopez et al., 2007). When looking at hypothesis 1b, the small insignificantly positive coefficient remains for the (-3,3) event window. However, for the (-5,5) and (-10,10) event windows, there is a significant positive effect of target CSR performance on acquirer CAR. When considering longer event windows, this sample supports the evidence of Aktas et al. (2010) that the market rewards acquirers which buy targets that perform well on CSR factors. Moreover, the results for the combination effect of acquirer and target CSR performance hypothesized in hypothesis 1c remains the same for longer event windows. The results are still insignificantly positive, but the positive coefficient increases when the event window increases. Furthermore, the robustness check for the interaction effect of Tobin's q and target CSR performance gives a positive value, while the (-1,1) event window gave a negative value. This is in sharp contrast of the findings of previous research. A possible explanation could be that the decrease in acquirer CAR through a high target Tobin's q is off set by the positive impact of high target CSR performance.

In the case of hypothesis 2 the insignificant positive effect of deals, in which the target has higher CSR performance than the acquirer, on acquirer CAR remains for the (-3,3) event window. However, for the (-5,5) and (-10,10) event windows the results give a significantly positive effect which increases when the event window increases. Therefore, support for the

finding that organizational learning of CSR practices is value-enhancing when the learning opportunity for the acquirer increases when considering longer event window lengths.

Lastly, for Hypothesis 3 the significant positive effect of CSR compatibility remains for all different event window lengths. This analysis therefore provides robust findings that the market reacts positively to deals in which is predicted that the integration process will run smoothly because of the similarity in CSR practices of the acquirer and target.

## 4.4.1 Long-term post-acquisition stock performance

As mentioned in the methodology, to check if the results found in the short-term OLS regressions hold in the long-term a calendar-time portfolio regression is performed. Following Moeller et al. (2004), for every calendar month equally weighted portfolios are formed for firms which just completed an acquisition in the period 2004 to 2019. The firms are kept in the portfolio for a holding period of twelve months, twenty-four months, and thirty-six months relative to the announcement month. Each month the portfolio is rebalanced, in which firms are dropped which reached the end of their holding period and adding all firms that have just announced an acquisition. The portfolio excess returns are then regressed on Fama and French (1992,1993) and Carhart (1997) four factor model. A market benchmark (S&P500) is used to control for market variations. The use of controlling for industry is beyond the scope of this study but this could provide valuable information if long-term results are coherent with the short-term regression results, because there could be differences in variation between the different industries the S&P500 is compelled of. An overview of the results can be found in table 8.

Panel A of table 8 shows the long-term post-acquisition abnormal stock returns of the portfolio of acquirers for the full sample. The slope coefficient ( $\alpha$ ) is statistically negative and therefore, in comparison with the sample used in this paper, it was a better choice investing in the benchmark index used (S&P500) than in this portfolio of acquirers. This finding supports the finding of Agrawal et al. (1992) who found that the average long-run drift for acquirers is statistically negative.

Contrary to the findings of Deng et al. (2013) subsample B provides a significantly negative relationship between having a high CSR score and long-term stock performance. This significant negative relationship is the same for acquirers which have low CSR performance (subsample C). The results even show that acquirers with low CSR performance perform less negative than acquirers with high CSR performance and that this holds for all different holding

periods. In the case of target CSR performance, the long-run relationship between target CSR performance and long-run stock returns of acquirers which invest in these targets is also significantly negative for both high (D) and low (E) CSR scoring targets. As with acquirer CSR performance, the results are again less negative for acquirers which invest in low CSR scoring targets than for those who invest in high CSR scoring targets. These results differ from the short-term findings of Aktas et al. (2010), who found that target CSR performance has a positive impact on acquirer CAR. Moreover, when including Tobin's q as an interaction variable (F) the negative relationship between target CSR performance and the long-run stock returns of the acquirer reduces. The sample in which target CSR performance is high, but the target has low Tobin's (G), shows a higher reduction of the long-term negative impact of target CSR on acquirer stock-performance. This better long-term performance of high CSR performing targets with low Tobin's Q is in coherence with the findings of Choi et al. (2010) who found that high CSR performance increases the ability for the acquirer to improve financial performance after the deal is completed.

To examine the effect of organizational learning from target CSR practices on longterm acquirer deal performance, the sample is divided into two subsamples. Panel H shows the long-term post-acquisition abnormal stock return results for the portfolio of acquirers which announced an acquisition of a target in which the target has a higher CSR performance level than itself. Subsequently, panel I shows the same results, but then for the portfolio of acquirers which announced an acquisition in which the acquirers have a higher CSR performance level than their target counterpart. The long-term results are for both panels significantly negative. This means that in contradiction to the short-term results, investing in targets with high CSR performance doesn't achieve a positive abnormal stock return. However, the slope of the portfolio in which the target has a higher CSR performance level is slightly less negative than the portfolio in which the acquirer has a higher CSR performance level. Therefore, this paper supports the findings that the market reacts negatively to acquisitions, but it reacts less negative to acquisitions in which the acquire has the opportunity to learn CSR practices from the target (Agrawal et al., 1992; Moeller et al., 2004; Deng et al., 2013; Aktas et al., 2010).

Finally, to measure the effect of organizational compatibility, the sample is again split into two subsamples. Panel J shows the long-term post-acquisition abnormal stock return results for the portfolio of acquirers which have the same level of CSR performance as the target. This compatibility is measured through the median CSR level of acquirers and targets, in which deals were both the target and the acquirer score below or above the median are seen as compatible. Panel K shows the same results, but then for the portfolio of acquires which announced a deal in which the acquirer and the target have incompatible CSR performance levels. For both panels, the results are significantly negative for all holding periods. Therefore, the results of this sample show that in the long-term, even if the acquirer and the target are compatible in their CSR performance, the market still reacts negatively to acquisitions.

	After of	ne year	After two	years	After three	e years
Variable	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
α	-0.101	-9.281***	-0.101	-9.410***	-0.101	-9.551***
βmkt	0.266	1.317	0.232	1.200	0.221	1.179
βSmB	1.985	$2.647^{***}$	1.982	2.646***	2.016	$2.700^{***}$
BHmL	-0.534	-1.160	-0.487	-1.037	-0.480	-1.040
ßUmD	-0.265	-0.686	-0.290	-0.824	-0.268	-0.795
Adjusted $R^2$	0.055	0.000	0.055	0.021	0.056	01770
Panel B: Subsamı	ple of acauirers w	ith high CSR per	formance			
α	-0.103	-9.288***	-0.102	-9.411***	-0.102	-9.573**
ßmkt	0.245	1.165	0.244	1.247	0.234	1.229
ßSmB	2.107	2.763***	2.066	2.737***	2.064	2.754**
BHmL	-0.562	-1.211	-0.452	-0.947	-0.459	-0.987
ßUmD	-0.296	-0.743	-0.330	-0.927	-0.319	-0.943
Adjusted $R^2$	0.059	0.745	0.059	0.927	0.059	0.745
Panel C: Subsam	ple of acquirers w	ith low CSR perj	formance			
a	-0.091	-7.970***	-0.091	-8.120***	-0.092	-8.175**
ßmkt	0.279	1.424	0.214	1.089	0.204	1.076
ßSmR	1.859	2 360***	1 909	2 448***	2 016	2 582**
RHmI	-0.322	-0.702	-0.340	-0.745	-0.269	-0.594
RUmD	-0.322	-0.311	-0.141	-0.403	-0.209	-0.229
Adjusted R <sup>2</sup>	0.045	-0.311	0.045	-0.403	0.047	-0.22)
Panel D: Subsam	ple of acquirers w	hich bought a ta	rget with high CSR	performance		
α	-0.101	-9.545***	-0.100	-9.543***	-0.101	-9.666**
βmkt	0.240	1.296	0.185	1.002	0.185	1.015
$\beta SmB$	1.834	2.465***	1.859	$2.492^{***}$	1.942	2.612**
βHmL	-0.496	-1.128	-0.484	-1.050	-0.467	-1.034
βUmD	-0.338	-0.987	-0.359	-1.080	-0.349	-1.082
Adjusted R <sup>2</sup>	0.052		0.052		0.056	
Panel E: Subsam	ple of acquirers w	hich bought a ta	rget with low CSR j	performance		
a	-0.096	-7.853***	-0.096	-8.127***	-0.096	-8.351**
ßmkt	0.328	1.370	0.339	1.545	0.286	1.413
βSmB	2.252	2.784***	2.252	2.818***	2.235	2.831**
ßHmL	-0.418	-0.835	-0 291	-0.586	-0.328	-0.676
BUmD	-0.092	-0.199	-0.084	-0.203	-0.079	-0.217
Adjusted R <sup>2</sup>	0.052	0.177	0.004	0.205	0.058	0.217
injusica n	0.050		0.000		0.050	
Panel F: Subsamp	ple of acquirers w	hich bought a ta	rget with high CSR	performance and	d a high level of Tol	pin's q
α	-0.099	-8.431***	-0.095	-8.422***	-0.095	-8.499**
βmkt	0.303	1.437	0.189	0.920	0.198	1.000
$\beta SmB$	1.973	$2.490^{***}$	1.951	$2.481^{***}$	2.067	2.654**
$\beta HmL$	-0.223	-0.509	-0.336	-0.715	-0.338	-0.736
βUmD	-0.189	-0.421	-0.252	-0.639	-0.204	-0.561
A dimensed D2	0.052		0.049		0.053	

Panel A: Full sample

Panel G: Subsampl	e of acquirers w	hich bought a targ	get with high CSR	performance and a	low level of Tobii	n's q
α	-0.085	-7.405***	-0.085	-7.618***	-0.087	-7.934***
βmkt	0.172	0.856	0.124	0.640	0.069	0.389
βSmB	2.503	3.165***	2.259	$2.896^{***}$	2.301	3.037***
βHmL	-0.502	-1.002	-0.461	-0.968	-0.424	-0.893
βUmD	-0.153	-0.486	-0.183	-0.622	-0.111	-0.380
Adjusted R <sup>2</sup>	0.066		0.057		0.057	
Panel H: Subsampl	e of acquirers w	hich bought a targ	get with superior (	CSR performance		
α	-0.096	-8.356***	-0.092	-8.257***	-0.093	-8.423***
βmkt	0.251	1.250	0.176	0.897	0.150	0.803
βSmB	2.035	$2.596^{***}$	2.010	$2.582^{***}$	2.087	$2.718^{***}$
βHmL	-0.311	-0.692	-0.347	-0.751	-0.336	-0.738
βUmD	-0.135	-0.357	-0.202	-0.580	-0.163	-0.496
Adjusted R <sup>2</sup>	0.050		0.049		0.051	
Panel I: Subsample	of acquirers wh	nich hought a targ	et with inferior CS	R performance		
	-0.101	_9 105***	-0.102	-9 361***	-0.102	-9 /8/***
a. Bmkt	-0.101	-9.105	-0.102	-9.301	-0.102	-9.404
pmni RSmR	2 050	2 674***	2 035	2 677***	2.040	2 684***
RHmI	-0.621	_1 2074	-0.475	-0.988	-0.481	-1.020
RUmD	-0.021	-0.742	-0.475	-0.900	-0.401	-0.800
Adjusted R <sup>2</sup>	0.058	-0.742	0.057	-0.015	0.057	-0.000
najusica n	0.020		0.057		0.007	
Daniel I. C. I. amini 1				CCD		
Panel J: Subsample	e of acquirers wi	nich bought a targ	et with compatible	e CSR performance	0.102	0 < 0 0 ***
a	-0.101	-9.268	-0.101	-9.477	-0.102	-9.630
$\beta mkt$	0.253	1.317	0.210	1.145	0.218	1.204
$\beta SmB$	1.923	2.533***	1.908	2.528	1.955	2.600
$\beta HmL$	-0.660	-1.348	-0.537	-1.142	-0.527	-1.144
$\beta UmD$	-0.436	-1.321	-0.357	-1.146	-0.297	-0.970
Adjusted R <sup>2</sup>	0.060		0.054		0.055	
Panel K: Subsampl	e of acquirers w	hich bought a targ	get with incompati	ble CSR performan	ice	
α	-0.096	-8.266***	-0.094	-8.309***	-0.094	-8.385***
βmkt	0.233	1.062	0.242	1.177	0.226	1.127
$\beta SmB$	2.268	$2.946^{***}$	2.238	$2.914^{***}$	2.244	$2.928^{***}$
$\beta HmL$	-0.310	-0.693	-0.238	-0.503	-0.221	-0.471
$\beta UmD$	-0.085	-0.204	-0.118	-0.306	-0.136	-0.369
Adjusted R <sup>2</sup>	0.057		0.058		0.059	

**Table 8**: This table shows the results of the calendar-time portfolio analyses of the acquirers in the sample. There is a full sample (A) and ten subsamples which consists out of high (B) and low (C) acquirer CSR performance, high (D) and low (E) target CSR performance, the target has a high CSR score and a high (F) or low (G) level of Tobin's q, the target has higher CSR performance than the acquirer (H), the acquirer has a higher CSR than the target (I), the acquirer and the target both score above or below the median CSR score (J), and the acquirer and the target have different CSR scores (K). The results are measured by following Fama and French (1992,1993) and Carhart (1997) four factor models. The robust standard errors are presented below each regression coefficient. The \*, \*\*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

## 5. Conclusion

## 5.1 Discussion

While there is an extensive amount of research done on M&A and CSR, the impact of CSR on M&A performance is limited. Deng et al. (2013) studied the effect of acquirer CSR performance levels on acquisition announcement returns and found that a higher level of CSR corresponds to an increase in abnormal returns at the announcement date. While Deng et al. (2013) look at the CSR performance level of the acquirer, Aktas et al. (2010) study the relationship between target CSR performance level and M&A deal performance. They found that deals involving a target with a superior CSR performance level have higher abnormal returns. Both papers measure CSR performance levels through CSR scores at the company level. This paper tries to add to the existing literature by looking at the relationships between CSR performance levels of a U.S-based sample. Lastly, this paper checks if results found in the short-term are tested via OLS regressions and for the long-term, a calendar portfolio regression is conducted.

The hypotheses of this paper are based on intensively studied economic theories. The stakeholder view of the shareholder and stakeholder theory is used to form hypothesis 1a, 1b, and 1c in which higher acquirer and target CSR performance is positively related to the CAR of the acquirer at the announcement date. In addition to the stakeholder theory this study looks if the positive impact of CSR and Tobin's q increase when a target both possesses a high level of these two measurements. Furthermore, when looking at the different CSR performance levels of the parties involved, this paper hypothesized that superior target CSR performance increases abnormal returns of the acquirer at the announcement date. This prediction is based on the organizational learning theory, which in the context of this study means that the market reacts positively to deals in which the acquirer has the ability to learn from the CSR practices of the target. In contradiction of the organizational learning theory, this paper also looks at the relationship of CSR compatibility and acquirer performance in an M&A setting. Because of the fact that, the integration stage is an important factor of M&A success and that CSR is an important indicator of the capability of a firm to manage the integration process (De Roeck & Swaen, 2010), this paper forms the hypothesis 3 that deals in which the parties involved have compatible CSR performance level show the ability to better manage the integration process

and therefore better M&A performance. This paper reports the following results on the previously mentioned hypotheses:

In the case of hypothesis 1a, this paper finds no evidence that acquirer CSR performance positively impacts acquirer CAR at the announcement date. The results even suggest that there is a negative relationship between acquirer CSR and acquirer CAR. This is in support of the findings of Meckl and Theuerkorn (2015) who also found insignificant results and, in some cases, they found evidence for a significantly negative relationship. A possible explanation for the results found in this study and that of Meckl and Theuerkorn (2015) is that the market sees CSR practices of the acquirer more as a shareholder expense than as stakeholder maximization and therefore see it as value-destroying (Lopez et al., 2007; Walley & Whitehead, 1994). The long-term results provided further supporting evidence and showed that in the long-term high CSR scoring acquirers performed worse than low CSR scoring acquirers.

For hypothesis 1b, the sample used in this paper indicate a small and insignificantly positive relationship between the CSR performance level of the target and acquirer CAR. However, when for robustness checks the event window is expanded, the results show a significantly positive relationship. This positive relationship supports the findings of Aktas et al. (2010) that the acquirer can learn good CSR practices from the target and that this has a positive impact on acquirer CAR. Contrary to the findings on acquirer CSR performance, the findings for target CSR performance does show support for the stakeholder maximization view. The results show that the market values the learning opportunity for the acquirer and the trustworthiness of the target, based on its CSR performance level, which can lower transaction costs and therefore increase returns (Aktas et al., 2010; Donaldson & Preston, 1995). However, this conclusion is contradicted by the long-term results, which showed that acquirers investing in high CSR performing targets performed worse than acquirers which invested in low CSR performance targets.

The findings of hypothesis 1a and 1b indicate that acquirer CSR has a negative impact on acquirer CAR and target CSR a positive one. While the findings were insignificant for the regression results for hypotheses 1c, in which a stronger positive impact is predicted when both the acquirer and the target have high CSR performance levels, the sharp increase in the positivity of the coefficient indicates that the market might value deals in which both the acquirer and target score high on CSR practices. A possible explanation for this is that the market sees the value CSR has on decreasing operational costs by the increase of trust but want both parties to emanate trustworthiness by having high CSR performance. Moreover, as was found by the significant findings of hypothesis 3, the market values deals in which the acquirer and target are compatible. Therefore, the increase in the positivity of the coefficient can also be explained through the positive market reaction for deals in which both parties have high CSR performance levels and therefore it is expected that the integration process will run smoothly (Bereskin et al., 2018).

The interaction effect of Tobin's q and target CSR performance produces ambiguous findings to the hypothesized prediction. The findings of the (-1,1) event windows suggest that Tobin's q has a negative impact on acquirer CAR even in combination with a high CSR performing target. A reason for this could be that bidders pay on average a higher premium for targets that have higher levels of Tobin's Q (Rhodes-Kropf & Viswanathan, 2004; Reuer et al., 2012). This increase of the acquisition premium leads on average to lower returns for the acquirer (Doukas, 1995; Moeller et al., 2004). The long-run results support this way of reasoning, because it shows that bidders who bought high CSR performing targets with low Tobin's q perform better than those who invest in high CSR performing targets with high levels of Tobin's q. However, when incorporating longer event windows, the insignificantly negative relationship turns into an insignificantly positive relationship. This is in sharp contrast with the findings of previous research and only a hypothetical explanation can be suggested. For instance, it could be that for this sample acquisitions premiums are relatively low and therefore the negative impact of acquisition premiums on the CAR of the acquirer relatively small. Subsequently, this small negative effect is offset by the positive impact of high target CSR performance.

The findings of hypothesis 2 are significantly positive when considering longer event windows in the short-run. Therefore, this paper concludes that the market reacts positively to deals in which the acquirer has the opportunity to learn from the CSR practices of the target and that this positive effect increases when the acquirer has low CSR performance. This is because the learning opportunity increases when the differences between acquirer and target CSR levels increase. Acquirers can abuse this relationship by buying high CSR targets to green wash themselves and generating higher returns in the process. The long-run results for hypothesis 2 provide significantly negative results, which means that in the long-run acquirers which were involved in deals involving a better CSR performing target performed worse than the index market (S&P500). The only support the long-run results of this sample provides for the findings of Aktas et al. (2010) is that acquirers which were involved in deals in which they had better CSR performance level than the target, performed even worse.

The OLS regression tests for hypothesis 3, reveal significant findings for all different event window lengths. These findings support the hypothesized relationship between the compatibility of CSR performance levels and acquirer CAR and show that the market reacts more positively to deals in which the acquirer and the target have compatible CSR scores than when they have incompatible CSR scores. Moreover, the findings support earlier research that indeed CSR performance levels indicate the ability of both firms to perform a well-organized integration process and that this leads to higher abnormal returns (Bereskin et al., 2018). However, in the long-term compatible CSR scores does not have a positive impact on longterm stock performance of the acquirer. It is even so that in the long-term deals in which the acquirer and the target have incompatible CSR performance levels perform less negative than deals in which they have compatible CSR performance levels.

This paper found significant results for the positive relationship of target CSR performance, deals in which the target has superior CSR performance, and deals in which the acquirer and target have similar CSR performance levels on acquirer CAR. However, in the long-run all hypothesized predictions resulted in significantly negative findings. A possible explanation for this is that the usage of industry benchmarks instead of the market benchmark used could produce different results, because of the different variations in industries out of which the S&P500 is made of. Therefore, the conclusion of this paper is that the market recognizes the positive impact of target CSR performance on acquirer CAR and that this positive impact increase when the learning opportunity for the acquirer increases. Moreover, CSR compatibility is found to have the highest positive impact on acquirer CAR.

The findings of this study have multiple practical implications. For investors, the results suggest that target CSR performance is a criterion on which investors can formulate a prediction for the change in returns for the bidder. Secondly, for corporate takeover decisions the acquirer has the opportunity to green wash their image by buying socially responsible targets and gain a higher return in the process. Finally, corporate management should value CSR, because CSR indicates trustworthiness and the results of this paper show that this increase in trust translates to higher returns as mentioned in the stakeholder maximization view.

## 5.2 Limitations

This paper analyses the relationship between CSR performance and acquirer deal performance. While the results may indicate a certain effect between these two variables, there are some limitations that should be considered.

There are multiple CSR databases in which different rating agency's compromise a CSR score, based on ESG factors, at the company level. The three most used databases for CSR analyses are the KLD, IVA, and Thomson One ASSET4 database. The KLD database only provides CSR scores for US based firms and only covers the 3000 firms with the highest market capitalization. Therefore, the main disadvantage of this database is that it cannot be used to look at a universal effect of CSR on acquirer CAR but only for large firms. Secondly, the IVA database covers over 5000 firms on a global scale, and it bases its CSR score on the relationship between a firm's core business and the key industry CSR issues. The IVA database bases its CSR score on CSR issues in a particular industry and how well the company reduced the risk for those CSR issues. Finally, the Thomson One ASSET4 database is the largest database including around 9000 CSR rated firms and is just as the IVA database a global oriented database. However, the Thomson One ASSET4 database bases it's CSR score on 400 ESG measures, which the analysts process manually for each firm. Each measure is standardized in such a manner that guarantees the CSR score is comparable for all the firms in the database. Therefore, the Thomson One ASSET4 database is the most comprehensive database because CSR scores of firms in the entire sample can be compared instead of only per industry. Even though Dahlsrud (2008) found that there is a high percentage of overlap between the dimensions the different CSR measures are made of. However, the databases all use different selection methods for which firms to include in their sample and how to standardize their CSR scores to make them comparable with group peers. Therefore, the results found in this analysis are not directly comparable to those found by other databases.

This study is based only on a relatively small sample of public companies, because for public companies financial and accounting data is readily available. Secondly, in the ASSET4 database, there are around 9000 companies on a global scale with a CSR score. There is no selection on size or industry, so the database contains large/mid/small sized firms from all different industries. Therefore, the Thomson One ASSET4 database is a comprehensive database but as previously mentioned it only contains public firms which have to apply to different regulations than private firms. Therefore, when interpreting these results, it should be considered that the results are not conclusive for all companies.

A third factor that has an impact on the results found is the fact that when a rating agency can't find the right or enough information in the publicly disclosed reports, the company will get a zero score for that criteria. This means that the overall CSR score is biased to firms who choose to report on these rated items, which are most of the time larger and more capital rich firms because they have the capabilities to disclose the right information. The result

of this is that small firms, which are operating on a social manner, could have a low CSR score and vice versa a large firm that is operating irresponsible, could have a high CSR score because it invests in how it publicly discloses certain information.

## 5.3 further research

In the limitations section, the foundation for further research is discussed. For instance, this study uses a new database that has not been used by previous studies to research the relationship between CSR performance and M&A announcement returns. Previous studies use either the KLD or IVA ESG databases, while this study uses Thomson ASSET4 database. These three databases all have different ways to select and assess the firms in their sample, these were mentioned in the limitations section. Therefore, further research could provide a meta-analysis of the relationship between CSR and M&A performance based on the different databases, which could provide a more coherent view of this relationship or that a particular database is better to measure CSR performance and its effect on M&A performance.

While this study looks at the overall CSR score, further research could look at the individual pillars of CSR. This could provide information on if investors should base their investment decisions on either the environmental, social, governance, or a certain combination of these pillars instead of the overall CSR score.

Finally, this study looks at the relationship between CSR performance and acquirer returns. However, this study does not look at the potential effect of CSR performance on target returns and combined deal returns. Further research could provide evidence that CSR performance is even more value-enhancing or value-destroying when looking at the combined entity instead of only the acquirer.

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## Appendices

## Appendix A

		Panel A: Distribution by country	,			Panel B: Distribution by year		
Acquirer Country	Freq.	Percentage (%)	Target Country	Freq.	Percentage (%)	Year	Freq.	Percentage (%)
Argentina	1	0.24	Argentina	2	0.49	2004	1	0.24
Australia	19	4.65	Australia	41	10.02	2005	5	1.22
Austria	1	0.24	Austria	2	0.49	2006	10	2.44
Bahrain	1	0.24	Bahrain	1	0.24	2007	23	5.62
Belgium	4	0.98	Belgium	1	0.24	2008	13	3.18
Bermuda	1	0.24	Brazil	3	0.73	2009	13	3.18
Brazil	5	1.22	Canada	38	9.29	2010	19	4.65
Canada	28	6.85	China	3	0.73	2011	20	4.89
China	3	0.73	Denmark	1	0.24	2012	25	6.11
Denmark	2	0.49	Finland	1	0.24	2013	12	2.93
Finland	1	0.24	France	7	1.71	2014	26	6.36
France	20	4.89	Germany	2	0.49	2015	44	10.76
Germany	4	0.98	Gibraltar	1	0.24	2016	47	11.49
Gibraltar	1	0.24	Greece	2	0.49	2017	47	11.49
Greece	2	0.49	India	6	1.47	2018	56	13.69
Hong Kong	2	0.49	Ireland-Rep	3	0.73	2019	48	11.74
India	6	1.47	Israel	2	0.49	Total	394	100
Ireland-Rep	3	0.73	Italy	5	1.22			
Isle of Man	1	0.24	Japan	15	3.67			
Israel	1	0.24	Kuwait	1	0.24			
Italy	6	1.47	Malaysia	1	0.24	Panel C: Distribution by Acquirer	Nation	
Japan	31	7.58	Mexico	1	0.24		Freq.	Percentage (%)
Malaysia	1	0.24	Morocco	1	0.24	Construction	10	2.44
Mexico	1	0.24	Netherlands	7	1.71	Manufacturing	193	47.19
Netherlands	8	1.96	New Zealand	1	0.24	Mining	57	13.94
New Zealand	1	0.24	Norway	3	0.73	Retail Trade	19	4.65
Norway	1	0.24	Papua N Guinea	1	0.24	Services	71	17.36
Poland	1	0.24	Russia	2	0.49	Transportation & Utilities	51	12.47
Russia	1	0.24	South Africa	7	1.71	Wholesale Trade	8	1.96
Saudi Arabia	1	0.24	South Korea	2	0.49	Total	394	100
Singapore	1	0.24	Spain	1	0.24			
South Africa	4	0.98	Sweden	2	0.49			
South Korea	3	0.73	Switzerland	4	0.98	Panel D: Distribution by Target N	lation	
Spain	4	0.98	Taiwan	2	0.49		Freq.	Percentage (%)
Sweden	3	0.73	Thailand	1	0.24	Construction	10	2.44
Switzerland	8	1.96	UK	35	8.56	Manufacturing	175	42.79
Taiwan	4	0.98	United States	201	49.14	Mining	63	15.4
Thailand	2	0.49				Retail Trade	18	4.4
UK	32	7.82				Services	85	20.78
United States	188	45.97				Transportation & Utilities	45	11
Utd Arab Em	2	0.49				Wholesale Trade	13	3.18
Total	394	100	Total	394	100	Total	394	100

**Table 9**: This table shows the sample distribution by country, year, and industry. The sample consists of 394 deals over the period of 2004-2019. It furthermore includes 41 acquirer countries and 37 target countries from a total of seven different industries.

## Appendix B

Pillar	Category	Indicators in Rating	Weight
	Resource Use	20	11%
Environmental	Emissions	22	12%
	Innovation	19	11%
Social	Workforce	29	16%
	Human Rights	8	4.50%
	Community	14	8%
	Product Responsibility	12	7%
	Management	34	19%
Governance	Shareholders	12	7%
	CSR strategy	8	4.50%
Total		178	100%

 Table 10: this table shows the different categories and the indicators on which the overall ESG score is based on.

Ap	pendix	С
$^{1}P$	рспал	$\mathbf{c}$

Country	Benchmark portfolio
Argentina	S&P Latin America 40
Australia	MSCI AEFE
Austria	STOXX Europe 600
Bahrain	MSCI World
Belgium	STOXX Europe 600
Bermuda	S&P 500
Brazil	S&P Latin America 40
Canada	S&P/TSX Composite Index
China	MSCI World
Denmark	STOXX Europe 600
Finland	STOXX Europe 600
France	STOXX Europe 600
Germany	STOXX Europe 600
Gibraltar	STOXX Europe 600
Greece	STOXX Europe 600
Hong Kong	S&P Asia 50
India	MSCI World
Ireland-Rep	STOXX Europe 600
Isle of Man	STOXX Europe 600
Israel	MSCI World
Italy	STOXX Europe 600
Japan	Nikkei 225
Malaysia	S&P Asia 50
Mexico	S&P Latin America 40
Netherlands	STOXX Europe 600
New Zealand	MSCI AEFE
Norway	STOXX Europe 600
Poland	STOXX Europe 600
Russia	MSCI World
Saudi Arabia	MSCI World
Singapore	S&P Asia 50
South Africa	JSE
South Korea	S&P Asia 50
Spain	STOXX Europe 600
Sweden	STOXX Europe 600
Switzerland	STOXX Europe 600
Taiwan	S&P Asia 50
Thailand	S&P Asia 50
UK	STOXX Europe 600
United States	S&P 500
Utd Arab Em	MSCI World

**Table 11**: shows the different benchmarks used for the represented countries in the sample. As can be seen for Europe the STOXX Europe 600, Amerika and Canada the S&P 500, South/Middle-Amerika the S&P Latin America 40, Asia the S&P Asia 50, Australia and New Zealand MCSI AEFE, Japan Nikkei 225, Afrika JSE, and the MSCI is used for China, the Middle-East, and India.

Appendix D

	(1)	(2)	(3)	(4)	(5)	(6)
ACQUIRER CSR	-0.0002	-0.0001	-0.0000	0.0000	-0.0002	-0.0001
	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Firm-Specific Control Variables						
ASIZE	0.0020	0.0017	0.0025	0.0010	0.0027	0.0002
	(0.0042)	(0.0055)	(0.0048)	(0.0062)	(0.0053)	(0.0062)
InATOBINQ	0.0024	0.0021	0.0008	-0.0027	-0.0100	-0.0123
	(0.0084)	(0.0100)	(0.0096)	(0.0111)	(0.0113)	(0.0130)
ALEVERAGE	-0.0000**	0.0000	0.0000	0.0001**	0.0000	0.0001***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
AFCF	-0.0029	0.0007	-0.0029	0.0016	-0.0013	0.0042
	(0.0036)	(0.0040)	(0.0042)	(0.0047)	(0.0046)	(0.0053)
TSIZE	0.0017	0.0010	0.0008	0.0012	0.0015	0.0008
	(0.0026)	(0.0033)	(0.0027)	(0.0035)	(0.0035)	(0.0039)
InTTOBINQ	-0.0081	-0.0128*	-0.0086	-0.0130*	-0.0035	-0.0080
	(0.0060)	(0.0066)	(0.0074)	(0.0073)	(0.0066)	(0.0071)
Deal-Specific Control Variables						
CROSSBORDER	0.0121	0.0052	0.0090	0.0027	0.0082	-0.0005
	(0.0091)	(0.0112)	(0.0094)	(0.0118)	(0.0108)	(0.0124)
REL_INDUSTRY	0.0018	0.0076	-0.0006	0.0080	-0.0047	0.0060
	(0.0100)	(0.0108)	(0.0109)	(0.0120)	(0.0115)	(0.0125)
DEALVALUE	0.0014	0.0033	0.0028	0.0046	-0.0020	0.0006
	(0.0035)	(0.0046)	(0.0040)	(0.0052)	(0.0044)	(0.0058)
CASHPAID	0.0142	0.0217	0.0078	0.0252*	0.0025	0.0252
	(0.0092)	(0.0132)	(0.0109)	(0.0148)	(0.0127)	(0.0166)
Contstant	-0.0106	-0.0345	-0.0264	-0.1686**	-0.0084	-0.1078
	(0.0361)	(0.0802)	(0.0409)	(0.0831)	(0.0444)	(0.0866)
Year fixed effects	No	Yes	No	Yes	No	Yes
Industry fixed effects	No	Yes	No	Yes	No	Yes
Country fixed effects	No	Yes	No	Yes	No	Yes
Adjusted R-Squared	0.0172	0.1819	0.0100	0.1763	0.0096	0.2353
Observations	394	394	394	394	394	394

**Table 12**: This table reports the OLS and fixed effect regression results of the robustness check for different event windows. The dependent variables are the (1) CAR (-3,3), (3) CAR (-5,5), and (5) CAR (-10,10) of the acquirer. After each column for a particular event window length a column is followed in which fixed effects are included. The independent variable is the acquirer's CSR performance. The robust standard errors are presented below each regression coefficient. The \*, \* \*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

Appendix E

	(1)	(2)	(3)	(4)	(5)	(6)
TARGET CSR	0.0004	0.0004	0.0005*	0.0005	0.0006*	0.0006
	(0.0003)	(0.0003)	(0.0003)	(0.0004)	(0.0003)	(0.0004)
Firm-Specific Control Variables						
ASIZE	0.0022	0.0016	0.0028	0.0009	0.0030	0.0001
	(0.0042)	(0.0054)	(0.0047)	(0.0060)	(0.0052)	(0.0060)
InATOBINQ	0.0035	0.0031	0.0018	-0.0018	-0.0086	-0.0111
	(0.0084)	(0.0100)	(0.0095)	(0.0112)	(0.0112)	(0.0130)
ALEVERAGE	-0.0000***	0.0000	0.0000	0.0001**	0.0000	0.0001**
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
AFCF	-0.0032	0.0005	-0.0031	0.0014	-0.0017	0.0040
	(0.0035)	(0.0039)	(0.0041)	(0.0046)	(0.0045)	(0.0052)
TSIZE	0.0008	0.0000	-0.0002	0.0002	0.0002	-0.0004
	(0.0027)	(0.0033)	(0.0027)	(0.0036)	(0.0035)	(0.0040)
InTTOBINQ	-0.0081	-0.0124*	-0.0083	-0.0124*	-0.0034	-0.0074
	(0.0061)	(0.0066)	(0.0074)	(0.0073)	(0.0066)	(0.0072)
Deal-Specific Control Variables						
CROSSBORDER	0.0100	0.0033	0.0070	0.0007	0.0056	-0.0029
	(0.0089)	(0.0112)	(0.0093)	(0.0118)	(0.0106)	(0.0126)
REL_INDUSTRY	0.0040	0.0094	0.0012	0.0094	-0.0020	0.0081
	(0.0098)	(0.0105)	(0.0106)	(0.0117)	(0.0112)	(0.0122)
DEALVALUE	0.0018	0.0037	0.0033	0.0050	-0.0015	0.0011
	(0.0036)	(0.0045)	(0.0040)	(0.0052)	(0.0044)	(0.0059)
CASHPAID	0.0154*	0.0226*	0.0086	0.0258*	0.0038	0.0262
	(0.0090)	(0.0130)	(0.0106)	(0.0146)	(0.0124)	(0.0162)
Contstant	-0.0288	-0.0588	-0.0441	-0.1876**	-0.0324	-0.1361
	(0.0358)	(0.0788)	(0.0397)	(0.0797)	(0.0439)	(0.0841)
Year fixed effects	No	Yes	No	Yes	No	Yes
Industry fixed effects	No	Yes	No	Yes	No	Yes
Country fixed effects	No	Yes	No	Yes	No	Yes
Adjusted R-Squared	0.0200	0.1860	0.0175	0.1817	0.0162	0.2404
Observations	394	394	394	394	394	394

**Table 13**: This table reports the OLS and fixed effect regression results of the robustness check for different event windows. The dependent variables are the (1) CAR (-3,3), (3) CAR (-5,5), and (5) CAR (-10,10) of the acquirer. After each column for a particular event window length a column is followed in which fixed effects are included. The independent variable is the target's CSR performance. The robust standard errors are presented below each regression coefficient. The \*, \* \*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

Appendix F

	(1)	(2)	(3)	(4)	(5)	(6)
BOTH HIGH CSR	0.0070	0.0092	0.0129	0.0134	0.0148	0.0154
20111110110211	(0.0088)	(0.0093)	(0.0095)	(0.0103)	(0.0106)	(0.0111)
Firm Specific Control Variables	(0.0000)	(0100)2)	(0100)0)	(010100)	(010100)	(010111)
A SIZE	0.0022	0.0018	0.0029	0.0012	0.0032	0.0004
ASIZE	(0.0022)	(0.0010)	(0.002)	(0.0012)	(0.0052)	(0.0004)
	(0.00+2)	(0.0034)	(0.00+7)	(0.0000)	0.0092)	0.0113
IIIATOBINQ	(0.0032)	(0.0028)	(0.0014)	(0.0111)	(0.0112)	(0.0129)
ALEVERACE	0.000+)	0.0000	(0.0093)	0.0001**	(0.0112)	(0.0129)
ALEVERAGE	(0,0000)	(0.0000)	(0.0000)	(0.0001)	(0.0000)	(0.0001)
AFCE	0.0000)	(0.0000)	(0.0000)	0.0000)	(0.0000)	(0.0000)
Arci	(0.0035)	(0.0002)	(0.0034)	(0.0009)	(0.0021)	(0.0054)
TSIZE	(0.0033)	0.0039)	(0.0041)	0.0040)	0.0043)	(0.0032)
ISIZE	(0.0012)	(0.0003)	(0.0002)	(0.0000)	(0.0000)	(0.0001)
1"TTOBINO	0.0027	0.0132**	0.0028)	0.0134*	(0.0033)	0.0040)
IIITTOBINQ	-0.0083	(0.0052)	(0.0073)	(0.0072)	-0.0041	(0.0030)
Deal Specific Control Variables	(0.0000)	(0.0005)	(0.0073)	(0.0072)	(0.0005)	(0.0071)
CROSSBORDER	0.0108	0.0047	0.0080	0.0022	0.0066	0.0013
CROSSBORDER	(0.0100)	(0.0047)	(0.0000)	(0.0022)	(0.0106)	(0.0123)
DEL INDUCTOV	(0.0089)	(0.0112)	(0.0093)	(0.0117)	(0.0100)	0.0075
KEL_INDUSTKI	(0.0034)	(0.0000)	(0.0007)	(0.0089)	-0.0020	(0.0073)
	(0.0098)	(0.0100)	(0.0100)	(0.0117)	(0.0112)	(0.0122)
DEALVALUE	(0.0018)	(0.0040)	(0.0034)	(0.0053)	-0.0015	(0.0017)
CASUDAD	(0.0050)	(0.0040)	(0.0041)	(0.0033)	(0.0043)	(0.0000)
CASHFAID	$0.0137^{*}$	$0.0253^{\circ}$	0.0093	$(0.0274^{\circ})$	(0.0049)	$0.0280^{\circ}$
Contatont	(0.0091)	(0.0132)	(0.0108)	(0.0149)	(0.0126)	(0.0100)
Contstant	-0.01/8	-0.0521	-0.0280	$-0.1825^{**}$	-0.0150	-0.1308
XZ	(0.0343)	(0.0782)	(0.0381)	(0.0794)	(0.0423)	(0.0835)
Y ear fixed effects	NO	Yes	NO N	Yes	INO N	Yes
Industry fixed effects	No	Yes	No	Yes	No	Yes
Country fixed effects	N0	Yes	N0	Yes	NO 0.0120	Yes
Adjusted K-Squared	0.0175	0.1837	0.0145	0.1806	0.0139	0.2395
Observations	394	394	394	394	394	394

**Table 14**: This table reports the OLS and fixed effect regression results of the robustness check for different event windows. The dependent variables are the (1) CAR (-3,3), (3) CAR (-5,5), and (5) CAR (-10,10) of the acquirer. After each column for a particular event window length a column is followed in which fixed effects are included. Moreover, a dummy variable is included which is 1 when both the acquirer and the target score above the median CSR performance score and this dummy variable is regressed on acquirer CAR. The robust standard errors are presented below each regression coefficient. The \*, \*\*, and \*\*\*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

Appendix G

	(1)	(2)	(3)
TARGET HIGH CSR	0.0106	0.0151	0.0185
	(0.0109)	(0.0122)	(0.0128)
TARGET HIGH CSR*.lnTTOBINQ	0.0032	0.0046	0.0020
	(0.0116)	(0.0127)	(0.0134)
Firm-Specific Control Variables			
InTTOBINQ	-0.0144*	-0.0152*	-0.0088
	(0.0073)	(0.0091)	(0.0099)
ASIZE	0.0018	0.0011	0.0003
	(0.0053)	(0.0060)	(0.0060)
InATOBINQ	0.0030	-0.0018	-0.0110
	(0.0101)	(0.0112)	(0.0130)
ALEVERAGE	0.0000	0.0001**	0.0001**
	(0.0000)	(0.0000)	(0.0000)
AFCF	0.0005	0.0013	0.0040
	(0.0039)	(0.0046)	(0.0052)
TSIZE	0.0001	0.0000	-0.0005
	(0.0033)	(0.0036)	(0.0040)
Deal-Specific Control Variables			
CROSSBORDER	0.0042	0.0015	-0.0022
	(0.0111)	(0.0116)	(0.0123)
REL_INDUSTRY	0.0090	0.0092	0.0078
	(0.0105)	(0.0117)	(0.0122)
DEALVALUE	0.0042	0.0058	0.0018
	(0.0046)	(0.0052)	(0.0060)
CASHPAID	0.0245*	0.0287*	0.0290*
	(0.0133)	(0.0149)	(0.0167)
Contstant	-0.0523	-0.1823**	-0.1342
	(0.0805)	(0.0803)	(0.0836)
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes
Adjusted R-Squared	0.186	0.184	0.243
Observations	394	394	394

**Table 15**: This table reports the OLS and fixed effect regression results of the robustness check for different event windows. The dependent variables are the (1) CAR (-3,3), (2) CAR (-5,5), and (3) CAR (-10,10) of the acquirer. Moreover, a dummy variable is included which is 1 when target scores above the median CSR score. The independent variable is the interaction variable between high target CSR performance and target Tobin's q. The robust standard errors are presented below each regression coefficient. The \*, \* \*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

Appendix H

	(1)	(2)	(3)	(4)	(5)	(6)
TARGET_HIGHER	0.0078	0.0046	0.0142**	0.0094	0.0224**	0.0159
	(0.0093)	(0.0110)	(0.0101)	(0.0116)	(0.0111)	(0.0119)
Firm-Specific Control Variables						
ASIZE	0.0019	0.0017	0.0024	0.0009	0.0026	0.0000
	(0.0042)	(0.0055)	(0.0047)	(0.0061)	(0.0053)	(0.0061)
InATOBINQ	0.0031	0.0025	0.0012	-0.0024	-0.0092	-0.0116
	(0.0084)	(0.0101)	(0.0096)	(0.0112)	(0.0112)	(0.0130)
ALEVERAGE	-0.0000**	0.0000	0.0000	0.0001**	0.0000	0.0001**
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
AFCF	-0.0028	0.0007	-0.0025	0.0016	-0.0008	0.0043
	(0.0035)	(0.0040)	(0.0041)	(0.0047)	(0.0046)	(0.0052)
TSIZE	0.0012	0.0007	0.0003	0.0008	0.0005	0.0000
	(0.0025)	(0.0032)	(0.0026)	(0.0035)	(0.0034)	(0.0038)
InTTOBINQ	-0.0082	-0.0127*	-0.0084	-0.0126*	-0.0034	-0.0074
	(0.0060)	(0.0067)	(0.0072)	(0.0074)	(0.0064)	(0.0072)
Deal-Specific Control Variables						
CROSSBORDER	0.0110	0.0046	0.0085	0.0018	0.0069	-0.0023
	(0.0088)	(0.0110)	(0.0092)	(0.0117)	(0.0105)	(0.0123)
REL_INDUSTRY	0.0029	0.0083	-0.0003	0.0081	-0.0036	0.0067
	(0.0098)	(0.0106)	(0.0106)	(0.0118)	(0.0112)	(0.0122)
DEALVALUE	0.0016	0.0035	0.0031	0.0049	-0.0015	0.0012
	(0.0035)	(0.0045)	(0.0039)	(0.0052)	(0.0044)	(0.0058)
CASHPAID	0.0150*	0.0221*	0.0082	0.0254*	0.0036	0.0258
	(0.0090)	(0.0132)	(0.0108)	(0.0149)	(0.0125)	(0.0165)
Contstant	-0.0217	-0.0389	-0.0351	-0.1612*	-0.0267	-0.1027
	(0.0341)	(0.0808)	(0.0380)	(0.0825)	(0.0425)	(0.0859)
Year fixed effects	No	Yes	No	Yes	No	Yes
Industry fixed effects	No	Yes	No	Yes	No	Yes
Country fixed effects	No	Yes	No	Yes	No	Yes
Adjusted R-Squared	0.018	0.182	0.015	0.178	0.020	0.240
Observations	394	394	394	394	394	394

**Table 16:** This table reports the OLS and fixed effects regression results for hypothesis 2. The sample is split in two subsamples through the use of a dummy variable, which is 1 for deals in which the target has stronger CSR performance than the acquirer. The dependent variables are the (1) CAR (-3,3), (3) CAR (-5,5), and (5) CAR (-10,10) of the acquirer. After each column for a particular event window length a column is followed in which fixed effects are included. The robust standard errors are presented below each regression coefficient. The \*, \*\*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.

	1.	T
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	(1)	(2)	(1)	(2)	(1)	(2)
TARGET_COMPATIBLE	0.0120*	0.0156	0.0142	0.0172*	0.0176*	0.0170
	(0.0087)	(0.0095)	(0.0095)	(0.0103)	(0.0105)	(0.0108)
Firm-Specific Control Variables						
ASIZE	0.0022	0.0019	0.0028	0.0012	0.0031	0.0004
	(0.0042)	(0.0053)	(0.0047)	(0.0060)	(0.0052)	(0.0061)
InATOBINQ	0.0026	0.0022	0.0005	-0.0029	-0.0101	-0.0123
	(0.0084)	(0.0099)	(0.0096)	(0.0111)	(0.0113)	(0.0129)
ALEVERAGE	-0.0000*	0.0000	0.0000*	0.0001***	0.0000**	0.0001***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
AFCF	-0.0034	0.0002	-0.0033	0.0011	-0.0020	0.0037
	(0.0035)	(0.0039)	(0.0041)	(0.0046)	(0.0045)	(0.0052)
TSIZE	0.0015	0.0007	0.0008	0.0010	0.0013	0.0005
	(0.0026)	(0.0032)	(0.0027)	(0.0035)	(0.0034)	(0.0039)
InTTOBINQ	-0.0081	-0.0132**	-0.0084	-0.0133*	-0.0035	-0.0084
	(0.0059)	(0.0065)	(0.0072)	(0.0072)	(0.0064)	(0.0071)
Deal-Specific Control Variables						
CROSSBORDER	0.0122	0.0056	0.0100	0.0034	0.0090	0.0000
	(0.0088)	(0.0111)	(0.0093)	(0.0117)	(0.0107)	(0.0123)
REL_INDUSTRY	0.0025	0.0082	-0.0008	0.0080	-0.0043	0.0065
	(0.0098)	(0.0106)	(0.0106)	(0.0118)	(0.0112)	(0.0122)
DEALVALUE	0.0020	0.0044	0.0034	0.0057	-0.0012	0.0018
	(0.0036)	(0.0046)	(0.0040)	(0.0052)	(0.0044)	(0.0059)
CASHPAID	0.0149*	0.0228*	0.0080	0.0260*	0.0031	0.0263
	(0.0089)	(0.0131)	(0.0107)	(0.0147)	(0.0124)	(0.0163)
Contstant	-0.0251	-0.0646	-0.0363	-0.1928**	-0.0254	-0.1387*
	(0.0351)	(0.0770)	(0.0384)	(0.0774)	(0.0427)	(0.0823)
Year fixed effects	No	Yes	No	Yes	No	Yes
Industry fixed effects	No	Yes	No	Yes	No	Yes
Country fixed effects	No	Yes	No	Yes	No	Yes
Adjusted R-Squared	0.021	0.189	0.016	0.184	0.016	0.241
Observations	394	394	394	394	394	394

**Table 17:** This table reports the OLS and fixed effects regression results for hypothesis 2. The sample is split in two subsamples through the use of a dummy variable, which is 1 for deals in which the acquirer and the target have compatible CSR performance levels. The dependent variables are the (1) CAR (-3,3), (3) CAR (-5,5), and (5) CAR (-10,10) of the acquirer. After each column for a particular event window length a column is followed in which fixed effects are included. The robust standard errors are presented below each regression coefficient. The \*, \*\*, and \* \* \*, stand for statistically significant values at the 0.10, 0.05, 0.01 level respectively.