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Does CSR Facilitate an Enhanced M&A Performance?

Empirical Evidence from Mergers and Acquisitions in Northern Europe

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Abstract:

Transaction volumes in the global mergers and acquisitions (M&A) markets are close to peak levels (JP Morgan, 2018) and companies', as well as capital markets' investments into corporate social responsibility (CSR) activities, are growing from already high levels (Kitzmueller and Shimshack, 2012; Nordea 2017). However, it is still uncertain whether any such investments succeed to generate shareholder value (Bruner, 2002; Margolis et at., 2009). A few researchers have examined the intersection between M&A and CSR, where the majority has found that CSR is associated with superior M&A performance (e.g. Qiao et al., 2018). This has been argued to result from more successful integration processes due to particularly high stakeholder support (Deng et al., 2013). This paper examines a sample of 2 856 M&As conducted by firms from Northern Europe and interestingly, our findings provide evidence of the contrary. We find that highly CSR rated acquirers experience lower cumulative abnormal returns around announcement and lengthier deal durations when compared to lower rated and non-CSR rated acquirers. To investigate the relationship between CSR and cumulative abnormal returns, a univariate analysis and several multivariate regressions (OLS, 2SLS, and 3SLS) are conducted, aiming to control for potential endogeneity issues. Using a multivariate Cox regression to investigate deal duration, we find that stronger CSR performers experience significantly lengthier deal durations in both private and public transactions. Further analysis of the decomposed CSR measure reveals that only social performance is negatively associated with cumulative abnormal returns, while primarily stronger environmental performers face significantly lengthier deal durations. Overall, the empirical evidence suggests that acquirers CSR performance is negatively related to shareholder wealth in M&A transactions in Northern Europe, which is in line with the shareholder expense view (Friedman, 1998). Our results are contradictory to the main part of prior research and potential explanations for the divergence in findings are presented and discussed.

Keywords: Corporate Social Responsibility, Mergers and Acquisitions, Cumulative Abnormal Returns, Deal Duration, Northern Europe

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1. Introduction

Corporate social responsibility (CSR) investments have experienced substantial growth and CSR practices has become an important part of firms' business operations (Kitzmueller and Shimshack, 2012). In 2014, the Fortune 500 firms spent around $15 billion on CSR investments (Financial Times, 2014). Today, that amount has increased with 33% to around $20 billion (Meier and Cassar, 2018). Capital markets have similarly adopted the CSR trend and the amount of capital managed under CSR requirements in the US has grown from $8.7 trillion at the beginning of 2016 to $12 trillion in 2018 (US SIF, 2018). In the European region, 53% of investments were managed under socially responsible investment policies in 2017 (Nordea, 2017). Motivated by the extensive growth of capital invested into CSR activities, has the topic caught researchers' attention, who eagerly tries to understand and investigate its implications and effects on value creation.

Mergers and acquisitions (M&As) are some of the most important business decisions corporate leaders make, impacting company stakeholders as well as shareholders. During 2017, $3.7 trillion were deployed in the global M&A market, reaching the fifth to highest transaction volumes to date (JP Morgan, 2018). However, it is well-known that acquirers often fail to generate shareholder value from M&A transactions (Bruner, 2002). A weak integration processes is frequently emphasized to rationalize such high failure rates (Cartwright and Schoenberg, 2006). Because the integration process is dependent upon stakeholder support to succeed and CSR is often argued to be associated with superior stakeholder support, researchers have postulated that CSR could facilitate an enhanced M&A performance (Deng et al., 2013; Qiao et al., 2018). This is in line with the stakeholder value maximization view, which suggests that companies should aim to generate stakeholder value since it will ultimately increase shareholder value (Deng et al., 2013). Empirical evidence supportive of this view, has found that CSR is associated with superior shareholder value creation in M&A transactions, due to decreased information asymmetries, additional synergies, shorter deal durations and improved post-merger performance (e.g. Aktas et al., 2011; Deng et al., 2013; Gomes and Marsat, 2018).

However, an opposing theory exists which has been entitled the shareholder expense view (e.g. New York Times Magazine, 1970; Vance, 1975). It argues that the solitary role of a corporation is to generate profits to shareholders and to do this optimally, invest minimally in CSR (Friedman, 1998). When corporate executives decide to invest in CSR, without explicit shareholder demand to do so, they are spending shareholders money at the benefit of stakeholders or even worse, act in their own self-interest, aiming to present themselves as good corporate citizens (Friedman, 1998). If capital markets do not believe CSR investments to generate benefits that are greater than the associated costs, high CSR performers should experience inferior value creation in M&A transactions (e.g. Meckl and Theuerkorn, 2015). Evidence in line with this view, has shown that

being a strong CSR acquirer could have no impact on value creation or even be value destroying in M&A transactions (Meckl and Theuerkorn, 2015).

Because previous research on the intersection between M&A and CSR is contradictory and relatively scarce, the research field has explicitly asked for more empirical evidence (Malik, 2015). Furthermore, a commonly discussed issue when researchers investigate the topic of CSR, is that it has been argued to introduce a reverse causality problem since it is hard to entangle whether firms experience a superior or inferior value creation due to CSR, or if CSR is the result of a superior or inferior value creation (e.g., Waddock and Graves, 1997; McWilliams and Siegel, 2000). Because mergers and acquisitions are largely unanticipated events, previous research suggests that studying the relationship between CSR and firm value in an M&A context could potentially suffer less from the reverse causality problem (Aktas et. al, 2011; Deng et al., 2013; Qiao et al., 2018). Consequently, investigating whether higher CSR performance is enhancing or destroying value in an M&A transaction could provide valuable insights to corporate executives, shareholders, company stakeholders and possibly even society as a whole.

Investigating a large sample of 2 856 transactions in the Northern Europe we hypothesize, in line with the main part of prior research on the topic, that high CSR acquirers have stronger stakeholder support and are rewarded with faster deal completion as well as significantly higher cumulative abnormal returns (CAR's) around announcement. In this thesis, we deploy a broad definition of CSR that has previously been adopted and consider it as company actions which increase stakeholder wealth, but not necessarily decrease shareholder wealth (Liang and Renneboog, 2017). Subsequently, strong CSR performers are defined as companies that takes an extensive social responsibility and are rewarded with a high CSR rating, in line with previous research on the topic (e.g. Deng et al., 2013; Kim et al., 2014; Qiao et al., 2018). To broaden the analysis, the highly rated CSR acquirers are compared to two benchmark groups, first to inferior CSR performers defined as lower CSR rated acquirers and then toward expectedly inferior CSR performers defined as firms without CSR scores.

Using quantitative analysis, we conduct one univariate analysis and three different types of multivariate regressions to examine the relationship between high CSR performing acquirers and CAR's around M&A announcements. Our results reveal a negative relationship between CSR and CAR's and are hence contradictory to the main part of prior findings. The same empirical analysis on the decomposed CSR score, shows that only strong social performance is associated with significantly lower returns. A Cox regression established that high CSR acquirers and specifically high environmental performers, face significantly lengthier deal durations in both private and public deals. Hence, further contradictory results to what we hypothesized are discovered and consequently both hypotheses are rejected.

Through the quantitative analysis it can be concluded that high CSR acquirers are associated with significantly lower announcement returns and longer deal durations, than inferior and expectedly inferior CSR performers. Contrary to what we hypothesize, these findings indicate that investors penalize firms with high CSR performance during M&A transactions, possibly for pursuing an agenda that is not primarily aimed to generate shareholder wealth. This evidence is in line with the shareholder expense view. However, other potential inferences are plausible and differences between the empirical evidence outlined in this thesis and previous research are considered and discussed.

2. Literature Review

In order to investigate the relationship between CSR and M&A performance, prior literature facilitating the analysis will be outlined below. The first section introduces previous research on CSR and value creation, where inconsistencies are highlighted, and common justifications for these are deliberated. Thereafter, in section 2.2, relevant literature on M&A and value creation will be presented and discussed in the context of CSR.

2.1 Value Creation from CSR?

Many researchers have investigated whether enhanced CSR performance drives shareholder value (e.g. Cochran and Wood, 1984; Pava and Krausz, 1996; Russo and Fouts, 1997; Elias, 2004). However, empirical evidence has been highly contradictory, and no consensus has been reached (e.g. Margolis et al., 2009). Some argues that high CSR performance drives shareholder value, while several others have found evidence of the contrary or of no linkage at all (e.g. McWilliams and Siegel, 2000; Margolis et at., 2009). Others have argued that the value creation depends on the magnitude of CSR investments, suggesting that there is an inverted U-shaped relationship between CSR and corporate financial performance (Zhang and Guo, 2018). Two opposing views have emerged in the literature, which have been entitled the stakeholder value maximization view (e.g. Coase, 1937; Jensen and Meckling, 1976; Jensen, 2001) and the shareholder expense view (e.g. Vance, 1975; Friedman, 1998).

2.1.1 The Stakeholder Value Maximization View

The stakeholder value maximization view argues that in order to maximize shareholder value, a company should invest in CSR and emphasize stakeholder value as it motivates stakeholders to support company operations, which in turn drives shareholder value (e.g. Clarkson, 1995; Jensen, 2001; Freeman et al., 2004). Empirical evidence supporting this theory finds that stronger CSR performance is associated with higher valuations and better share price performance (e.g. Anderson and Frankle, 1980; Freedman and Stagliano, 1991). Furthermore, CSR has been found to be associated with improved operational performance by being related to higher ROI, ROA and ROS (Cochran and Wood, 1984; Nehrt, 1996; Porter and Linde, 1995).

Contract Theory and Stakeholder Support

Stakeholder value maximization theorists often explain the increased value creation resulting from high CSR performance in the light of the contract theory, where firms are seen as a network of implicit and explicit contracts between the company and its stakeholders (e.g. Coase, 1937; Jensen and Meckling, 1976; Hill and Jones, 1992). The theory suggests that stakeholders supply a firm with

critical resources in exchange for both implicit and explicit claims. Cornell and Shapiro (1987) describe explicit contracts as legally defined contracts, such as employees' salaries and suppliers' payment terms, whereas implicit contracts are more abstract and not legally articulated, such as job security to employees and promise of continuous service to customers. Implicit contracts can be broken without legal consequences and the value of these contracts is highly dependent on reciprocal trust and to what extent stakeholders expect the firm to honor its commitments. Companies that invest in CSR tend to display greater attention to stakeholders and are argued to be better at honoring their commitments (Eccles et el., 2014). Thus, high CSR performance has been discovered to build stronger implicit contracts, which makes stakeholders of these firms more inclined to support firm activities and approve of less beneficial explicit contracts (Jensen and Meckling, 1976; Cornell and Shapiro, 1987; Deng et al., 2013).

Empirical evidence has shown that high CSR performance leads to improved employee productivity and morale (Solomon and Hansen, 1985). Further, CSR has been revealed to be associated with a reputation of being a good employer, which attracts talents and motivates personnel (Roberts and Dowling, 2002; Valentine and Fleischman, 2008; Edmans, 2011). In line with the contract theory, these findings indicate that employees reward firms with higher CSR performance since they offer strong implicit contracts, which creates additional incentives to contribute to these firms' operations (Valentine and Fleischman, 2008).

Moreover, research has demonstrated that CSR can generate better customer relationships due to an improved brand reputation, which ultimately serves as a competitive advantage (Menon and Kahn, 2003; Bloom et al., 2006). From a contract theory point of view, this implies that high CSR performers offer implicit claims that customers value, which ultimately enhances shareholder value. Furthermore, the competitive advantage high CSR performers have been found to be associated with, can be interpreted in light of the resource-based view (e.g. Russo and Fouts, 1997). The resource-based view implies that firms receive a competitive advantage from internal capabilities, which are difficult to substitute or imitate (e.g. Barney, 1991).

2.1.2 The Shareholder Expense View

The opposing view argues that companies engaging in CSR activities are generating benefits to stakeholders at the expense of shareholders (e.g. Vance, 1975; Friedman, 1998; Surroca and Tribo, 2008). Empirical evidence suggestive of this view finds that investing in CSR decreases shareholder value, since the associated costs outweigh the resulting benefits (e.g. Aupperle et al., 1985; Marsat and Williams, 2011).

Milton Friedman, one of the foremost advocates of this line of reasoning, wrote in a famous article that the solitary role of a corporation is to generate profits to shareholders (New

York Times Magazine, 1970). In order to do this optimally, firms should invest minimally in CSR and make sure only to act in accordance with the law and business ethics (Friedman, 1998). Then, it is up to the government and political system to extract taxes and impose rules on the market, since only they carry a societal responsibility. Evidence in line with this theory shows that firms investing in CSR have higher costs which hurts firm profitability, competitiveness and subsequently generates a worse share price performance (Walley and Whitehead, 1994; Marsat and Williams, 2011).

CSR as a Principal Agent Problem

In addition, Friedman (1998) argues that CSR should be examined in the light of agency theory. According to agency theory, corporate leaders are agents and shareholders are the principals. Corporate leaders are elected by the shareholders to run the company and are thus responsible to satisfy shareholder demands. If the agent pursues an agenda that is contrary to what the principal demands, a conflict of interest arises and a principal-agent problem emerges (Eisenhardt, 1989).

Previous research has suggested that societies and stakeholders may be the primary sources of demand for CSR investments (Liang and Renneboog, 2017) and that managers who decides to pursue such investments, seek individual benefits in terms of an enhanced reputation (Friedman, 1998; McWilliams and Siegel, 2001). Unless all shareholders explicitly request CSR investments, a principal agent problem is introduced when corporate leaders decide to invest in CSR (Friedman, 1998; Barnea and Rubin, 2010).

Previous empirical evidence supporting this view has found that managers repeatedly decide to invest in CSR even when they know that such investments will be unprofitable for the company and hurt shareholder value (Martin and Moser, 2012). Moreover, corporate leaders who have a large shareholder ownership tend to invest less in CSR than leaders who own a smaller part of a firm, which implies that they invest more in CSR when they carry a smaller part of the total cost (Barnea and Rubin, 2010). Furthermore, lower CSR performers tend to be associated with higher debt levels (Barnea and Rubin, 2010). Because higher debt levels decrease the amount of cash available for wasteful investments (Berk and DeMarzo, 2017), this indicates that firms invest less in CSR when monitoring is better and that debt markets do not believe CSR to be value enhancing (Barnea and Rubin, 2010).

2.1.3 Explanations for the Contradicting Evidence

Measurement Issues in CSR Research

Although researchers have attempted to clarify the definition of CSR (e.g. Ramanathan, 1976; Carroll, 1999), Taneja et al. (2011) argues that a widespread ambiguity still exists and claims that this is one of the main reasons behind the observed inconsistencies in previous empirical findings.

Further, collecting comparable and reliable data on CSR performance has been argued to be complicated (Preston, 1981, Moser and Martin, 2012). CSR reporting is generally not mandatory and hence contingent on companies' willingness to disclose (e.g. Webb et al., 2009; Chih et al., 2010). In addition, reporting requirements are not standardized, and published reports are not required to be audited (e.g. Morimoto et al., 2005; O'Dwyer and Owen, 2005). The reliability and comparability of these reports can thus be questioned (Martin and Moser, 2012), making it difficult for investors and CSR rating institutes to evaluate and compare CSR practices between firms. Moreover, previous research has argued that rating providers apply different definitions of CSR (Bendell, 2010) as well as varying methodologies on how to measure the concept quantitatively, which has resulted in that the same company can receive two entirely different CSR scores from two different providers (Chatterji et al., 2009; ACCF, 2018). Because researchers investigating CSR performance generally use CSR scores provided by different rating institutes as a proxy for CSR performance (e.g. Kim et al., 2014; Liang and Renneboog, 2017) this could contribute to the inconsistent findings observed in previous research.

Furthermore, companies deciding to report about CSR related investments seldom have a profitability based approach and do generally not present information of direct costs and revenues (Moser and Martin, 2012), which correspondingly makes it harder for investors to critically incorporate potential value implications of these investments. Even managers may find it difficult to value their CSR activities and entangle whether they generate value or not, since any associated revenues can be hard to distinguish as it is difficult to establish what is driven by a stronger CSR performance vis a' vis other factors (Sprinkle and Maines, 2010).

Inconsistencies Resulting from Different Time Period and Geographical Regions

Prior studies investigating the relationship between CSR and value creation have been conducted in various time periods and based on samples from different geographical regions. Lins, Servaes, and Tamayo (2017) investigated the stock market performance of high CSR performers and found that they only tend to perform better in crisis periods when the overall market trust is low. They argue that CSR only yields excess returns in bad times, when investors shy away from risk (Lins et al., 2017). Because the level of trust in the market is evolving over time, this evidence suggests that samples from different time periods may yield contradicting results.

Liang and Renneboog (2017) argue that different countries have separate fundamental rules on how business should be conducted, claiming that the magnitude of CSR investment is profoundly impacted by a country's legal regime and governance structures. Similarly, others have explained the differences in CSR practices to result from a divergence in legal and social norms (Maignan and Ralston, 2002). For instance, the European Union has prosecuted CSR to a greater extent than other geographic regions for example, through the introduction of the Consumer Rights Directive (European Union 6, 2011), protecting consumers in all contract engagements, and the Non-Financial Reporting directive, which demands selected companies in all membership states to disclose their CSR practices (European Union 5, 2014). Relating the CSR activities in Europe to the US, the US has less extensive legal requirements in relation to CSR (Garoupa et al., 2017). Instead, companies are expected to have more voluntarily CSR engagements (e.g. Vogel, 1992). Furthermore, in a study by Maignan and Ralston (2002), they argued that business in the European region compared to the US are more skeptical about the value creation from CSR engagements. Despite the potential skepticism, the average level of CSR performance in the European region, particularly Scandinavia and the UK, has been found to be significantly higher than in the US (Liang and Renneboog, 2017).

2.2 Value creation from CSR in an M&A Context?

Previous research on M&A transactions almost equally supports the notion that acquirers generate value as that they fail to do so (Bruner, 2002). In a comprehensive literature review, Agrawal and Jaffe (2000) suggest that abnormal returns to acquiring firms in the years following an acquisition are negative, or at best not statistically different from zero, while others have found that the average returns to acquiring firms are around 1% (Berk and DeMarzo, 2017). Most M&A research examines M&A performance measured as abnormal returns around the deal announcement or long term post-merger share price performance, where studies of abnormal returns, defined as the excess return of a stock less its' expected return, are most common (Bruner, 2002). These returns are generally observed over a short time period, referred to as the event window around the announcement, and measured as cumulative abnormal returns (CAR) (Betton et al., 2008). Research examining CAR's is based on an assumption of the efficient market hypothesis and assumes that capital markets immediately adjust to new information released to the market and incorporates the true expected value of the deal (Mandelker, 1974). Although, researchers have provided evidence contrary to the efficient market hypothesis (e.g. Freeman et al, 2004; Kourtidis et al, 2011), studies on abnormal returns are still common due to being cheaper to conduct as well as being less impacted by other value influencing factors, which studies examining long-term post-merger performance naturally are (Caves, 1989; Zollo and Meier, 2008).

Because mergers have been found to often fail, M&A research has been interested in investigating why and intrigued to identify possible success factors (e.g. Gomes et al., 2013). Several firm and deal characteristics have been found to impact the value creation from M&A transactions (Bruner, 2002) The most central influencers have been established to be the payment structure, whether the target is public or not, the relative size between acquirer and target as well as information asymmetries in regard to valuation of the target (Betton et al., 2008; further discussed in 4.4.3). Acquirer motives have also been suggested to impact M&A performance, where weak announcement returns have been argued to arise from hubris and empire building (Roll, 1986; Avery et al., 1998). Empire building occurs when a company knowingly makes a value destroying M&A transaction, motivated by a willingness to build a larger company (Avery et al., 1998). However, transactions motivated by hubris occur when managers have an unwarranted belief that they have the necessary expertise and capacity to make a value enhancing deal, but in fact conducts value destroying M&A transactions (Roll, 1986).

In more recent literature, CSR performance has been investigated as a potential success factor in M&A transactions (e.g. Aktas et al., 2011; Deng et al., 2013; Meckl and Theuerkorn, 2015; Qiao et al., 2018). Empirical findings have been somewhat contradictory however indicative of a positive relationship. Prior research in line with the stakeholder value maximization view, suggests that acquirers with a superior CSR performance are associated with higher abnormal returns, better long term post-merger performance, additional synergies, higher deal certainty and shorter deal times (Aktas et al., 2011; Deng et al., 2013; Qiao et al., 2018). On the contrary, evidence more in line with the shareholder expense view presents empirical evidence of that stronger CSR performers have been associated with significantly lower or no significantly different abnormal returns than lower CSR performing acquirers (Meckl and Theuerkorn, 2015).

2.2.1 Previous Literature Suggesting a Positive Relationship between CSR and M&A Performance in line with the Stakeholder Value Maximization View

CSR and Target Premiums

Previous research has shown that targets usually are awarded with CAR's around 20-30%, which often is justified as the premium acquirers has to pay in order to achieve control (e.g. Jensen and Ruback, 1983; Datta et al, 1992). The returns to target companies are consistently found to be positive and statistically significant (Bruner, 2002). From the acquirer's perspective, it is important not to overpay and give away too much of the synergies to the target company. Because CSR has been argued to reduce information asymmetries it could enable acquirers to conduct a better assessment of the value of the target company (Gomes and Marsat, 2018), this potentially decreases the risk of overpayment.

Using a large sample of international transactions, Gomes and Marsat (2018) revealed a positive relationship between targets' CSR performance and bid premiums, demonstrating that acquirers tend to reward strong CSR-performance in target companies. However, breaking down CSR into the environmental and social component respectively, Gomes and Marsat demonstrated that while environmental performance was largely associated with higher premiums, the social component only commanded a premium in the case of cross-border deals. They argued that since cross-border deals entail especially high information asymmetries and are consequently associated with higher risk of improper evaluation, buying a high socially performing target would decrease information asymmetries and firm-specific risk (Gomes and Marsat, 2018). In contrast to stock market investors who can diversify their exposure to idiosyncratic risk, M&A investors cannot (De Franco et al., 2011). This can motivate acquiring companies to incorporate firm-specific risk in the valuation of target firms and thus justify a higher price paid to the target.

CSR and Synergies

Synergies are essential for value creation in M&A transactions. If no synergies are created in an M&A transaction, the deal will be a zero-sum deal, where one party benefits at the expense of the other (Berk and DeMarzo, 2017). Although almost all M&A transactions argue for significant expected synergies, few acquirers succeed to generate these. A common explanation for weak synergy implementation is inferior integration processes, which are commonly found to be the result of poor cultural fit as well as lack of support from employees (Cartwright and Schoenberg, 2006).

In a study by Deng, Kang and Low (2013), examining a large sample of US mergers, they found that high CSR acquirers were associated with superior CAR's at announcement, long-term operating performance and long-term share price performance. They argued that this resulted from that high CSR performers had a strong stakeholder support in the integration process, which facilitated a superior implementation of synergies and resulted in greater value creation to the acquirer. Furthermore, they extended their scope and examined value creation to stakeholders post an M&A transaction and found that transactions by high CSR acquirers generated more stakeholder and shareholder value, and were associated with fewer layoffs post completion of the merger. They argued that this was support for the stakeholder value maximization theory, as a higher CSR performance not only yielded excess returns to the shareholders of the acquiring firms, but also to their stakeholders.

In addition, previous research has found that heterogenic transactions in terms of CSR performance yielded an improved long-term M&A performance, as strong CSR performing acquirers transferred their CSR knowledge to weaker performing CSR targets in a study conducted on Chinese M&As (Qiao et al., 2018). However, the CSR related synergies were only found in the

eastern Chinese region and not in the western region, something they argued to result from that the eastern region is more developed and have a higher level of CSR consciousness (Qiao et al., 2018). Others have argued that buying a high CSR performing target could generate additional synergies to the acquirer (Aktas et. al, 2011), since the target could contribute with improved efficiencies, higher customer satisfaction, stronger market position and be a signal of a strong management team.

2.2.2 Previous Literature Suggesting a Negative Relationship between CSR and M&A Performance in line with the Shareholder Expense View

According to the shareholder expense view, investing in CSR would benefit acquirers' stakeholders at the expense of shareholders (Deng et al., 2013; Meckl and Theuerkorn, 2015). Some evidence has been presented in line with this view, suggesting that being a high CSR performer does not generate additional shareholder wealth in M&A transactions (Meckl and Theuerkorn, 2015; Chen and Gavious, 2015).

By conducting a univariate analysis based on a sample of 113 mergers from mainly the US and Germany, Meckl and Theuerkorn (2015) found evidence suggesting that higher CSR performance did not drive value in an M&A process and that it even could be value destroying. Using a multivariate approach, they did not find evidence of any significant impact from the level of CSR performance on M&A success. They argued that high CSR performing acquirers conducted a more thorough social and environmental screening of the target companies, which generated higher costs. Because their empirical evidence indicated that the market did not compensate the acquirers for these additional costs, they concluded that the findings were more in support of the shareholder expense view (Meckl and Theuerkorn, 2015).

Other evidence more in line with this view was outlined by Chen and Gavious (2015). In a study based on M&A transactions in Israel, they demonstrated that no relationship between target's CSR performance and valuation could be shown. They argued that this was because institutional and M&A investors do not regard CSR to have any real profit potential (Chen and Gavious, 2015).

2.2.3 CSR as a Facilitator of Shorter Deal Durations

A limited amount of research has been conducted on the deal duration of M&A processes. However, the time it takes to complete a merger can have a significant impact on the cost of the transaction (Luypaert and De Maeseneire, 2015). A lengthier M&A process increases the risk of a bidding contest, leads to increased direct costs, delays potential synergy gains, diverts managers' attention from other business activities and increases the risk that financial market conditions will change (Bainbridge, 1990; Dikova et al., 2010; Luypaert and De Maeseneire, 2015). Moreover,

competitors can benefit from an increased uncertainty in a merging entity, making lengthier deal durations further value destroying.

Overpayment and bidder experience (Luypaert and De Maeseneire, 2015), has been argued to shorten the deal time. On the contrary, more complex deals, large transactions, stock offers and hostile deals tend to be related to lengthier deal durations (Luypaert and De Maeseneire, 2015). Moreover, protracted deal durations may also result from a conflict of interest between shareholders and corporate executives, since if one of these parties do not regard the deal to be value creative, they could block or delay the deal (Jensen, 1986).

Deng, Kang, and Low (2013) provide evidence that mergers by high CSR performing acquirers, experience shorter deal duration as well as a higher likelihood of merger completion. They suggest that high CSR performance effectively align stakeholder and shareholder interests, fuels stakeholder support and makes the pre-merger negotiation and integration less time consuming. If a merger would be beneficial to stakeholders but not shareholders, then shareholders who have the power to veto a merger would be expected to vote against, block or delay the completion (Deng et al., 2013). Because their empirical evidence suggested that high CSR firms were associated with shorter deal durations, they concluded that their findings supported the stakeholder value maximization view.

2.2.4 The Relationship between Value Creation and Decomposed CSR Performance

Previous research aiming to examine CSR quantitatively has commonly used CSR scores provided by rating institutes as a measure of a company's CSR performance (e.g. Kim et al., 2014; Fernando et al., 2017; Liang and Renneboog, 2017; Gomes and Marsat, 2018). The scores delivered by the ratings institutes concerns environmental, social and governmental (ESG) matters (e.g. Thomson Reuters, 2018). Researchers often decompose these ESG scores into a CSR score and include only or mainly the social and environmental performance ratings (e.g. Deng et al., 2013, Liang and Renneboog, 2017; Gomes and Marsat, 2018). This is because corporate governance performance measures include an assessment of issues, which are inherently different than those aimed to be studied when investigating CSR performance (Krueger, 2015). Furthermore, researchers regularly examine each individual component of the CSR measure to gain a more thorough understanding of the relationship between CSR and financial performance (e.g. Gomes and Marsat, 2018).

Environmental Performance

Prior literature examining specifically environmental performance, have primarily argued that it creates value as it decreases the risk of receiving a damaged reputation, costly penalties and fines (Hann and Bauer, 2010; Fernando et al., 2017). Consequently, having a weak environmental performance has been established to be associated with higher cost of debt and weaker credit ratings (Hann and Bauer, 2010). However, empirical evidence of stock market ownership shows that institutional investors reject stocks with particularly low or high environmental performance, suggesting that informed investors do not regard being a particularly high or low environmental performer to increase shareholder wealth (Fernando et al., 2017).

Social Performance

The benefits of social performance have in previous research mainly been discussed to arise from stronger implicit contracts and enhanced trustworthiness towards both stakeholders and investors (Deng et al., 2013; Lins et al., 2017). Empirical evidence in line with this reasoning suggests that acquirers regard high social performing targets to be associated with lower information asymmetries (Gomes and Marsat, 2018). Furthermore, high employee satisfaction, which typically is a part of the social performance measure, has been established to be positively related to superior long-term stock price performance (Edmans, 2011). Moreover, high social performing firms have been established to be associated with fewer layoffs after a merger, while still experiencing a greater increase in shareholder wealth than lower social performers (Deng et al., 2013).

Governance Performance

Lastly, previous research aiming to examine the relationship between CSR performance and value creation often controls for that governance is not the true factor driving the results (e.g. Deng et al., 2013; Liang and Renneboog, 2017). This is because companies with strong governance performance has been regarded to be associated with higher returns in M&A transactions (Byrd and Hickman, 1992; Mausulis et al., 2007) and better share price performance (e.g. Love and Klapper, 2002; Gompers et al., 2003).

3. Research Hypothesis

As corporate leaders increase companies' CSR investments (Kitzmueller and Shimshack, 2012) and M&A volumes are close to peak levels (JP Morgan, 2018), studying the returns provided to shareholders from such investments is growing of importance. Despite an extensive amount of literature within the field of CSR and M&A respectively, relatively few studies have focused on the intersection of these two (Malik, 2015). Due to the scarce amount of research conducted and the contradicting results found in previous research (Margolis et al., 2009), the research field explicitly calls for more empirical evidence on the subject (Malik, 2015). To our knowledge, no study has yet investigated the topic in the Northern Europe. Moreover, as far as we know this is the first study comparing highly rated to non-rated CSR acquirers in an M&A context. This adds to the previous research since it enables a larger sample to be studied and is less restricted by the availability of CSR scores. Furthermore, as researchers have argued that the impact of CSR investments on value creation is varying with the trust in the marketplace and hence over time (Lins et al, 2017), examining the impact of CSR on M&A in a post-crisis period will expand the previous literature as the time period of our study has not been examined before. Thus, this thesis aims to fill this research gap and answer whether acquirers with high CSR performance experience better announcement returns and shorter deal durations in Northern Europe.

Outlining the Hypotheses

Previous research examining the relationship between CSR and M&A performance has not been able to conclude a clear relationship. Instead, two opposing theories are commonly discussed. However, the majority of research finds a positive association (Aktas et. al, 2011; Deng et al., 2013; Qiao et al., 2018). This is in line with the stakeholder value maximization view, which argues that high CSR performing firms generally undertake M&A deals that benefit stakeholders and ultimately shareholders. This is expected since strong CSR performers typically have better stakeholder support that should facilitate a superior integration process and realization of subsequent synergies, which create more shareholder wealth around announcement (Aktas et al., 2011; Deng et al., 2013). Thus, we hypothesize that;

HI: Acquirers with high CSR performance experience higher cumulative abnormal returns around an M&A announcement than companies that have or are expected to have an inferior CSR performance.

According to the stakeholder value maximization theory, acquirers with higher CSR performance have stronger implicit contracts with stakeholders (Jensen and Meckling, 1976; Cornell and

Shapiro, 1987; Deng et al., 2013). These companies should receive stronger stakeholder support and thus be able to complete deals faster, in line with previous empirical evidence (Deng et al., 2013). Therefore, our second hypothesis is that;

HII: Acquirers with high CSR performance experience shorter deal duration than companies that have or are expected to have an inferior CSR performance.

In this thesis, CSR scores are used as a proxy for CSR performance. Including an analysis of expectedly inferior CSR performers, through incorporation of non-CSR rated performers, is done to extend the analysis of the influence of having a higher CSR score on CAR's and deal durations. The hypothesis is that if higher CSR scores are associated with superior announcement returns and shorter deal durations, such an effect should be identified in a comparison to this group as well, since non-rated acquirers can be expected to be considered by the market as neutral to slightly worse CSR performers (further explained in 4.4.2.).

Furthermore, we will expand the analysis and investigate the relationship between the individual factors incorporated in the CSR performance measure and M&A performance separately. This is to deepen the understanding of the association between M&A performance and social as well as environmental performance respectively.

4. Data and Methodology

The methodology is designed to enable a comprehensive empirical analysis of our two hypotheses, whether higher CSR performers are associated with enhanced CAR's and shorter deal duration for M&A deals in Northern Europe. In section 4.2 the data collection process will be outlined. It is followed by a presentation of the research design in section 4.3, definition of the variables in 4.4 and thereafter by a thorough exposition of the methodology of the data analysis in section 4.5 and 4.6 for the two hypotheses respectively. Subsequently, a presentation of the robustness tests follows in section 4.7. Finally, in section 4.8 the methodology is discussed and evaluated.

4.1 Scope

Previous research has found different implications of CSR on value creation in the financial crisis and the post crisis period (Lins et al., 2017). Thus, our scope was defined as examining all completed transactions by public acquirers in Northern Europe after the financial crisis until the end of last calendar year. All industries were included, except the financial industry as it is subject to specific capital requirements and have unlike capital structures (Berk and DeMarzo, 2017), hence less comparable to firms from other industries. Excluding the financial industry is also in line with previous research on the topic (Deng et al., 2017). Industries were defined according to SIC codes on a double-digit basis, thus all acquirers with SIC codes between 6000-6999 were excluded.

4.2 Data Collection

The final sample underlying our empirical analysis was constructed with data from three different data sources. Because previous research has stressed the scarcity of available CSR scores (e.g. Qiao et al., 2018), we began the data collection process by investigating which Northern European countries had accessible CSR scores. The countries in our sample befell limited to the UK, Ireland, Norway, Denmark, Finland and Sweden. Thereafter, we downloaded all M&A data, complemented with the relevant share price and accounting data then finally merged it with available CSR data.

4.2.1 M&A Data

The initial sample of mergers and acquisitions was downloaded from Thomson's Financial Securities Data Company (SDC) Platinum Database, which is a database that is commonly used in previous research (e.g. Betton et al., 2008; Tang, 2015; Liang and Renneboog, 2017). The downloaded data included all M&A transactions conducted in Northern Europe[1] post 2010 from all industries, except the financial sector. The data was subsequently screened based on the

[1] M&A data was collected only for the UK, Ireland and the Nordic countries, due to the aforementioned limitations resulting from the limited availability of CSR scores.

following four criteria to increase comparability of the transactions in our sample, which is in line with previous research on the topic (Deng et al., 2013):

1. The transaction was completed.
2. The acquirer held less than 50% of the shares prior to the transaction, but more than 50% post transaction.
3. The acquirer was publicly traded at announcement.
4. The transaction value was $1 million or more.

4.2.2 Share Price & Accounting Data

Our data gathering process proceeded with downloading the relevant share price and accounting data accompanying our sample from Datastream. The data was used to compute the acquiring firms' CAR and control variables. Downloaded data items consisted of acquirers' historical share prices, overall stock market data, stock indices data and relevant accounting data.

4.2.3 CSR Rating Data

In order to examine the impact of high CSR performance on value creation in an M&A context, we downloaded available ratings in regard to environmental, social and governmental (ESG) performance for companies in Northern Europe from Datastream. Thomson Reuters ESG scores have been extensively used in previous research on the CSR topic and are considered an accepted provider of corporate social responsibility assessments (e.g. Liang and Renneboog, 2017; Gomes and Marsat, 2018).

The database is one of the most comprehensive ESG databases available, providing around 1,400 scores on European companies offering time series data since 2002 (Thomson Reuters, 2018). [2] The ratings are based on an assessment of more than 400 environmental, social and governmental metrics, of which 178 measures are selected and compiled into 10 categories, which are used in the ESG scoring process (Thomson Reuters, 2018). Inputs to the ratings are collected from companies' annual reports, voluntary CSR reports, company websites, NGO's websites and stock exchange filings. The scores aim to provide an objective assessment of a company's ESG performance, commitment and effectiveness and enable differentiation between companies with genuinely strong ESG performance and those that have limited transparency in reporting or weak execution (Appendix 1).

[2] The ESG scores are repeatedly updated and were redesigned in 2018 (Thomson Reuters, 2018).

Accounting for above restrictions resulted in a final sample consisting of 2 856 transactions completed by 1 184 unique acquirers, where 824 transactions had available ratings. An overview of the full sample is presented below.

TABLE 1. OVERVIEW OF THE DATA

	Acquirer industry (first two digit of the SIC code)						
	Agriculture, forestry, and fisheries (01-09)	**Mineral industries** (10-17)	**Manufacturing** (20-39)	**Transportation, Communications, Electric, Gas and Sanitary service** (40-49)	**Wholesale trade and retail trade** (50-59)	**Service industries** (70-89)	***Total***
2010	3	44	148	39	31	162	*427*
2012	1	43	120	14	22	139	*339*
2013	2	25	114	28	20	124	*313*
2015	4	19	154	27	25	146	*375*
2011	4	49	140	30	32	142	*397*
2014	2	28	124	27	19	140	*340*
2016	0	9	135	40	26	138	*348*
2017	1	25	104	37	20	130	*317*
Total	*17*	*242*	*1039*	*242*	*195*	*1121*	*2 856*

4.3 Research Design

The thesis aims to answer whether high CSR performing acquirers are associated with higher cumulative abnormal returns (CAR) around an M&A announcement and shorter deal duration. To answer our two research questions, we deployed an event study approach. Event studies are commonly used to study the impact of a specific news item directly or indirectly related to a company on the corresponding stock performance under a specific period of time, referred to as the event window (MacKinlay, 1997). This thesis studied the impact of an M&A announcement on the stock performance for the acquiring firm during an event window from the day prior to the announcement, to the day after. This is in line with previous M&A research (Betton et al., 2008) and is based on the assumption of the efficient market hypothesis (Mandelker, 1974). In the event that the merger announcement occurred on a non-trading day, the following trading day was used as the day the news were presented to the market. This follows the methodology used in previous research on merger announcements using an event study approach (e.g. Deng et al., 2013; Chen and Gavious, 2015). Furthermore, previous research has discussed that overlapping event windows may introduce biased returns (Meckl and Theuerkorn, 2015), which subsequently hurts the reliability of an event study. Because our aim was to study the CAR's following each transaction announcement, we removed transactions that had an overlapping event window to eliminate potentially biased announcement returns.

To examine the first hypothesis, our analysis commenced with a univariate analysis of differences in mean and median CAR's for an equally weighted portfolio of high versus low CSR

performing acquirers respectively. Thereafter, a multivariate OLS regression including control variables of firm and deal characteristics that have been found in previous M&A research to impact CAR's was conducted.

Previous CSR research has repeatedly discussed an endogeneity issue resulting from the presence of a reversed causality between CSR and financial performance (e.g. Aktas et al., 2010; Deng et al., 2013; Orlitzky et al., 2003; Qiao et al., 2018). To alleviate this potential issue, a 2SLS and a 3SLS regression was conducted, which is in line with previous research (e.g. Deng et al., 2013; Gomes and Marsat, 2018). Moreover, several robustness tests were completed to understand whether our results were robust after altering some of our underlying assumptions.

To resolve the second hypothesis, we used a multivariate Cox regression to investigate whether higher CSR ratings are associated with faster deal completion, a method used in previous research on the subject (Deng et al., 2013). The Cox regression was conducted on private and public deals respectively, as they follow different legal rules and transaction processes (Dikova et al., 2010).

Two benchmark groups were included in the empirical analysis. It commenced with a study of CSR rated firms, examining the relationship between CSR performance and CAR's as well as deal duration for higher compared to lower CSR performers, using the CSR rating as a proxy for CSR performance in line with previous research (e.g. Kim et al., 2014; Lins et al., 2017). Thereafter, the highly CSR performing acquirers were compared to acquirers without any CSR rating.

Measurements of M&A Performance

Common measures used to examine value creation in M&A transactions are announcement returns and long-term operating performance, where the former reflects the expected return of the merger and the later the actual outcome (Bruner, 2002). The major body of research has been made on announcement returns (Agrawal and Jaffe, 2000), which are measured as abnormal returns and defined as the actual stock return less the expected return according to a benchmark around the days of a merger announcement (Bruner, 2002). The benchmark is typically the raw market return or the expected return according to the market model (Bruner, 2002).

The methodology is based on the assumption that the efficient market hypothesis holds, which infers that stock prices immediately adjust to new information and accurately incorporates the expected value implications of a deal in the acquirer's share price at announcement (Mandelker, 1974). The measure of study is typically used since if the efficient market hypothesis holds and there are no limits to arbitrage, it would be the preeminent measurement of an M&A's value creation since it does not suffer much from other value influencing factors, as studies evaluating long-term post-merger performance naturally do (Caves, 1989). However, researchers have found evidence that the efficient market hypothesis does not hold (Freeman et al, 2004; Kourtidis et al,

2011) and thus, abnormal returns around an announcement may not fully capture the true value implications of a deal. Furthermore, even if the efficient market hypothesis would hold, the true value implications of a deal are hard to determine beforehand, thus it is the expected value of a merger that will be reflected in the CAR's. Nevertheless, studies evaluating the relationship between announcement returns and post-merger operating performance has been found to be statistically significant and positive (Healy et al., 1992), suggesting that abnormal returns around an announcement are a suitable reflection of the merged entity´s value creation over time.

Another measure of M&A performance, which has been less frequently investigated but has significant value implications, is the deal duration (e.g. Luypaert and De Maeseneire, 2015). A lengthier deal duration has been found to generate both indirectly and directly costlier transactions resulting from delayed synergies, diversion of management's attention and higher risk of new information released to the market or varying marketplace conditions (Bainbridge, 1990; Dikova et al., 2010; Luypaert and De Maeseneire, 2015). Deal duration is defined as the time it takes to complete a transaction and measured as the number of days between the announcement date and the effective date (Betton et al., 2008; Dikova et al., 2010; Deng et al., 2013; Luypaert and De Maeseniere, 2015). The measure captures the M&A process when it is under scrutiny of the market, i.e. during the time when the market knows about the transaction.

4.4 Defining the Variables

4.4.1 Dependent Variables

Cumulative Abnormal Return

Our first dependent variable used to measure the M&A performance is the CAR over a three-day event window around announcement, which is in line with previous research (e.g. Betton et al., 2008). It was calculated as the cumulative excess return of a stock over the market using a beta of one, which is commonly used in previous research (Bruner, 2002).

$$CAR_i\ (t_{-1}, t_1) = \sum_{t=-1}^{t=1} (R_i - E(R_m))$$

Deal Duration

The second dependent variable is the deal duration which is calculated as the effective date less the announcement date as specified in SDC, and thus follows the definition of deal duration used in previous research (Betton et al., 2008; Dikova et al., 2010; Deng et al., 2013; Luypaert and De Maeseniere, 2015). In our empirical analysis, the deal duration was examined separately for private and public firms since previous research has argued that different fundamental processes exist for these transactions, partly because public deals must comply with national and international rules during all stages in the deal process which often causes lengthier deal durations (Dikova et al.,

2010). Furthermore, this distinction is generally made in previous research on the topic, where researchers tend to examine public deals alone (Deng et al., 2013; Luypaert and De Maeseniere, 2015).

4.4.2 The Independent Variables

Our thesis aims to investigate the impact of being a high CSR performer on the dependent variables respectively. As a proxy for CSR performance, we use Datastream's environmental and social scores and weigh them according to Thomson Reuters Methodology. Hence, we excluded the governance component from our proxy of CSR, which is in line with previous research (Deng et al., 2013; Kim et al., 2014; Lins et al., 2017). The computed CSR score includes an assessment of a company's resource use score, emission score, environmental innovation score, workforce score, human rights score, community score and product responsibility score (Appendix 2).

Because Datastream only has a limited availability of CSR scores, a comparison only between higher and lower rated acquirers would have introduced a selection bias to firms that had received a CSR score. This is a commonly discussed concern in previous research on the topic of CSR (e.g. Kim et al., 2014; Meckl and Theuerkorn, 2015). In order to expand and deepen the analysis, we included a second benchmark group, namely transactions conducted by firms without any CSR-scores.

Inspired by the methodology of a control and treatment sample commonly used in medical research (D'Agostino, 1998), we used an additional benchmark group screened according to the same criteria as all other transactions were (4.2.1). Researchers using this methodology commonly tries to match the two groups as much as possible so the differences in results between the groups can be derived from the isolated difference under study (Rosenbaum, 2005), which in our case is the difference in CSR performance between the groups. However, this commonly leads to small sample sizes since it requires matching according to multiple dimensions (Shen and Chang, 2009). To avoid limiting our sample and conducting a qualitative selection of matching dimensions, we did not use the matching concept.

The second benchmark group, consisting of non-CSR rated acquirers are assumed to be regarded as neutral to worse CSR performers by investors, hence referred to as expectedly inferior CSR performers. These firms do not have a rating and as investors have been discovered to use CSR ratings in their valuation analysis (Chatterji et al., 2009) they will have less information about the non-rated firms' CSR performance. When investors face larger information asymmetries, they commonly expect a worse performance in line with the "lemons principle" (Akerlof, 1970). Furthermore, non-CSR rated firms are typically smaller firms which generally are under less scrutiny by society and since society has been regarded to be a primary demander of CSR

investments (Liang and Renneboog, 2017), these firms should face lower demand for such investments. Consequently, we assume that the average non-CSR rated firm is expected by the market to have a neutral to worse CSR performance in comparison to the highly CSR rated acquirers in our sample.

Aiming to examine the impact of high CSR performance on CAR and deal duration compared to inferior CSR performers, an analysis of the firms which have a CSR score was conducted. In the univariate analysis examining the relationship between CSR performance and CAR, the highly rated acquirers are benchmarked to the lower CSR performing acquirers. The highly CSR performing group of acquirers are defined as companies who have a CSR-score in excess of the sample median of available CSR scores, which follows the definition used in previous research (Deng et al., 2013). Consequently, lower CSR performing acquirers are firms with CSR-ratings below the median score of available ratings in our sample. In the multivariate analysis, regressions are conducted based on the continuous CSR rating on a scale between 0-100. The analysis is further conducted on the decomposed components of the CSR score, henceforth on the environmental and social rating, both measured on a scale between 0-100.

Regarding the investigation if high CSR acquirers experience an enhanced M&A performance compared to the expectedly inferior CSR performers, an analysis is conducted comparing the highly CSR rated firms to the non-rated firms. In the univariate analysis, are the CAR's of the highly rated acquirers benchmarked to the non-rated acquirers. The multivariate regressions examining the impact of being an expectedly inferior CSR performer, is based on an independent variable defined as a binomial vector taking the value of 1 if a high CSR score exists and 0 for firms that do not have a CSR score.

4.4.3 The Control Variables

Certain deal and firm characteristics have previously been established as significantly influencing the CAR's and deal durations around an M&A announcement (Bruner, 2002). In line with previous research on M&As we controlled for such firm and deal characteristics in our empirical analysis (e.g. Betton et al., 2008; Tang, 2015). This was done to avoid omitting important explanatory factors, since that could generate biased estimates (Wooldrigde, 2003). The factors presented below will be controlled for in the empirical analysis and a further explanation of the composition of the control variables can be found in Appendix 3.

Control Variables Adjusting for Firm Characteristics

Larger acquirers tend to have more complicated integration processes and are therefore generally associated with significantly lower CAR's (Moeller et al., 2003). In relation to deal duration, has the size of a company been found to have no significant impact on deal duration (Luypaert and De Maeseneire, 2015). However, following the methodology used in previous research (Deng, et al., 2013), we controlled for the impact of ***Firm Size*** on CAR's and deal duration. Moreover, higher CSR acquirers have been found to carry lower debt levels (Barnea and Rubin, 2010), hence differences in leverage between the benchmark groups are expected. In line with previous research on announcement returns (Betton et al., 2008) we controlled for ***Leverage*** in relation to CAR's. Furthermore, since acquirers with a higher Tobins Q have been established to receive higher CAR in previous research (Servaes, 1991), we controlled for ***Tobins Q*** in the regression analysis examining CAR's. Lastly, we included a Market-to-Book-Ratio, ***MB,*** control variable in the Cox regression examining deal duration. This is in accordance with previous research on the topic, which have argued that high MB ratios are a proxy for having more cash on hand, which could increase the likelihood of overpayment and hence facilitate faster deal completion (Luypaert and De Maeseneire, 2015).

Control Variables Adjusting for Deal Characteristics

The relative size of target and acquirer has been found to have a significant impact on the magnitude of returns to acquirers, where a larger target has a greater influence on shareholder returns at announcement (Asquith et al., 1983). Moreover, larger deals have been found to increase the deal time (Luypaert and De Maeseneire, 2015). Thus, we control for ***Relative Deal Size*** when investigating both hypotheses. Acquirer returns have also been argued to depend on the consideration structure, where cash bids in general yield a better return than stock paid deals (Asquith et al. 1987; Travlos, 1987) and because cash deals are associated with a lower deal complexity, they have been determined to be associated with shorter deal duration (Luypaert and De Maeseneire, 2015). Thus, we incorporate an ***All Cash Deal*** dummy in our empirical analysis. Furthermore, evidence has been presented by previous researchers that diversifying acquisitions commonly generates lower announcement returns (Berger and Ofek, 1995) and shorter deal duration (Deng et al., 2013; Luypaert and De Maeseneire, 2015). Hence, it is consequently adjusted for through the use of a ***Diversifying Acquisition*** dummy. Cross border transactions are commonly regarded as more complex transactions with higher information asymmetries and are generally associated with lower CAR's (Gatignon and Anderson, 1988), therefore ***Cross Border Deal*** is controlled for in our analysis of CAR´s. In hostile transactions when a tender offer is made, acquirers generally experience a more positive return (Gregory, 1997). However, the M&A process

can be expected to be lengthier (Luypaert and De Maeseneire, 2015). Hostile deals are hence controlled for in our analysis through the use of a *Tender Offer* dummy, in accordance with previous research on the topic (Deng et al., 2013). In a high technology M&A, the valuation is commonly regarded to be more complex since a lot of value often is justified by future growth (Mchawrab, 2016). To control for potential implications of such increased uncertainty in the valuation, a *Hightech* dummy is included in the empirical analysis of CAR's. Furthermore, we include a *Private Target* Dummy since deals with private targets generally increases liquidity to target shareholders (Berk and DeMarzo, 2017), which could decrease premiums paid and thus increase CAR's to acquiring firms. Furthermore, the variable is conditioned upon in the analysis examining deal duration, since public and private deals are subject to fundamentally different processes (Luypaert and De Maeseneire, 2015). Lastly, a *Toehold* dummy is incorporated, since acquirers with an already established ownership tend to complete deals more slowly (Deng et al., 2013) and since they have managed to buy an initial stake without paying a premium (Berk and DeMarzo, 2017) they could be associated with higher CAR's.

4.5 Data Analysis of the Relationship between CAR and CSR

4.5.1 Univariate Analysis

The empirical analysis commenced with a univariate analysis of a comparison between the difference in mean and median CAR of three equally weighted portfolios, where the highly rated acquirers were compared to lower and expectedly lower CSR performers respectively. The two portfolios were tested on whether their returns were statistically significantly different from zero, using a student's t-test on the mean and a Wilcoxon-sign-rank test for the median. Thereafter, we tested their difference from each other with a two-sided t-test on the difference in mean and thereafter through a Wilcoxon-rank-sum test for the median return. The student's t-test assumes normally distributed data (Wooldridge, 2003). According to the central limit theorem, it would be acceptable to assume a normal distribution and hence deploy a t-test if the sample is sufficiently large and was randomly generated (Wooldridge, 2003). Previous research has assumed that CAR's, collected through a similar methodology as ours, fulfill these requirements (Shah and Arora, 2014), thus we used the student's t-test to examine the differences in mean return between our three benchmark groups consisting of 2 856 M&A transactions in total. The Wilcoxon-sign-rank test and Wilcoxon-rank-sum test used to examine differences in median returns, do not assume a specific distribution (Man and Whitney, 1947).

4.5.2 Multivariate OLS Regression

The analysis continued with a multivariate OLS regression to analyze the impact of the key independent variable, first the CSR rating and thereafter a binomial variable which was one if the acquirer was a high CSR performer and zero if the acquirer lacked a CSR score, on CAR´s. The regression was ran according to the below stated equation, where Z is the vector of control variables included to adjust for firm and deal characteristics, which follows the methodology used in previous research (e.g. Betton et al., 2008; Tang, 2015). The control variables used in the multivariate regression are presented in section 4.4.3.

$$y_i = \beta_{CSR} x_{CSR} + \beta_Z x_Z + \varepsilon_i$$

One of the main assumptions of the OLS regression is that the error terms are homoscedastic (Wooldridge, 2003). If this assumption is not fulfilled, the model is regarded to be inefficient and its standard errors will not generate correct and robust estimates (Wooldridge, 2003). To control for homoscedasticity, the regression residuals were examined through a Breusch-Pagan test.[3] If the regression residuals were found to be heteroscedastic according to the Breusch-Pagan test, we would in line with previous research report robust White standard errors (e.g. Betton et al., 2008; Luypaert and De Maeseneire, 2015). [4]

Another important assumption of the OLS regression which was cautiously examined, was that our regressions did not suffer from multicollinearity issues, since its existence can lead to high variation in the estimated slope coefficients (Wooldridge, 2003). This was tested through a VIF test and by examining pairwise correlations of our regression variables. If the VIF statistic was above the threshold of five, a measure which has been argued to be a rather conservative in previous research (Alauddin and Nghiemb, 2010), that factor was examined further. This was done to see if one of these variables alone would be able to explain the influence of both variables, enabling one of them to be dropped from the model (Wooldridge, 2003). In regard to the pairwise correlations, if two coefficients had a correlation close to one they would be considered to have a strong linear relationship, and would thus be examined further. (Wooldridge, 2003).

4.5.3 Two Staged Least Squares and Three Staged Least Squares Regressions

Endogeneity issues are commonly discussed in previous CSR research (e.g. Deng et al. 2013; Kim et al., 2014; Lins et al., 2017). In the event a significant relationship between a firm's CSR

[3] Tests that the variance of the regression residuals is independent of the independent variables. If there is no relationship between the two, the regression residuals are assumed to be homoscedastic (Breusch and Pagan, 1979).
[4] Even if the regression residuals seemed to be homoskedastic, we reported the White standard errors and corresponding significance levels in Appendix 8.

performance and CAR has been detected, researchers have found it hard to entangle whether it is the CSR performance that drives higher CAR´s or whether higher CAR's simply are rewarded to better companies that, due to their size and higher profitability, are able to invest in CSR and subsequently have an enhanced CSR performance. This is commonly referred to as the reverse causality problem in previous CSR research (e.g., Waddock and Graves, 1997; McWilliams and Siegel, 2000). The reverse causality issue introduces endogeneity between the CSR variable and the dependent variable, which means that the CSR component is correlated with the error term in a regular OLS regression (Wooldridge, 2003).[5] Running a OLS regression with an endogenous regressor generates biased and inconsistent estimates of the slope and intercept coefficients (Wooldridge, 2003). It is therefore important to adjust for potential endogeneity issues to avoid making incorrect inferences from the regression results. To control for potential endogeneity issues, a two stage least squares (2SLS) regression has commonly been used in previous research (e.g. Kennedy, 2006; Wooldridge, 2002).[6]

The 2SLS methodology aims to adjust for potential endogeneity issues by replacing the endogenous variable with estimated values of it, which are not correlated with the error term (Wooldridge, 2003). This is made by running an OLS regression in two stages, where the first stage is a regular OLS based on instrumental variables as independent variables and CSR as the dependent variable. The first stage regression also includes all exogenous regressors, which in our study is a vector of firm and deal characteristics as well as yearly and industry fixed effects as independent variables, which is in line with prior research (e.g. Deng et al., 2013). The first stage generates estimated values of CSR, which captures the effect of the true CSR scores, but are not endogenous variables since the instrumental variables used in its place are not directly correlated with the dependent variable in the second stage (Angrist and Pieschke, 2009). Hence, the first stage regression is specified in the below equation, where the first component is a vector of instrumental variables and the second the vector of firm and deal characteristics.

$$x_{\widehat{CSR}} = \beta_{IV} x_{IV} + \beta_z x_z + \varepsilon_i$$

In the second stage regression of the 2SLS which ultimately investigates the relationship between the CSR performance and CAR's, the instrumental variables used to estimate CSR in the first regression replace the actual CSR values, i.e. the endogenous regressor (Wooldridge, 2003). The second stage OLS regression further includes all control variables that were used in the multivariate

[5] Note that endogeneity issues also can be introduced if omitted factors exist (Wooldridge, 2003).
[6] However, the 2SLS approach generally produces less consistent and robust estimated coefficients, especially if the instrumental variables are not suitable (Wooldridge, 2003).

regression to make sure that the second stage regression does not suffer from an omitted variable bias. All regressions were tested for homoscedasticity through a Bresuch-Pagan test (Breusch and Pagan, 1979). If heteroscedasticity was detected all coefficients were reported based on Huber-White standard errors, which are robust to heteroscedasticity (White, 1982).[7] Thus, the second stage regression is specified below including the estimated values of CSR from the first stage regression and all exogenous regressors.[8]

$$CAR_i = \beta_{\widehat{CSR}} x_{\widehat{CSR}} + \beta_z x_z + \varepsilon_i$$

In regard to the non-rated group, where the dependent variable is a binomial vector in the first stage regression and equals 1 if a high CSR scores exists and zero otherwise, a 3SLS approach was used to control for potential endogeneity issues arising between CAR's and being in the group that has a high CSR score. To estimate the binomial values in the first stage regression we used a probit regression, which is a probability model that uses a maximum likelihood approach to produce estimated values of one and zero respectively (Wooldridge, 2003).[9] The probit regression is not a linear model and will not generate normally distributed error terms (Wooldridge, 2003). Running a 2SLS where the first regression is a probit regression and the second an OLS is sometimes called the "Forbidden Regression" and will only produce consistent estimators under very restrictive assumptions, which almost never hold in reality (Hausman, 1975; Wooldridge, 2002). Instead, a 3SLS approach is recommended to generate more efficient estimated values when the endogenous variable in the first stage is a binomial variable (Wooldridge, 2002; Angrist and Pieschke, 2009). The first stage probit regression is based on instrumental variables which are correlated with the CSR availability but not directly with CAR (Angrist and Pieschke, 2009). The fitted nonlinear values from the first stage regression are then saved and subsequently used as instrumental variables in a regular 2SLS regression (Angrist and Pieschke, 2009). The regression technique is further described in Appendix 4.

Instrumental Variables

In order for the instrumental variables to be suitable, two criteria must be fulfilled. The first one is that the correlation between the instrumental variable and the independent variable is high. This is required to avoid that the estimated coefficients receive a high variance which would make the second stage regression unreliable (Bound et al., 1995). The second one is that the correlation

[7] Even if the Breusch-Pagan test did not detect any heteroscedasticity, were the robust standard errors and corresponding significance levels reported in Appendix 8.
[8] Noteworthy is that all 2SLS regressions were conducted simultaneously in a data program (R studio), as this is recommended (Wooldridge, 2003).
[9] Please find a more through explanation of the probit regression in Appendix 4.

between the instrumental variable and the dependent variable is zero (Wooldridge, 2003). Hence, the instrumental variables should only have an indirect impact through the CSR variable on CAR's and no direct influence should prevail.

$$Corr(x_{CSR,i}, x_{CSR,IV}) \neq 0$$
$$Corr\ (x_{CSR,IV}, \varepsilon_i) = 0$$

To test for the first criterion, that the correlation between the independent variable and the instrumental variables is sufficiently high, an F-test was conducted on the first stage regression (Kleiber and Zeileis, 2017). Testing for the second criterion, that the instruments are not correlated with the error term and thus their validity, a Sargan test was used. It requires that the number of instruments is greater than the endogenous regressors. In our empirical analysis, the endogenous regressor is the CSR measure, thus the Sargan test requires at least two instrumental variables (Sargan, 1958). Because the 3SLS uses fitted values from the first stage regression as instrumental variables in the second regression, only one instrumental variable exists and thus can the Sargan test only be used in relation to the 2SLS regression. The Sargan test is sometimes called the *"test for over identifying restrictions"* and it regresses all exogenous variables as well as instruments on the residuals from the first stage regression to test that they are uncorrelated. Results from the test should not be regarded as an absolute measure, but rather as a relative measure between the instrumental variables where if accepted, could mean that the instrumental variables are equally valid or equally invalid (Sargan, 1958). Furthermore, a Wu-Hausman test statistic was examined to compare the consistency of the 2SLS and 3SLS regressions respectively, vis a' vis the regular OLS regression (Hausman, 1978).

In the first stage regressions, we use a Scandinavian dummy and 2-year lagged CSR data as instrumental variables. Because the non-rated group of acquirers are expected to be neutral to worse CSR performers, both first stage regressions ultimately aim to predict high and low CSR scores respectively. Therefore, the same instrumental variables are used for both benchmark groups.

Scandinavian Dummy

Evidence has been presented that CSR scores are higher for firms in civil law countries than in common law and that Scandinavian firms have the highest CSR scores (Liang and Renneboog, 2017).[10] Therefore, we expect a meaningful correlation between being a Scandinavian firm and having a high CSR score. However, we find no reason to believe that Scandinavian firms should

[10] Following the methodology of Liang and Renneboog (2017), we include Finland in Scandinavia.

have persistently different CAR's at announcement, thus the correlation between being a Scandinavian firm and the CAR's should be zero. Therefore, we use an instrumental variable which is one if a firm is from the Scandinavian region and zero if not.

Two Year Lagged CSR Data

Lagged CSR data has previously been used in CSR research as an instrumental variable (e.g. Jo and Harjoto, 2011; Jo and Na, 2012), which indicates that it is reasonable to assume that CSR performance is auto correlated and thus persistent over time. However, it has further been argued that firms that regard CSR to be value creative in an M&A context could be likely to invest a lot in CSR prior to a transaction (Deng, et al., 2013). Furthermore, a firm's CSR score is repeatedly updated based on new information (Thomson Reuters, 2018), thus lagged CSR scores and current CSR scores are expected to be correlated with each other, but not the same. Moreover, we find it reasonable to assume that there should be no direct correlation between the two year lagged CSR scores and the current CAR's. The only impact from the two-year lagged CSR score on announcement returns should be through its autocorrelation with the CSR score at announcement. This is in line with the previously mentioned criteria for instrumental variables (Wooldridge, 2003) and thus the two year lagged CSR scores are used as an instrumental variable.[11]

4.6 Data Analysis of the Relationship between Deal Duration and CSR

In order to investigate the impact of CSR on deal duration for public and private deals respectively, we used a multivariate Cox regression. We included the aforementioned control variables to avoid that CSR captures an effect which should be attributed to other influencing factors. This is in line with previous research on the topic (Deng et al., 2013).

A Cox regression is commonly used in medical research and is often called "survival analysis".[12] The regression examines how different variables influences the time between two pre-specified events (Allison, 1995). The time under study is commonly referred to as survival time. In our study, the pre-specified events are the announcement date and the effective date, where survival time is the time between these two, which follows the definition used in previous research on deal duration (Dikova et al., 2010; Deng et al., 2013; Luypaert and De Maeseniere, 2015).[13]

The Cox regression examines the relationship between the predictors and survival time (Kleinbaum and Klein, 2012), which in our case is the relationship between the CSR component

[11] Companies that did not have a CSR score 2 years ago, but are included in our sample are treated as being part of the non-rated CSR sample and are hence assigned a CSR score of zero.
[12] The analysis is often used when researchers investigate birth to death processes (Cox, 1972).
[13] In line with Deng, Kang and Low (2013), we examine only completed deals in our Cox regression. Hence, our results will only present evidence on the relative probability to close a deal for deals that were eventually completed.

as well as the relevant control variables and deal duration. The Cox regression is based on two main concepts, the first is the survival function, which examines the probability at time t that the pre-specified event has not yet occurred (Kleinbaum and Klein, 2012; Edux, 2018).[14] Secondly, is it based on the risk that the event will occur at each point in time, for those who have not yet experienced the event, which is referred to as the hazard rate ($h(t)$) (Kleinbaum and Klein, 2012). The hazard rate is a function of the baseline hazard ($h_0(t)$), which is the hazard rate at time zero, and the predictors impact on the risk that the event will occur (Kleinbaum and Klein, 2012), in our case the probability that the announced deal becomes effective.[15]

$$h(t) = h_0(t) \times e^{(b_{CSR}x_{CSR} + b_Z x_Z)}$$

The hazard rates of the two benchmark groups are divided by each other, which cancels out the baseline hazard and leaves a hazard ratio which can be interpreted as the relative risk that the event will occur (Kleinbaum and Klein, 2012). The hazard ratio can be investigated in relation to each predictor by studying the change in the overall hazard ratio when all predictors are held constant except one, which increases by 1 unit. The change in the hazard ratio can then be seen as the relative influence from that predictor on the probability that the deal becomes effective, when that particular predictor increases by one unit and all other variables are held constant (Educ, 2018). The overall hazard ratio is specified according to below function (Kleinbaum and Klein, 2012), where Z is the vector of control variables.

$$HR_{i,j} = \frac{h_0(t) \times e^{(b_{CSR}x_{CSR,i} + b_Z x_{Z,i})}}{h_0(t) \times e^{(b_{CSR}x_{CSR,j} + b_Z x_{Z,j})}}$$

One important assumption of the Cox regression is the assumption of proportional hazard (Cox, 1972) [16], which means that the two groups under study must have a constant difference in likelihood to make the transaction effective during the time period in our study. The hazard function must hence be proportional and independent of time in order to generate reliable interpretations (Fox, 2002). Therefore, we tested each predictor as well as the full Cox regression, for the proportional hazard assumption by examining the Schoenfeld residuals (Schoenfeld, 1982). In the event the

[14] The relationship between the survival function and the hazard rate is the following, h(t)=-{([dS(t)/d(t)])/(S(t))} (Kleinbaum and Klein, 2012).
[15] The hazard ratio is based on the exponential of all covariates, since time can never be negative.
[16] Another important assumption is the assumption of a linear relationship between a covariate and the log hazard or the cumulative log hazard (N G'Andu, 1997). Because previous research examining a similar relation and uses a similar methodology as in this thesis (Deng et al., 2013), we regard it to be reasonable to assume so as well.

proportional hazard assumption is violated, it would generate less reliable, but still meaningful results (Allison, 1995).

4.7 Robustness Tests

In order to test the robustness of our findings, we changed some of our assumptions and examined whether the initially established relationships still existed.

4.7.1 CAPM

An important variable in our analysis is the CAR measure. To test whether our results are robust to changes in benchmark returns, we used the market model as a benchmark when calculating the abnormal return since this is another commonly used technique in previous research (Bruner, 2002; Berk and DeMarzo, 2017). Thus, we changed the assumption that beta equals one and calculated the CAR's based on firm specific betas computed of share price data and market data of each country included in our study, from 200 days prior to the announcement until 11 days before the merger was announced. This estimation window was used to avoid inclusion of potential abnormal returns which in previous research have been found during the days prior to a transaction resulting from rumors of the merger to come (Betton et al., 2008) and follows the methodology of previous research (Deng et al., 2013). We thereafter re ran all regressions on the new measure of CAR to see whether our results were robust between the two measures of CAR.

$$CAR_i\,(t_{-1}, t_1) = \sum_{t=-1}^{t=1} (R_i - \beta_i(E(R_M))), where\ \beta_{i,}$$

$$\beta_i = \frac{Cov(R_i, R_M)}{Var(R_M)}$$

4.7.2 Increased Event-window

Previous research has uncovered announcement returns during the days prior to a transaction, indicating that the news of the merger may have reached the market before the announcement (Campa and Hernando, 2004). If this is the case, studies of CAR's immediately centered around the official announcement date would not capture the true market reaction when the information is received. Therefore, we increased our event window to alter the assumption that the market did not know anything prior to the merger and then incorporated the information fully one day after the announcement. The event window was therefore increased from (-1,1) days to (-2,2) and subsequently (-5,5) days in the univariate and multivariate analysis of CAR, since these event windows have also been frequently used in previous research examining CAR's (e.g. Betton et al., 2008; Shah and Arora, 2014).

4.7.3 Controlling for Governance Performance

Following the methodology of previous research (Lins et al., 2017), we aim to control for if governance is an omitted factor in our analysis and whether the CSR-score seems to be simply capturing an effect that should be attributed to the governance component. Our initial multivariate regression results from the analysis of the decomposed CSR ratings, were thus tested for robustness to see whether the governance performance was associated with similar results.

4.7.4 Quartiles instead of Median as a Separating Condition

We increased the required rating for what was defined as a high CSR acquirer by including only the highest rated quartile of acquirers. These were compared in a univariate analysis towards the quartile of the lowest rated and the non-CSR rated acquirers to see whether the results were robust.

4.8 Critical Review of our Methodology

Our thesis suffers from a significant selection bias due to the limited availability of CSR scores. Including the non-rated sample does not solve this selection bias and should only be regarded as a method to broaden the analysis and not simply exclude firms without CSR scores. Specific firm characteristics are correlated with CSR rating availability, hence including non-rated acquirers introduces another bias. Because such characteristics could impact patterns in CAR's and deal duration, differences observed between the highly and non-rated sample may as such be driven by other factors than the difference in CSR performance. As previously mentioned, control variables are included to adjust for this issue. However, this issue may not be completely eliminated since CSR may be correlated with other unknown factors. Therefore, CSR may be assigned an influence that in fact could be explained by another factor.

Furthermore, CSR is commonly discussed to be associated with a reversed causality issue, which introduces endogeneity (e.g. Deng et al., 2013; Kim et al., 2014; Lin et al., 2017). Thus, a 2SLS and 3SLS regression technique was used (4.5.3). However, even though the methodology aims to adjust for endogeneity, the instrumental variables are rarely perfect in reality. Even if the instrumental variables are tested for their fit, they seldom lack complete relatedness with the dependent variable and hence the error term, while still being strongly correlated with the independent variable. Thus, the 2SLS and 3SLS approaches could still suffer from an endogeneity issue or from other econometric issues.

Another concern is that our study is highly dependent on the ESG scores provided by Datastream. CSR is a qualitative concept in nature and some researchers have stressed the difficulties associated with quantitatively measuring corporate social responsibility (e.g. Graves and Waddock, 1994). Furthermore, researchers have found differences in rating methodologies, scope

and coverage between different providers (Escrig-Olmedo et al., 2010), hence potential differences between the ratings assigned to companies among providers can exist. If the scores are not correctly capturing the companies CSR performance or the markets assessment of the companies CSR performance, then our study would not be able to capture the true impact of CSR in M&A transactions. Our thesis could have benefitted from using ESG-scores from another provider to decrease some of the dependency on Datastream, however we did not have access to other scores.

The benchmark return used to calculate the CAR's could impact the results in our empirical analysis. In our study, we first used the raw market return and then the market model estimated return as the benchmark return. This is in line with previous research on the topic (Bruner, 2002), however previous research has criticized CAPM for being unable to capture the true expected return (e.g. Fama and French, 1992; Fernandez, 2015). Our thesis could have benefitted from an additional benchmark model, such as the Fama French Carhart 4 factor model. However, constructing the factors necessary for such analysis would generate costs of collecting data, that we would argue to outweigh the benefits of receiving it. We have already controlled for whether the results change when using two different benchmark returns, thus we would not expect using a third measure to add much explanatory power.

Lastly, our non-CSR rated sample is based on the assumption that these firms are expected to have a neutral to slightly worse CSR performance than the high CSR rated acquirers in our sample do. However, the non-rated CSR firms may also have a superior CSR performance. If this would be the case, the interpretation of benchmarking the high CSR scored sample to the non-scored sample would be another one. Nevertheless, we regard it to be a reasonable assumption, but still something that must be taken into consideration in the analysis of the data.

5. Empirical analysis

The results from the empirical analysis will be presented and discussed below, aiming to investigate our two hypotheses whether high CSR acquirers are associated with higher CAR's and shorter deal duration for highly CSR rated acquirers, compared to low rated and non-CSR rated acquirers respectively. In the first section, the pairwise correlations of all independent and control variables used in our study are presented. In section 5.2, empirical evidence related to our first hypothesis based on previous research on the topic, that high CSR performing acquirers should be rewarded with higher CAR's at announcement, is presented. Our analysis begins with outlining the evidence from the univariate analysis of CAR's around announcement. Thereafter, a presentation of the empirical results from the multivariate OLS regressions as well as the 2SLS's and 3SLS's regressions. In section 5.3 we will present empirical evidence examining whether high CSR acquirers are awarded with shorter deal durations, which would be in line with our hypothesis based on previous research on the topic. In relation to both multivariate regressions, results from the analysis of the decomposed CSR measure and the robustness test examining governance performance will follow in a subsequent section. Results from all other robustness tests are presented throughout the text. After the empirical results have been presented, the evidence will be discussed and evaluated in the context of previous research on the topic in section 5.4.

5.1 Descriptive Statistics

A correlation matrix showing the pairwise correlations between our independent and control variables for the full sample is outlined below.[17] This is presented to facilitate an understanding of the interrelations within the independent variables used in our study and to investigate if any particularly high correlations exists which could introduce multicollinearity and henceforth generate biased estimates in the forthcoming regressions (Wooldridge, 2003). The matrix shows that high CSR performers generally are larger firms who completes all cash deals more frequently. In regard to the CSR rated sample, this implies that larger firms typically have higher CSR scores. This is in line with the rational that larger firms typically face larger demand from society to invest in CSR. Moreover, the fact that high CSR performers generally are larger firms compared to non-CSR rated acquirers was expected, since Thomson Reuters' usually assign CSR scores to larger companies which are included in an index (Thomson Reuters, 2018). Furthermore, noteworthy is that in our sample, no two variables have particularly high correlations.[18]

[17] Correlation matrices for the high and low as well as the high and non-CSR scored benchmark groups can be found in Appendix 5. Furthermore, an overview of the full dataset as well as of the highly-rated, low-rated and, non-rated benchmark groups can be found in Appendix 6.

[18] The OLS, 2SLS and 3SLS regressions were further tested for multicollinearity through a VIF test.

TABLE 2. CORRELATION MATRIX

The table presents the pairwise correlations of all independent variables included in the empirical analysis. The variables relate to the initial dataset of 2 856 observations and then adjusted for transactions within the same event window as well as for missing values.

	CSR measures		***Firm Characteristics***				***Deal Characteristics***							
	CSR Available	CSR rating	Firm Size	Leverage	Tobins Q	MB	Relative Deal Size	Cross Border Deal	Toehold	Hightech	Private Target	All Cash Deal	Tender Offer	Diversifying Acquisition
CSR measures														
CSR Available	1,00													
CSR Rating		1,00												
Firm Characteristics														
Firm Size	0,29	0,18	1,00											
Leverage	0,03	0,38	0,06	1,00										
Tobins Q	0,08	0,43	-0,01	-0,03	1,00									
MB	0,01	0,07	0,01	-0,05	0,18	1,00								
Deal Characteristics														
Relative Deal Size	0,16	0,08	0,13	0,00	0,06	0,03	1,00							
Cross Border Deal	0,27	0,42	0,14	0,02	0,14	0,05	0,09	1,00						
Toehold	0,04	0,04	0,12	0,12	0,01	0,01	0,07	0,05	1,00					
Hightech	-0,06	0,19	-0,03	-0,06	0,18	0,04	-0,04	0,08	-0,02	1,00				
Private Target	0,01	0,60	-0,06	0,15	0,18	0,06	0,07	0,13	-0,10	0,07	1,00			
All Cash Deal	0,18	0,25	0,10	0,03	0,02	0,03	0,02	0,09	0,01	0,01	0,02	1,00		
Tender Offer	0,06	0,08	0,16	0,00	0,00	0,00	-0,02	0,01	0,14	0,07	-0,42	0,10	1,00	
Diversifying Acquisition	0,03	0,25	0,01	0,06	0,06	0,03	0,03	-0,03	-0,03	-0,17	0,16	0,00	0,00	1,00

5.2 Evidence of the Relationship between CSR and CAR

To examine the first hypothesis and determine whether high CSR acquirers experience significantly higher CAR's around announcement, a univariate analysis followed by a multivariate analysis and furthermore a 2SLS and a 3SLS aiming to control for endogeneity concerns, were investigated. The univariate analysis was conducted to examine the overall relationship between CSR performance and CAR's. However, since it only examines the difference in CAR without controlling for differences in firm and deal characteristics, it is not intended to independently answer the research question. The analysis is rather aimed at facilitating a more in depth understanding of the distribution of the dependent variable by examining the difference in mean and median CAR's for the different benchmark groups.

The univariate analysis shows that all mean and median announcement returns are statistically significantly different from zero. Furthermore, the median CAR's are lower than the mean returns in every sample, which suggests that all samples have some observations with particularly high CAR's, which increases the mean returns. The median CAR of the full sample is around 1% and the average return is around 2%, which indicates that acquirers in our sample seem to generate shareholder value in their M&A transactions.

The comparison between our three samples shows that the average CAR during the three-day (-1,1) and five-day (-2,2) event windows are statistically different from each other, where the lower rated sample experience significantly higher average returns. For our primary event window (-1,1), the lower rated sample experience on average 0,58% higher returns than the high rated sample, representing a 75% higher average return. No comparison of median returns is statistically significant between the higher and lower CSR rated sample. Similar results are established when the analysis is based on CAPM benchmarked returns (Appendix 7).

TABLE 3. UNIVARIATE ANALYSIS OF CAR'S

A t-test was used to analyze the mean and a Wilcoxon Sign Rank test to examine the median CAR's, to determine whether the CAR's are statistically significantly different from zero. Moreover, the high CSR group of acquirers is compared to the low CSR as well as the benchmark group with no CSR scores, using a two-sided t-test for the mean and a Wilcoxon Rank Sum test for the median. The analysis is based on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. High CSR acquirers are defined as acquirers with a CSR rating that exceeds the median rating and low-rated acquirers have a CSR score which is lower than the median in our sample. Non-CSR rated acquirers are companies that were not assigned a CSR score during the year of announcement. All univariate results are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level.

	Full sample N= 2,716		High CSR Subsample N= 392		Low CSR Subsample N= 386		No CSR Rating Subsample N= 1,938		Test of Difference High vs. Low		Test of Difference High vs. No CSR Rating	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
CAR(-1,1)	0,0204***	0,0103***	0,0077***	0,0059***	0,0134***	0,0088***	0,0255***	0,0122***	-0,0058**	-0,0029	-0,0178***	-0,0063***
Test for Robustness												
CAR(-2,2)	0,0236***	0,0142***	0,0081***	0,0061***	0,0141***	0,0103***	0,0301***	0,0192***	-0,0060*	-0,0042	-0,0220***	-0,0131***
CAR(-5,5)	0,0244***	0,0157***	0,0100***	0,0127***	0,0139***	0,0096***	0,0309***	0,0187***	-0,0038	0,0031	-0,0208***	-0,0060***

The benchmark group with no CSR rating experience on average 1,78% higher returns than the highly rated sample over the primary event window. This implies that non-CSR rated acquirers experience a return which is more than twice the return of the highly rated acquirers. The results are robust across all event windows and when benchmarked to returns based on the market model (Appendix 7). However, the difference in returns cannot be meaningfully compared before controlling for both firm and deal characteristics, since the divergence potentially could be attributed to other factors than the acquirers CSR performance. For example, as revealed in section 5.1, the lower and non-CSR rated companies are smaller firms, and smaller firms have been found to have significantly higher CAR's regardless of time period under study (Moeller, Schlingeman and Stultz, 2004). At first sight, above evidence does not seem to support our hypothesis that stronger CSR performing firms experience significantly higher CAR's around an M&A announcement. The univariate analysis rather indicates an opposite relationship.

To examine the relationship further, three multivariate regressions were conducted, controlling for firm and deal characteristics as well as yearly and industry fixed effects. The results from the OLS regression examining the relationship between an acquirers CSR performance and CAR's, suggests that the CSR rating is negatively associated with CAR's. However, the regression is only significant at the 10% level[19] and the results are not robust for CAPM benchmarked returns or over the different event windows (Appendix 9; Appendix 10; Appendix 11). The 2SLS regression examining the same relationship indicates a similar although more significant and

[19] The results are reported based on regular OLS standard errors since the Breusch-Pagan test found that no heteroscedasticity was detected. Using White standard errors shows that the CSR component is not significant (Appendix 8).

sizeable negative relationship between CSR performance and CAR.[20] Furthermore, the results from the 2SLS regression are robust over all event windows and when the dependent variable is defined according to the market model (Appendix 9; Appendix 10; Appendix 11). The 2SLS regression demonstrates that a company with 10 points higher CSR rating, measured on a scale between 0-100, on average receives a 0,367% lower CAR at announcement. To put this in perspective, as the average deal in our CSR rated sample receives a CAR of approximately 1%, an average return which is of the same magnitude as in previous research (Berk and DeMarzo, 2017), this implies a decrease in the mean return by around 37%. Because the average market cap in the CSR rated sample is $10,5 billion, this corresponds to an average difference in shareholder wealth of around $39 million.

TABLE 4. MULTIVARIATE ANALYSIS OF CSR AND CAR'S

The results from our multivariate regressions used to investigate the relationship between CSR and CAR's over the primary event window (-1,1) are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. Regression 1 and 3 are regular OLS regressions, regression 2 is a 2SLS and regression 4 is a 3SLS regression. The results from the first stage regressions and the second stage regression can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis for all OLS regressions and Huber-White standard errors in relation to the 2SLS and 3SLS regressions, when heteroscedasticity is detected according to the Breusch-Pagan test.

	OLS CSR Rating	2SLS CSR Rating	OLS High vs. No CSR Rating	3SLS High vs. No CSR Rating
Variable	(1)	(2)	(3)	(4)
CSR measure	-0,0194*	-0,0367**	-1,5877***	-1,6113***
	(0,0104)	(0,0151)	(0,5104)	(0,5208)
Other Acquirer Characteristics				
Firm Size	-0,0049	-0,0018	-0,0035	-0,0035
	(0,0067)	(0,0071)	(0,0119)	(0,0119)
Leverage	2,1535*	2,2197*	-0,0802	0,0542
	(1,2357)	(1,2403)	(1,8027)	(1,0798)
Tobins Q	0,4172***	0,4225***	-0,0076	0,0085
	(0,0737)	(0,0739)	(0,1784)	(0,1776)
Deal Characterics				
Relative Deal Size	-0,0006**	-0,0006**	-0,0002	-0,0002
	(0,0003)	(0,0003)	(0,0004)	(0,0004)
All Cash Deal	0,3403	0,3303	0,5441	0,5404
	(0,3014)	(0,3137)	(0,4308)	(0,4313)
Diversifying Acquisition	-0,0418	0,0305	-0,2829	-0,2671
	(0,3038)	(0,3072)	(0,3802)	(0,3802)
Cross Boarder Deal	0,0154	0,0885	-0,4133	-0,4245
	(0,3457)	(0,3496)	(0,4003)	(0,4011)

Continued

	OLS CSR Rating	2SLS CSR Rating	OLS High vs. No CSR Rating	3SLS High vs. No CSR Rating
Variable	(1)	(2)	(3)	(4)
	(0,8405)	(0,8448)	(1,3038)	(1,3011)
Toehold	1,0387	1,0564	-0,9691	-1,0151
	(0,8044)	(0,8079)	(1,2208)	(1,2206)
Hightech	-0,5747*	-0,5713*	-0,2003	-0,2565
	(0,3425)	(0,3435)	(0,4203)	(0,4184)
Private Target	1,2982**	1,2867**	0,8163	0,8617
	(0,5778)	(0,5794)	(0,9737)	(0,9739)
Intercept	0,2910	0,9255	2,8995**	2,8619**
	(0,9074)	(1,1251)	(1,2388)	(1,1627)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes
Sample Size	677	677	1 461	1 461
Adjusted R^2	0,066	0,061	0,023	0,023
p-values				
Sargan Test		0,5089		
Wu Hausman Test		0,097 *		0,91
Weak Instrument Test		<2e-16 ***		<2e-16 ***

The results in regard to the second benchmark group comparing high CSR acquirers to non-rated acquirers, shows that high CSR acquirers are associated with significantly lower announcement returns regardless of measurement of benchmark return, event window and type of regression (Appendix 9; Appendix 10; Appendix 11). The results are similar as in the comparison of the high and low CSR rated acquirers, and shows that highly CSR rated firms are associated with around 1,59% lower returns according to the OLS regression than firms without any CSR scores. The 3SLS regression indicates a very similar relationship, showing that non-rated acquirers experience around 1.61% higher announcement returns than highly rated firms.[21] The average return in the highly and non-CSR rated sample is approximately 2,26%, which implies that firms that have a CSR rating experience approximately 71% lower returns. Because the average market cap in this sample is $4,3 billion, a 1,59% lower return corresponds to a $67 million lower shareholder return on average. Noteworthy is that only the CSR component and the intercept is statistically significant in both the multivariate and the 3SLS regression. We contemplate that this should not be interpreted as that having a CSR score decreases the CAR on average by 1,61% although this is what the regression output implies. Instead, we infer that having a CSR score is associated with being an inherently different firm than a non-rated acquirer, thus no other control variable in the regression is able to capture the effect between these two groups better. We conclude that contrary to what we hypothesized, the high CSR acquirers are not associated with significantly higher returns than the non-rated acquirers.

[21] The Wu Hausman test shows that the 3SLS and the OLS regressions are equally consistent (Hausman, 1978). No Sargan test statistic is computed since it measures relative exogeneity and in the 3SLS, only one instrumental variable, being the fitted values from the probit regression, are used (Angrist and Pieschke, 2009). Finally, the weak instrument test suggests that the instrumental variables are sufficiently correlated with the endogenous independent variable (Bound et al., 1995).

5.2.1 Evidence of the Relationship between Decomposed CSR and CAR

An analysis of the association between the decomposed CSR performance measure was conducted to facilitate a deeper understanding of the established negative relationship between CSR performance and CAR's. Furthermore, the analysis was conducted to examine whether the CSR component is associated with lower CAR's or if governance seems to be an omitted factor in the initial regression analysis.

The results show that highly rated social performing acquirers are associated with significantly lower returns. The results are robust regardless of measure of benchmark return, event window or type of regression (Appendix 9; Appendix 10; Appendix 11). However, higher environmental performers do not experience significantly lower CAR's at announcement.

The robustness test shows that higher governance performance has no significant relation with CAR's according to the OLS regression, but is significantly associated with lower returns as inferred from the 2SLS regression. However, the 2SLS regression investigating the relationship between social performance and CAR's establishes that a 10 point higher rated acquirer receives about 0,46% lower returns, whereas a similar difference in the governance rating corresponds to a 0,19% lower return. Thus, both types of multivariate regressions establish a much more robust and pronounced relationship between CAR's and the social component. Thus, we can infer that the negative relationship between CSR and CAR's appears to primarily be motivated by the social component and does not seem to result only from a high correlation with governance performance. The OLS regression shows that a 10 points higher social rating decreases the CAR on average by 0,23% and according to the 2SLS regression by 0,46%. Because the average CAR in the total CSR rated sample is approximately 1%, this infers that firms with a 10 point higher social rating experience a 46% lower return according to the 2SLS regression. To further put this in perspective, the average 10 point higher socially performing acquirer will experience a relative increase in market cap which is around $48 million lower than for the lower CSR rated acquirer.

TABLE 5. MULTIVARIATE ANALYSIS OF DECOMPOSED CSR AND CAR'S

The results from our multivariate regressions used to investigate the relationship between E, S and G respectively and CAR's over the primary event window (-1,1) are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window, for missing values as well as for the prerequisite of having an E, S and G score at the time of announcement. Regression 1, 3 and 5 are regular OLS regressions, while 2, 4 and 6 are 2SLS regressions. The results from the first stage regressions can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis for all OLS regressions and Huber-White standard errors in relation to the 2SLS regressions, when heteroscedasticity is detected according to the Breusch-Pagan test.

	OLS E Rating	2SLS E Rating	OLS S Rating	2SLS S Rating	OLS G Rating	2SLS G Rating
Variable	(1)	(2)	(3)	(4)	(5)	(6)
E, S, G measure	-0,00395	-0,0142	-0,0225**	-0,0460**	-0,0089	-0,0194**
	(0,0080)	(0,0105)	(0,0109)	(0,0177)	(0,0074)	-0,0097
Other Acquirer Characteristics						
Firm Size	-0,0078	-0,0062	-0,0042	0,0002	-0,0060	-0,0033
	(0,0066)	(0,0067)	(0,0040)	(0,0048)	(0,0068)	-0,0070
Leverage	2,1739*	2,3297*	2,0196	1,9370	2,2668*	2,3748*
	(1,2408)	(1,2456)	(1,5508)	(1,5240)	(1,2444)	-1,2480
Tobins Q	0,4101***	0,4059***	0,4304***	0,4501***	0,4151***	0,4248***
	(0,0739)	(0,0741)	(0,1557)	(0,1510)	(0,0743)	-0,0746
Deal Characterics						
Relative Deal Size	-0,0006**	-0,0006**	-0,0006**	-0,0007**	-0,0005**	-0,0005**
	(0,0003)	(0,0003)	(0,0003)	(0,0003)	(0,0003)	-0,0003
All Cash Deal	0,2962	0,2558	0,3439	0,3587	0,3791	0,3366
	(0,3017)	(0,3122)	(0,2869)	(0,2986)	(0,3046)	-0,3256
Diversifying Acquisition	-0,0835	-0,0244	-0,0370	0,0426	-0,0415	0,0115
	(0,3042)	(0,3066)	(0,2847)	(0,2864)	(0,3064)	-0,3084
Cross Boarder Deal	-0,0428	0,0177	-0,0015	0,0655	-0,0457	0,0068
	(0,3471)	(0,3501)	(0,3355)	(0,3366)	(0,3491)	-0,3512
Tender Offer	0,5323	0,6310	0,5799	0,6722	0,5750	0,6990
	(0,8432)	(0,8464)	(0,7595)	(0,7492)	(0,8461)	-0,8501
Toehold	1,0574	1,0919	1,0343*	1,0359*	1,0836	1,1333
	(0,8064)	(0,8088)	(0,5633)	(0,5500)	(0,8082)	-0,8109
Hightech	-0,5874*	-0,5998*	-0,5563*	-0,5309*	-0,6468*	-0,6548*
	(0,3433)	(0,3439)	(0,3167)	(0,3155)	(0,3487)	-0,3493
Private Target	1,3165**	1,3195**	1,2864*	1,2583*	1,2817**	1,2716**
	(0,5792)	(0,5800)	(0,6814)	(0,6757)	(0,5810)	-0,5821
Intercept	-0,4874	-0,2628	0,4267	1,3919	-0,3670	-0,2431
	(0,8499)	(0,9759)	(1,1064)	(1,3556)	(0,8032)	-0,8957
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Sample Size	677	677	677	677	667	667
Adjusted R^2	0,061	0,059	0,069	0,059	0,064	0,061
p-values						
Sargan Test		0,386		0,850		0,385
Wu Hausman Test		0,132		0,053 *		0,090*
Weak Instrument Test		<2e-16 ***		<2e-16 ***		<2e-16 ***

5.2.2 Summary of Evidence on the Relationship between CSR and CAR

The results from the univariate analysis and the multivariate regressions suggests that the high CSR acquirers in our sample are associated with significantly lower announcement returns regardless of benchmark group and type of regression. Although, the OLS regression only shows that CSR is significantly impacting CAR's at the 10% level, it still demonstrates a negative relationship. Therefore, we reject our first hypothesis and conclude that our empirical analysis suggests that

being a highly CSR rated acquirer is not associated with higher CAR's. The results are rather indicative of a negative relationship between being a high CSR acquirer and CAR's, where mainly the social component seems to be statistically significantly related to the negative returns. Hence, our results indicate that investors penalize firms with high social performance which is in line with the shareholder expense view.

5.3 Evidence of the Relationship between CSR and Deal Duration

To investigate the second hypothesis and determine whether high CSR performers are associated with shorter deal durations than inferior or expectedly inferior CSR performers, a multivariate Cox regression was conducted. The regression investigates the impact of the independent variables on the probability to close a deal and presents the relative speed to close a deal measured as the hazard ratio, where a hazard ratio below one indicates a positive relationship between that predictor and deal duration. On the contrary, a hazard ratio above one indicates a negative association between that predictor and deal duration (Kleinbaum and Klein, 2012).

The Cox regression for the CSR rated sample establishes a hazard ratio of 0,9943 in relation to private deals and 0,9774 in public deals, which indicates that the number of days to make a transaction effective increases with a higher CSR rating. Thus, the results are similar for both private and public deals, although the relationship is more pronounced for public deals.[22] Our results can be interpreted as that the relative probability for a 1 score higher CSR rated acquirer to make a public deal effective is 2,32% lower and for a 10 score higher CSR rated acquirer the probability is 21% lower than for the worse rated acquirer, while holding all other covariates constant. Considering the average transaction value in our sample, which is worth around $212 million, waiting one day infers a proximate loss only due to the time value of money of average estimated synergies by $2 265.[23] More importantly, the main damage from a lengthier deal duration

[22] The Cox regression was tested for the proportional hazard assumption based on a test of the scaled Schoenfeld residuals. The residuals are supposed to be time invariant, thus an assessment of the proportional hazard assumption controls that the residuals are not correlated with time (Allison, 1995). Testing for the proportional hazard assumption by investigation of the Schoenfeld residuals, we can see that all coefficients except Firm Size, Relative Deal Size and the All Cash dummy have proportional hazards for private transactions (Appendix 13). For the comparison of high to low CSR rated firms in public transactions, only the All Cash dummy does not satisfy the proportional hazard assumption, but the overall Cox regression satisfies the condition of proportional hazard (Appendix 13). Therefore, we tried to stratify according to the methodology presented by Allison (1995). This introduces other draw-backs and did not resolve our issue, therefore above table presents the Cox regression with non-proportional hazard in relation to the predictors mentioned above. Although coefficients obtained in a Cox regression with non-proportional hazards are less reliable, they are still carrying a lot of information (Allison, 1995). If some variables do not fulfill the proportional hazard assumption, their impact can be interpreted as the average effect over the time period (Allison, 1995). This is sufficient for most analysis (Allison, 1995). Moreover, eliminating non-proportional hazardous parameters, our results revealed a similar relationship (Appendix 14). This table was not presented here, since our different samples carry different fundamental firm and deal characteristics, and we did not want to omit any control variables.

[23] Cost synergies were estimated at the median of announced synergies according to Deloitte (2017) and the cost of capital was estimated at 10%.

arises from higher legal fees and diversion of management's attention from existing operations and other potential investment opportunities (Bainbridge, 1990; Dikova et al., 2010). Our results, indicating that higher CSR performers experience prolonged deal time, are contradictory to previous research and do not suggest that shareholders and stakeholders of high CSR companies are more willing to support an announced deal than for low CSR performers. It is rather evidence of the contrary.

TABLE 6. MULTIVARIATE ANALYSIS OF CSR AND DEAL DURATION

The results from the multivariate Cox regression used to investigate the relationship between CSR and deal duration are presented below for the comparison of highly rated to low rated and non-rated CSR acquirers. All regressions are based on the initial dataset of 2 856 observations but adjusted for transactions within the same event window as well as for missing values. Only completed deals are included in the regression. Regression 1 and 2 are based on a continuous CSR rating variable, whereas regression 3 and 4 on CSR availability which is a dummy variable that is 1 if the acquirer has a high CSR score and zero if the acquirer does not have a CSR score. All variables included in the Cox regression are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. The hazard ratios are reported as coefficients and the corresponding robust standard errors in parenthesis. Note that a hazard ratio of 1 means that the factor has no impact, a ratio below 1 implies a positive relationship between the predictor and deal duration and a ratio above 1 indicates an opposite relationship.

Variable	Private Deals Cox Model CSR Rating (1)	Public Deals Cox Model CSR Rating (3)	Private Deals Cox Model H vs. No CSR Rating (2)	Public Deals Cox Model H vs. No CSR Rating (4)
CSR measure	0,9943**	0,9774***	0,7257***	0,5026***
	(0,0029)	(0,0087)	(0,0722)	(0,2366)
Other Acquirer Characteristics				
Firm Size	0,9927***	1,0056	0,9918***	1,0013
	(0,0021)	(0,0045)	(0,0024)	(0,0050)
MB	1,0040	0,9893*	1,0025	0,9484
	(0,0052)	(0,0058)	(0,0054)	(0,0510)
Deal Characterics				
Relative Deal Size	1,0001**	1,0006	1,0001***	1,0002
	(0,0001)	(0,0006)	(0,0000)	(0,006)
Toehold	0,6109***	0,9176	1,0195	1,9193
	(0,1899)	(0,4167)	(0,0620)	(0,2742)
All Cash Deal	1,0597	2,2136**	0,5523**	1,3878**
	(0,0842)	(0,3201)	(0,2532)	(0,3949)
Tender Offer	0,6688*	0,83	0,5124***	0,8813
	(0,2068)	(0,3200)	(0,1516)	(0,2526)
Diversifying Acquisition	1,3904***	0,6497	1,1538***	1,0218
	(0,0855)	(0,2713)	(0,0515)	(0,2329)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes
Sample Size	615	78	1465	99
Adjusted R^2	0,111	0,316	0,078	0,232
Likelihood Ratio Test	p=4e-09	p=0,02	p=<2e-16	p=0,05

In regard to the non-CSR rated sample, the results are similar as in the comparison of the higher to the lower rated sample.[24] To a non-rated acquirer, the results can be interpreted as that the probability of making an announced deal effective in a private transaction at any point in time is

[24] Testing for the proportional hazard assumption by investigation of the Schoenfeld residuals, we can see that all coefficients except Firm Size and Tender Offer have proportional hazards for private transactions (Appendix 13). For the comparison of high to non-CSR rated acquirers in public transactions, the Firm Size, MB, Toehold and Diversifying Acquisition dummy do not satisfy the proportional hazard assumption (Appendix 13). However, eliminating non-proportional hazardous parameters, our results still revealed a similar relationship (Appendix 14).

around 27% lower for a CSR rated acquirer than a non-rated acquirer, holding all other covariates constant. The difference is even greater in public transactions, where firms that do not have a CSR score have around 50% higher likelihood to close the deal than high CSR performers. This implies that high CSR acquirers are associated with significantly lengthier deal durations than non-CSR rated acquirers, and hence are associated with higher indirect as well as direct costs, in both private and public deals. However, we do not regard the difference to result only from the lack of a CSR score and being an expectedly neutral to slightly worse CSR performer. Instead, differences in fundamental firm characteristics which are not controlled for may also impact deal duration.

5.3.1 Evidence of the Relationship between Decomposed CSR and Deal Duration

To gain a more thorough understanding of the relationship between the CSR performance and deal duration, an analysis of the decomposed CSR scores was conducted. This was further done to examine whether higher CSR performance is related to significantly lengthier deal durations directly, or if it seems to be the result of a high correlation with the acquirer's governance performance.

Decomposing the CSR component into its social and environmental component respectively, we can see that the high environmental performing acquirers are associated with statistically significantly longer deal durations, [25] whereas the high social performers are not.[26] In the average private deal is a 10 point higher environmental performer associated with around 6,4% lower probability to make the deal effective, holding all other predictors constant. The relationship is more substantial in public deals, where a 10 point higher environmental rated acquirer has around a 23% lower probability to make the deal effective. Consequently, in both the public and private deals is the hazard ratio for the environmental performance measure significantly below one, suggesting that higher environmental performing acquirers are associated with significantly lengthier deal durations than low rated acquirers, holding all other predictors constant. Because lengthier deal durations generate higher direct as well as indirect costs (Luypaert and De Maesneire, 2015), higher environmental performers should experience costlier M&A processes as a result.

[25] The proportional hazard assumption is violated in relation to Firm Size and Relative Deal Size for the private transactions, and is violated for the All cash dummy and the Environmental component for public deals, although the global hazard is proportional for public deals (Appendix 13). The regression including only proportional hazards shows that the Environmental component is associated with statistically significantly lengthier deal durations as well in both private and public deals (Appendix 14).

[26] Firm Size, Relative Deal Size and the All Cash Deal dummy violates the proportional hazard assumption for the private transactions regression (Appendix 13). In regard to public deals does the MB ratio and the All Cash Deal dummy violate the proportional hazard assumption (Appendix 13). Excluding predictors with non-proportional hazards reveals that the social component is associated with significantly longer deal times in relation to private transactions (Appendix 14). However, this regression does not control for any differences in Firm Size or Relative Deal Size, which are fundamental differences that differ a lot between the benchmark groups of acquirers (Appendix 6).

Furthermore, the governance component is also associated with significantly lengthier deal durations in private transactions,[27] where a 10 points higher rated governance performer is associated with around 7,7% lower likelihood to make the deal effective. However, no significant association between the governance performance and deal duration was established in relation to public deals. Hence, even though our empirical evidence suggest that high CSR acquirers experience longer deal durations in private transactions, it could potentially be explained by a high correlation between a CSR and governance, where governance could be the true underlying factor causing the empirical patterns. Furthermore, Thomson Reuters includes a measure of *"CSR strategy"* in their governance rating (Thomson Reuters, 2018). Consequently, could a correlation between environmental and governance performance result from a positive relationship between CSR strategy and environmental performance. Altogether, we cannot determine whether it is a strong environmental, CSR or governance performance, which is associated with longer deal times for private deals. In relation to public deals, only high environmental performers are associated with longer deal times and hence being a high environmental performing acquirer can be concluded to be associated with lengthier deal durations in public transactions.

TABLE 7. MULTIVARIATE ANALYSIS OF DECOMPOSED CSR AND DEAL DURATION

The results from the multivariate Cox regression used to investigate the relationship between CSR and deal duration are presented below. All regressions are based on the initial dataset of 2 856 observations but adjusted for transactions within the same event window, for missing values as well as for the prerequisite of having an E, S and G score respectively. Only completed deals are included in the regression. All regressions are based on a continuous rating variable. All variables included in the Cox regression are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. The hazard ratios are reported as coefficients and the corresponding robust standard errors in parenthesis. Note that a hazard ratio of 1 means that the factor has no impact, a ratio below 1 implies a positive relationship between the predictor and deal duration and a ratio above 1 indicates an opposite relationship.

	Private Deals Cox Model E Rating	Public Deals Cox Model E Rating	Private Deals Cox Model S Rating	Public Deals Cox Model S Rating	Private Deals Cox Model G Rating	Public Deals Cox Model G Rating
Variable	(1)	(2)	(3)	(4)	(5)	(6)
E, S, G measure	0,9934***	0,9744***	0,999	0,9902	0,9920***	0,9924
	(0,0023)	(0,0086)	(0,0026)	(0,0072)	(0,0020)	(0,0071)
Other Acquirer Characteristics						
Firm Size	0,9929***	1,0065	0,9915***	1,0021	0,9942**	1,0028
	(0,0020)	(0,0040)	(0,0023)	(0,0049)	(0,0018)	(0,0050)
MB	1,0030	0,9906*	1,0040	0,9923	1,0038	0,9937
	(0,0057)	(0,0050)	(0,0051)	(0,0058)	(0,0057)	(0,0053)
Deal Characterics						
Relative Deal Size	1,0002**	1,0006	1,0001*	1,0006	1,0002**	1,0004
	(0,0001)	(0,0006)	(0,0001)	(0,0006)	(0,0001)	(0,0006)

[27] Firm Size and Relative Deal Size do not fulfil the proportional hazard assumption in relation to private transactions (Appendix 13). For public deals, the governance measure and the All Cash dummy violates the proportional hazard assumption (Appendix 13). Excluding the Relative Deal Size from the regression on private transactions makes the regression fulfil the proportional hazard assumption and similar results are found (Appendix 14). However, in relation to public deals, the governance component is always a time varying covariate at the 10% level when examining the Schoenfeld residuals, but the overall regression has a proportional hazard (Appendix 15). The results obtained in the proportional hazards regression are similar in relation to governance component as in the below reported regression (Appendix 14).

Continued

Variable	Private Deals Cox Model E Rating (1)	Public Deals Cox Model E Rating (2)	Private Deals Cox Model S Rating (3)	Public Deals Cox Model S Rating (4)	Private Deals Cox Model G Rating (5)	Public Deals Cox Model G Rating (6)
Toehold	0,6250**	1,0011	0,6069***	0,9773	0,6088***	1,0373
	(0,1889)	(0,3944)	(0,1920)	(0,4398)	(0,1923)	(0,4305)
All Cash Deal	1,0448	2,3226***	1,0537	2,1904**	1,0802	2,211**
	(0,0833)	(0,3042)	(0,0843)	(0,3338)	(0,0849)	(0,3229)
Tender Offer	0,687	0,9557	0,6683**	0,7543	0,681**	0,813
	(0,2359)	(0,3319)	(0,1804)	(0,3082)	(0,1624)	(0,3171)
Diversifying Acquisition	1,3933***	0,6878	1,3842***	0,6451*	1,4316***	0,6757
	(0,0854)	(0,2747)	(0,0855)	(0,2614)	(0,0876)	(0,2642)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Sample Size	615	78	615	78	605	78
Adjusted R^2	0,118	0,353	0,106	0,278	0,132	0,275

5.3.2 Summary of Evidence on the Relationship between CSR and Deal Duration

In line with the stakeholder value maximization view, we hypothesized that strong CSR performance facilitates faster deal completion. However, our results indicate the opposite relation, suggesting that high CSR performance is associated with significantly lengthier deal durations, for public as well as private targets. The results are similar in the comparison of highly rated to non-CSR rated acquirers, where high CSR rated acquirers are associated with significantly longer deal durations. Furthermore, an analysis of the decomposed CSR measure reveals that only high environmental performers are associated with significantly lengthier deal durations than inferior and expectedly inferior performers in both private and public deals. Thus, high CSR acquirers in our sample are associated with costlier M&A transactions since the direct and indirect costs increase with lengthier deal durations (Luypaert and De Maeseneire, 2015). This evidence is hence supportive of the shareholder expense view, indicating that high CSR acquirers are associated with costlier M&A processes.

5.4 Discussion of our Results

The empirical evidence reveals that high CSR performing acquirers experience significantly lower CAR's and lengthier deal durations in Northern Europe, which is contradictory to what we hypothesized based on the main body of previous research in the immediate field of M&A and CSR (Deng et al., 2013; Qiao et al., 2018). However, the literature on the intersection of CSR and M&A is scarce (Malik, 2015). The only previous study more in line with our results is interestingly enough investigating a sample of acquirers primarily from Germany and the US (Meckl and Theuerkorn, 2015), whereas the other previous studies have been made on samples from China and the US only (Deng et al., 2013; Qiao et al., 2018). A potential explanation for the difference between our results and the main body of previous research could be that the fundamental benefits of being a strong CSR performer, are comparatively smaller in Northern European M&As, compared to other previously studied regions.

One of the potential benefits of CSR, outlined by stakeholder value maximization theorists, is that CSR drives stronger implicit contracts that makes stakeholders more inclined to support the firm, which ultimately creates shareholder value (e.g. Clarkson, 1995; Jensen, 2001; Freeman et al., 2004). The Northern European region and particularly Scandinavia, has been established as a specifically high CSR performing region, resulting from higher legal CSR requirements and particularly high societal demand for CSR in the region (Liang and Renneboog, 2017). Furthermore, the legal system in Northern Europe which conforms with the directives introduced by the European Union, has been argued to be more stakeholder oriented compared to other regions, such as the US and China (Garoupa, et al., 2017). If the legal system enforces comprehensive mandatory requirements on companies, the stakeholders will be relatively more protected and benefit by obtaining stronger explicit contracts. These explicit contracts will facilitate enhanced stakeholder support making it reasonable to assume that the value of developing additional implicit contacts will decline. Conversely in less regulated regions, the stakeholders will have weaker explicit contracts, potentially making implicit contracts relatively more important. This is in line with previous research suggesting an inverted U-shaped relationship between CSR and financial performance (Zhang and Guo, 2018), where the potential benefits of receiving stronger implicit contracts are too insignificant to justify the required costs of obtaining them. Hence, acquirers from the Northern Europe may not be as rewarded for having a high CSR performance in M&A transactions, as firms with a legal origin in the US and China are**.** Moreover, if CSR could be regarded as creating a competitive advantage which evolves from internal capabilities that are rare, hard to imitate and substitute as the resource-based view suggests (e.g., Russo and Fouts, 1997), such competitive advantages would potentially be less valuable to stakeholders in a region as the Northern Europe, where such internal capabilities are more common (Liang and Renneboog, 2017).

If CSR is comparatively less value creative in Northern Europe, then the difference between our results and previous research, could be explained by that investors holding companies operating in the Northern Europe do not request CSR investments as much as investors in the US and China do. Thus, when corporate executives in Northern Europe decide to pursue such investments, a principal agent problem emerges. In line with the shareholder expense view, being a high CSR performer in Northern Europe could thus imply that investors regard managers to undertake value-destroying investments as they are concerned about satisfying stakeholder demand as well as act as a good corporate citizen, rather than primarily focus at generating shareholder wealth (Barnea and Rubin, 2010). Then investors could expect managers of high CSR performing companies to pursue M&A investments that are not only justified by economic motives, but also motivated from a stakeholder point of view. Investors would then be expected to be more cynical to M&As announced by high CSR acquirers and question whether the transaction primarily aims

to generate shareholder value, which would explain why M&A transactions conducted by high CSR acquirers in Northern Europe are associated with lower CAR's and lengthier deal durations.

The Relationship between CAR and Deal Duration

Another potential explanation of our results in line with Meckl and Theuerkorn's (2015) reasoning, is that being a high CSR performer could be associated with higher costs during M&A transactions, since high CSR performers could be expected to have a willingness to conduct a more thorough screening of the targets CSR performance in order to preserve their own current strong performance (Meckl and Theuerkorn, 2015). This relationship could potentially explain both our findings. If high CSR performers are expected to conduct more thorough screening processes, the time it takes to reach a conclusive agreement should increase. This in turn would generate a costlier M&A process and hence justify the lower returns achieved by the market, unless they regard a more extensive screening to be particularly value creative. If investors holding firms with a legal origin in the Northern European region do not regard CSR to be as value creative as they do in relation to firms which have their legal origin in the US, then they would not support this extensive screening process. Hence, this could explain the divergence between our findings and previous research.

Noteworthy, is that even if the market does not reward high CSR acquirers for a more thorough screening at announcement, acquirers may still benefit from it. This is because M&A investors in contrast to marginal investors, are unable to diversify their exposure to the target company (De Franco et al., 2011) and will hold them in the long-term. Hence, even though high CSR performing acquirers are not rewarded with higher CAR's around announcement, they may benefit in the long-term since they could face a lower idiosyncratic risk in relation to the target.

Moreover, as high CSR performers are associated with lengthier deal durations, this could imply that they have a heightened deal uncertainty as well. When a deal is uncertain as to whether it will go through, investors only incorporate a discounted part of the expected value arising from the deal at announcement. Thus, the longer deal times of high CSR performers could potentially justify their lower CAR's. However, strong social performance is significantly related to lower announcement returns whereas a superior environmental performance is associated with longer deal durations. Hence, the longer deal durations experienced by high CSR acquirers should not independently be able to explain the lower CAR's, but for some deals the longer deal durations could potentially contribute to the lower CAR's achieved by high CSR acquires.

Our evidence further suggests that high CSR performers experience a relatively longer deal duration in public compared to private transactions than lower CSR performers. A comparison of the deal values of the public respective to the private deals in our sample, reveal that the public

deals are associated with significantly higher deal values.[28] In line with above reasoning, high CSR acquirers would be expected to make a more thorough screening than low CSR acquirers in general, but even more so when the transaction value is greater. Moreover, in line with the shareholder expense view, investors of a high CSR performing acquirer may be increasingly likely to interfere and delay or neglect a deal when the deal value is larger.

Regarding the difference between the highly and non-CSR rated sample we postulate that the empirical evidence, which shows that only the intercept and the CSR availability variable are significantly related to CAR's, may result from that high CSR acquirers and non-rated acquirers have different investor bases or are associated with fundamentally different firm and deal characteristics. This could be the case since many institutional investors have CSR requirements to fulfil in regard to their investments (Chatterji et al., 2009; Nordea, 2017) and because the CSR rated firms and particularly the highly CSR rated firms, are significantly larger firms and typically part of an index, owing to the selection methodology of which firms to rate by Thomson Reuters (Thomson Reuters, 2018). However, no additional analysis will be conducted to examine this further since it is out of scope in regard to our research question. Instead, we simply conclude that the higher rated acquirers in our sample are associated with lower CAR's and lengthier deal durations and that the CSR component in relation to the non-CSR rated benchmark group, most likely captures something in addition to what was controlled for in the regression. Even though the higher and lower CSR rated firms are more alike, such differences could also exist between the high and low CSR rated acquirers. Hence, we interpret our results as indicative of that having a high CSR score is associated with, but not necessarily causally related to, value destruction in an M&A transaction.

Discussion of the Negative Relationship between Social Performance and CAR

The reason that high social performance has been found to be the primary driver of the lower CAR in our empirical analysis can potentially be explained by theories in line with the shareholder expense view. As discussed in the literature review, synergies are of uttermost importance in order to generate shareholder value in an M&A transaction (Berk and DeMarzo, 2017). Often, cost synergies are easier to quantify (Chatterjee, 2007) and hence generally considered as more reliable by investors. Cost-related synergies come from increased efficiency in the combined entity in comparison to the stand-alone entities pre-merger. Such efficiency gains are commonly achieved by renegotiating contracts with customers, suppliers and by laying off employees, which are no longer needed. Thus, realization of cost synergies is often achieved at the expense of company

[28] The average public transaction value is around $1 373 million, while the average transaction value for private deals is around $123 million.

stakeholders. Because highly rated CSR performers are expected to have strong implicit contracts with their stakeholders, managers of such firms may be less likely to realize possible cost synergies or even aim to realize such synergies. In line with above arguments, prior empirical evidence on the relationship between an acquirer's social performance and stakeholder wealth have found a significant positive relationship between the two and additionally that higher social performing acquirers are associated with fewer layoffs post an M&A transaction (Deng et al., 2013). We suggest that high social performers hence may prioritize to act as a good corporate citizen and protect their stakeholder relationships, even if they know that realizing such synergies would generate shareholder value. This is in line with agency theory, where our results could indicate that investors penalize firms with high social performance, if they believe that managers will act in their own or stakeholder interests rather than in the best interest of shareholders.

Discussion of the Negative Relationship between Environmental Performance and Deal Duration

High environmental performing acquirers were established to experience lengthier deal durations in both public and private transactions, whereas the social component was not significantly increasing the time it takes to complete a transaction. Because acquirers with high environmental performance could be expected to be considerably more informed, concerned and knowledgeable within environmental aspects, the lengthier deal duration could potentially be explained by a preference to conduct a more extensive screening of the target's environmental performance. Environmental concerns have been found to be associated with an increased risk of costly penalties and fines (Hann and Bauer, 2010), hence companies with high environmental performance may be relatively more conscious and careful about not deteriorating on their performance, making them willing to sacrifice deal rapidity in exchange for more information. This is in line with what previous research argued, that high CSR performers could have a willingness to conduct a more thorough screening of the targets environmental performance in order to preserve their own current strong performance (Meckl and Theuerkorn, 2015).

6. Concluding Remarks

6.1 Conclusions

In this thesis, we have investigated the relationship between CSR and M&A performance by examining whether acquirers with superior CSR performance complete deals faster and experience higher announcement returns than acquirers with inferior or expectedly inferior CSR performance. In contrast to what we hypothesized, our empirical analysis suggests that acquirers with high CSR performance are associated with significantly lower cumulative abnormal returns as well as lengthier deal durations, which indicates that a strong CSR performance could be value destroying in an M&A context.

Our results are contradictory to the main body of previous research in the immediate field of M&A and CSR. However, prior literature is scarce, and to our knowledge, our study is the first to examine the relationship based on a sample of M&A transactions in Northern Europe. Because the external pressure to invest in CSR has been shown to be particularly high in Northern Europe (Liang and Renneboog, 2017), we suggest that managers could be more likely to overinvest in CSR in this region, since more substantial investments may be needed to satisfy stakeholder demand and be perceived as a good corporate citizen. Furthermore, since the governments in Northern Europe have more extensive legal requirements in relation social and environmental responsibilities than the US (Garoupa et al., 2017), we suggest that the potential positive effects of CSR, such as strengthened implicit contracts and enhanced stakeholder support, might be less value creative in M&A transactions in a region with a more rule-based legal system, which already facilitates a strong stakeholder support.

In relation to the first hypothesis, our empirical analysis suggested that CSR and specifically social performance is negatively associated with cumulative abnormal announcement returns. We would argue that this could potentially be explained by that companies with strong social performance who value their stakeholder relationships highly, may be regarded as less willing to consider or implement possible value creating cost-related synergies in M&As, since it could harm their relationships with stakeholders and negatively affect managers' reputation.

Regarding the second hypothesis, our results could indicate that acquirers in Northern Europe could be perceived by investors as aiming to generate stakeholder value rather than primarily shareholder value. As shareholders have the right to block or delay a deal if they do not believe it to be value creative, a longer deal duration for high CSR acquirers could support the shareholder expense view if the longer deal time is the result of shareholders being more inquisitive of transactions proposed by high CSR firms. Another possible explanation is that acquirers with high CSR performance are more cautious and investigate targets' CSR performance more

extensively than lower CSR rated acquirers before closing a deal, causing lengthier deal durations in both public and private deals.

The analysis of the decomposed CSR measure revealed that environmental performance is primarily associated with significantly lengthier deal duration. Environmental concerns have been shown to be related to considerable risks (Hann and Bauer, 2010), thus our results could indicate that companies with superior environmental performance are more cautious, and potentially willing to sacrifice deal rapidity in exchange for information and certitude. However, in regard to private deals, having a high governance performance is also associated with significantly lengthier deal durations. Henceforth, we were unable to conclude whether it is having a strong governance or environmental performance, that is primarily related to lengthier deal durations in private deals.

Furthermore, our empirical findings could be suggestive of an interrelationship between deal duration and CAR's around announcement. Because stronger CSR performers are associated with lengthier deal durations, their deals may be related to a heightened uncertainty as to whether the deal will close. This could potentially motivate part of the lower CAR's since only the expected value of the deal will be incorporated at announcement. Moreover, if high CSR acquirers are anticipated to have lengthier deal durations which generates higher indirect and direct costs, this could potentially contribute to the lower CAR's observed.

In total, our findings do not support that high CSR performance is positively associated with M&A performance. Instead, our results demonstrate an opposite relationship, indicating that companies with high CSR performance in Northern Europe are penalized by investors, possibly for pursuing an agenda contrary to what they regard as optimal from a shareholder perspective. Thus, our findings are more supportive of the shareholder expense view, suggesting that CSR does not generate benefits large enough to compensate for the associated costs. However, because the companies in our samples have different firm characteristics, our findings could also result from unobserved factors that were not incorporated in our analysis, particularly in relation to the non-rated sample.

6.2 Contributions

Our thesis contributes with empirical evidence to the relatively scarce amount of previous research investigating the implications of having a high CSR performance on the value creation from M&A transactions. Moreover, it complements prior research by providing empirical evidence from the Northern European region, which to our knowledge is an area that has not yet been studied.

Furthermore, no previous study has examined high CSR acquirers and compared them to non-rated acquirers in an M&A context, but many have discussed the restrictions arising from the limited availability of CSR scores (e.g. Meckl and Theuerkorn, 2015). Our study aims to contribute

with empirical evidence through a comparison of this broader group to high CSR acquirers in order to increase the understanding of the relationship between CSR and M&A performance, whilst bearing in mind that non-CSR rated firms are associated with different firm characteristics than highly rated firms, due to the selection of which firms Thomson Reuters assign a rating to. Finally, by examining the relationship between the decomposed CSR measure and deal duration, this thesis contributes with a more in-depth analysis on the association between CSR and deal duration. To the best of our knowledge, this has not been investigated before.

6.3 Implications

Our empirical findings suggest that investors in the Northern European region, do not assign additional value to high CSR performers in M&A transactions. This indicates that managers should not rationalize their CSR investments as contributive of increased shareholder wealth in M&A transactions. Instead, they should reflect on whether their CSR investments really are intended to maximize shareholder value or if they are acting in their own or other stakeholder's interests.

7. Limitations and Suggestions for Future Research

7.1 Limitations

Our study was, as previous research on the topic of CSR and value creation, limited by the availability of CSR scores. Even though we included non-CSR rated firms in our analysis, the differences in underlying firm characteristics were significant and likely impacted both CAR's and deal duration. Even though we tried to adjust for this by using control variables, our findings could still be driven by other differences, which were not controlled for, between higher and lower or expectedly lower CSR performing companies. For instance, we suggested that dissimilarities in the ownership structure of rated and non-CSR rated firms could potentially be an omitted a factor. This is because only larger firms, that commonly are part of an index have been assigned a CSR score to date (Thomson Reuters, 2018), which possibly causes the investor bases to differ. However, because this was not included in our analysis and not controlled for in the regression, the CSR measure could potentially capture an effect that should be attributed to another factor.

Moreover, the empirical analysis was limited to rely upon Thomson Reuters CSR scores. Because CSR performance has been found to be difficult to measure (Chatterji et al., 2009), this could lead to incorrect inferences about the relationship between CSR and M&A performance. Additionally, due to the selection methodology of Thomson Reuters, the analysis was also restricted to more CSR conscious countries in Northern Europe and larger firms (Appendix 1).

Furthermore, CSR is commonly discussed to suffer from a reverse causality issue. We tried to control for potential endogeneity issues in our regression framework by using a 2SLS and a 3SLS regression, however no instrumental variables are able to capture the full effect of our endogenous independent variable while still not being correlated with our dependent variable. Hence, the 2SLS and 3SLS regressions will presumably not be able to generate perfectly reliable and consistent estimates.

Finally, our study did not investigate the long-term post-merger returns to acquiring firms. If companies are rewarded for being a high-CSR performer in the long-term, our analysis would not be able to capture such a relationship.

7.2 Suggestions for Future Research

Prior empirical findings investigating the relation between CSR and M&A performance have been slightly contradictory, but in aggregate suggestive of a positive relationship in line with the stakeholder value maximization view (e.g. Aktas et al., 2011; Deng et al., 2013; Qiao et al., 2018). However, our findings are more supportive of the opposing view and we suggest that the divergence between our results and prior findings could result from that investors assign less value in M&A transactions to companies operating with a high CSR performance and a legal origin in

the Northern European region, than to companies in the US or China. However, our study did not conduct any empirical analysis to compare the relationship across geographical regions. Therefore, we believe that research investigating a broader geographical scope contrasting different regions could add to the understanding of CSR and value creation in M&A transactions. Furthermore, a qualitative study related to investor perception on the relationship between CSR and M&A performance for firms operating in different geographical regions, could add to the understanding of geographical implications on shareholder returns from CSR in M&A transactions.

Moreover, as previously mentioned, our three benchmark groups were not matched according to firm characteristics. Therefore, our results could have been driven by additional underlying firm characteristics than those we controlled for in our regression framework. Hence, we would suggest that doing an analysis on matched samples, especially in relation to highly and non-CSR rated firms, to examine the relationship between CSR and M&A returns as well as deal duration would be interesting. In addition, due to the differences in methodology used by the rating providers (Chatterji et al., 2009), it would be relevant to conduct a similar analysis as we have done, but use another CSR score provider.

Furthermore, our scope was not to examine the long-term returns from M&A's conducted by high CSR performers. However, if the benefits of CSR such as a superior integration process are more long-term in nature and hard to quantify, they may not be incorporated at announcement. Moreover, if the longer deal duration is a result from a more thorough investigation of the target company, the deals may in fact yield higher returns in the longer term, since it for instance could decrease the idiosyncratic risk. If this would be the case, the market may not yet have learned to price it accordingly at announcement and although high CSR acquirers should be rewarded with higher CAR's at announcement, they are not yet experiencing that. Therefore, a study on long-term value creation based on a sample from Northern Europe would be interesting to see whether the market is mispricing high CSR performers at M&A announcements and if there perhaps is an unexploited opportunity of buying high CSR acquirers at their lower announcement returns and holding them over the post-merger period.

Lastly, we examined the variance of the underlying stocks related to the different groups of CSR performers and found that high CSR acquirers were associated with lower average variance in their underlying stocks during the 11-day event window of an M&A announcement (Appendix, 16). Because the objective of our study was not to examine the implications of CSR on the riskiness of the underlying stock in M&A transactions. We did not look any further into this by controlling for firm and deal specific characteristics, something we regard would be necessary in order to draw any meaningful conclusions from such an analysis. However, at first sight our results seemed to indicate that even though higher CSR performers were associated with lower CAR's, they were also associated with lower average variance in the underlying stock (Appendix 16). This evidence could

be in line with previous research on the topic of CSR and risk in general, which has found that high CSR performers are typically associated with lower risk (El Ghoul et al., 2011). Hence, further research on the implications of high CSR performance on the riskiness of the stock during an M&A transaction could be interesting and informative.

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9. Appendix

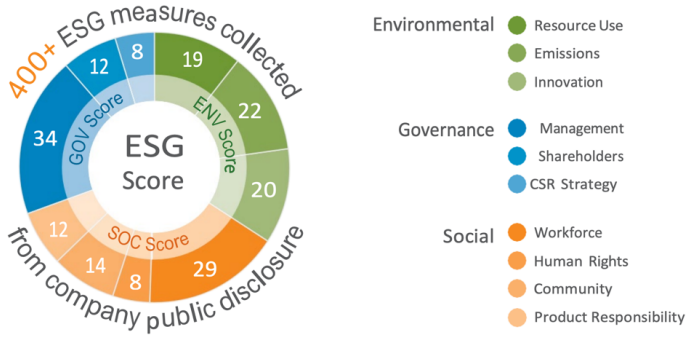
Appendix 1.

Thomson Reuters ESG Scores

Source: "Thomson Reuters ESG Scores", Published May 2018

Thomson Reuters ESG Scores are "designed to transparently and objectively measure a company's relative ESG performance, commitment and effectiveness". The scores are based on company-reported data. Thomson Reuters investigate over 400 company level ESG measures, of which a subset of 178 are included in the overall company assessment and scoring process. The selection of which measures to include is dependent upon the comparability and availability of data, as well as industry relevance. The selected 178 measures are included into 10 categories and weighted according to below *"Pillar Weights"*. This generates the E, S and G score separately and in summation this corresponds to the final ESG Score, which is a reflection of the company's ESG performance.

Illustration: Components included in Thomson Reuters ESG scores



Source: *"Thomson Reuters ESG Scores", Published May 2018*

APPENDIX 1: TABLE 1. THOMSON REUTERS PILLAR WEIGHTS AND CATEGORIES

Pillar	*Category*	*Indicators in Rating*	*Weights*	*Pillar Weights*
Environmental	Resources Use	19	11%	
	Emissions	22	12%	34%
	Innovation	20	11%	
Social	Workforce	29	16%	
	Human Rights	8	4%	35%
	Community	14	8%	
	Product Responsibility	12	7%	
Governance	Management	34	19%	
	Shareholder	12	7%	30%
	CSR Strategy	8	4%	
Total		*178*	*100%*	*100%*

APPENDIX 1: TABLE 2. DEFINITION OF CATEGORIES

Below follow the exact definitions used by Thomson Reuters Datastream of each category included in their scores.

Pillar	Category	Definition according to TR
Environmental	**Resources Use**	The Resource Use Score reflects a company's performance and capacity to reduce the use of materials, energy or water, and to find more eco-efficient solutions by improving supply chain management.
	Emissions	The Emission Reduction Score measures a company's commitment and effectiveness towards reducing environmental emission in the production and operational processes.
	Innovation	The Innovation Score reflects a company's capacity to reduce the environmental costs and burdens for its customers, thereby creating new market opportunities through new environmental technologies and processes or eco-designed products.
Social	**Workforce**	The Workforce Score measures a company's effectiveness towards job satisfaction, a healthy and safe workplace, maintaining diversity and equal opportunities, and development opportunities for its workforce.
	Human Rights	The Human Rights score measures a company's effectiveness towards respecting the fundamental human rights conventions.
	Community	The Community Score measures the company's commitment towards being a good citizen, protecting public health and respecting business ethics.
	Product Responsibility	The Product Responsibility Score reflects a company's capacity to produce quality goods and services integrating the customer's health and safety, integrity and data privacy.
Governance	**Management**	The Management Score measures a company's commitment and effectiveness towards following best practice corporate governance principles.
	Shareholder	The Shareholders Score measures a company's effectiveness towards equal treatment of shareholders and the use of anti-takeover devices.
	CSR Strategy	The CSR Strategy Score reflects a company's practices to communicate that it integrates the economic (financial), social and environmental dimensions into its day-to-day decision-making processes.

Source: *"Thomson Reuters ESG Scores", Published May 2018*

Category Benchmarks

The environmental and social related scores are benchmarked towards Thomson Reuters Business Classifications (TRBC) Industry Group to make sure that they are comparable across industries, as the relevant topics of comparison for a company are more similar within the same industry. Furthermore, the governance scores are benchmarked at the country level according to the Country of Headquarters, because governance is commonly highly regulated at the country level.

Coverage

The ratings are available on over 7,000 companies globally with time series data going back to 2002, although the most recent version of the scores was updated in 2018. Approx. 1400 of these are European companies. The coverage has evolved over time and is continuously expanding as more indices are being included. As the coverage is based on indices, only relatively larger firms have been assigned an ESG-score. Further, Thomson Reuters explains that since the public availability of ESG information varies across different countries, industries and market capitalizations and that the ESG database is more reflective of companies with greater degree of ESG data disclosure. These tend to be companies listed in countries where regulatory or investor demand favor such disclosure, and generally for companies in industries with a tradition of ESG transparency and companies with mid to large market capitalizations.

Appendix 2.

Constructing the CSR score

As described in the methodology section, Datastream's environmental and social scores are used as a proxy for CSR performance in this thesis. Hence, we excluded the governance component, which is in line with previous research (eg. Deng et al., 2013, Kim et al., 2014, Lins et al., 2017). The social and environmental score were weighted according to the TRD methodology then re-scaled to the original scale, ranging between 0 and 100. Below is a summary of the resulting relative weights of the environmental and social pillars.

$$E\ Measure = \frac{S(Resource\ Use) * P.W.(Resorce\ Use) + S(Emissions) * P.W.(Emissions) + S\ (Innovation) * P.W.(Innovation)}{\sum P.W.(Environmental)}$$

$$S\ Measure = \frac{S(Workforce) * P.W.\ (Workforce) \ldots + S(Product\ Responsibility) * P.W.\ (Product\ Responsibility)}{\sum P.W.\ (Social)}$$

$$CSR\ Measure = \frac{S(Resource\ Use) * P.W.(Resorce\ Use) \ldots + S(Product\ Responsibility) * P.W.(Product\ Responsibility)}{\sum P.W.(Environmental + Social)}$$

APPENDIX 2: TABLE 1. THOMSON REUTERS PILLAR WEIGHTS AND CATEGORIES FOR THE CSR SCORE

Pillar	***Category***	***Indicators in Rating***	***Weights***	***Pillar Weights (P.W)***
Environmental	Resources Use	19	15%	
	Emissions	22	18%	49%
	Innovation	20	16%	
Social	Workforce	29	23%	
	Human Rights	8	6%	51%
	Community	14	11%	
	Product Responsibility	12	10%	
Governance	Management	0	0%	
	Shareholder	0	0%	0%
	CSR Strategy	0	0%	
Total		*124*	100%	*100%*

$$\text{G Measure} = \frac{\text{S(Management)} * \text{P. W. (Management)} \ldots + \text{S(CSR Strategy)} * \text{P. W. CSR Strategy}}{\sum \text{P. W. (Governance)}}$$

Appendix 3.

Variable	Definitions	Used to investigate:	
		H1	*H2*
Instrumental variables			
Scandinavian Dummy	One if acquirer nation is Sweden, Finland, Denmark or Norway and zero if acquirer nation is UK or Ireland.	X	
Two Year laggad CSR score	Environmental and social rating two years prior to the year of the transaction. The ES-score includes an assessment of a company's resource use score, emission score, environmental innovation score, workforce score, human rights score, community score and product responsibility score. If no score was available two years prior to the transaction, the observation was treated as being part of the non-rated group and was subsequently assigned a zero.	X	
Firm Charecteristics			
Firm Size	Book value of acquirer total assets.	X	X
Leverage	Book value of debts (sum of current liabilities and long-term debt) divided by market value of assets (total book value of assets minus book value of equity plus market value of equity).	X	
MB	Market value of equity divided by book value of equity.		X
Tobins Q	Market value of assets (market value of equity minus book value of equity plus total book value of assets) over book value of assets.	X	
Deal Charecteristics			
All Cash Deal	One if the final consideration is defined as all cash according to SDC and zero otherwise.	X	X
Cross Border Deal	One if the nations of acquirer and target were different and zero otherwise.	X	
Diversifying Acquisition	One if the acquirer and the target have different first two-digit SIC codes and zero otherwise.	X	X
Hightech	One if both the acquirer and the target operate in high-tech industries and have been assign a "high tech code" according to SDC, zero otherwise.	X	
Private Target	One if the target was privately held (no ticker symbol assign by SDC) and zero otherwise.	X	
Relative Deal Size	Acquirer's market value of equity over deal transaction value according to SCD.	X	X
Tender Offer	One if the transaction was defined as a tender-offer according to SCD and zero otherwise.	X	X
Toehold	One if the acquirer held at least 5% of the target shares prior to the M&A and zero otherwise.	X	X

Appendix 4.

3SLS Overall Methodology: The 3SLS regression is conducted through the following steps as per recommendation by Angrist and Pieschke (2008);

1) A probit regression including the instrumental variables and all exogenous regressors is run to estimate the endogenous variables, which is a binary variable and thus takes only the value 0 or 1
2) The non-linear fitted values from the first regression are saved as a vector and used as an instrumental variable in the next stage together with all other exogenous regressors excluding instrumental variables used in the first stage. This is done to avoid inclusion of the non-linear residuals
3) Finally, an OLS regression is run, where the estimated binary variable is used as the instrumental variable substituting for the CSR availability

The Probit Regression in the First stage regression of the 3SLS: The first stage regression in the 3SLS regression is a probit regression, which is a regression model conducted through maximum likelihood estimation (Wooldridge, 2003; Spermann, 2009). Because the regression is defined according to a maximum likelihood estimation, any potential heteroscedasticity inevitably is taken into account as the dependent variables are assigned their distribution given the independent values (Wooldridge, 2003).

A probit regression is the most commonly used regression model to predict binary dependent variables, i.e. estimated values of 1 or 0 respectively (Wooldridge, 2003). The regression thus predicts the dependent variable given the independent variable and all other control variables as specified according to below function, where G is the standard normal cumulative distribution function (Wooldridge, 2003).

$$P(y = 1|x) = G(\beta_0 + \beta_1 x_1 + \cdots \beta_n x_n)$$

$$G(z) = \phi(z) = \int_{-\infty}^{z} \phi(v)dv, \qquad where\ \phi(z) = (2\pi)^{-(\frac{1}{2})}\, e^{(-\frac{z^2}{2})}$$

A probit regression computes a beta, corresponding standard errors and marginal effects of the relationship between the dependent variable and each independent variable. The beta coefficients of a probit regression model can best interpreted as the impact on the probability of achieving a 1 or 0, as caused by each independent variable. The magnitude of the beta is not contributing with much explanatory power and the beta estimate is often seen as presenting the direction of the relationship between the independent and the dependent variable (Wooldridge, 2003).

Because the beta coefficients can be difficult to interpret, one commonly computes the marginal effect between each independent variable and the dependent variable (Spermann, 2009). The marginal effects, shows the average increase in probability that the dependent variable achieves

a value of one, given an infinite small change in a continuous variable or when the value goes from zero to one for a dummy variable (Spermann, 2009). The marginal effects only show the increase in probability that the dependent variable receives a value of one, if all other covariates are held constant.

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Appendix 5.

APPENDIX 5: TABLE 1. CORRELATION MATRIX

The table presents the pairwise correlations of all independent variables included in the empirical analysis. The variables relates to the high and low CSR rated group of acquirers and includes 824 observations based on the selection criteria in section 4.2, but are adjusted for transactions within the same event window as well as for missing values. High CSR acquirers are defined as acquirers with a CSR rating that exceeds the median rating and low-rated acquirers have a CSR score which is lower than the median in our sample.

	CSR	***Firm Characteristics***				***Deal Characteristics***							
	CSR rating	Firm Size	Leverage	Tobins Q	MB	Relative Deal Size	Cross Border Deal	Toehold	Hightech	Private Target	All Cash Deal	Tender Offer	Diversifying Acquisition
CSR													
CSR Rating	1,00												
Firm Characteristics													
Firm Size	0,40	1,00											
Leverage	0,65	0,29	1,00										
Tobins Q	0,62	0,17	0,51	1,00									
MB	0,15	0,05	0,04	0,18	1,00								
Deal Characteristics													
Relative Deal Size	0,29	0,19	0,21	0,22	0,07	1,00							
Cross Border Deal	0,78	0,30	0,49	0,52	0,16	0,25	1,00						
Toehold	0,15	0,19	0,11	0,09	0,03	0,15	0,13	1,00					
Hightech	0,45	0,13	0,25	0,38	0,18	0,09	0,44	0,07	1,00				
Private Target	0,87	0,24	0,63	0,59	0,28	0,31	0,75	0,08	0,42	1,00			
All Cash Deal	0,57	0,22	0,35	0,36	0,22	0,14	0,47	0,10	0,31	0,48	1,00		
Tender Offer	0,21	0,24	0,09	0,10	0,06	0,01	0,13	0,15	0,11	-0,05	0,20	1,00	
Diversifying Acquisition	0,58	0,19	0,38	0,39	0,19	0,18	0,41	0,02	0,20	0,57	0,33	0,10	1,00

APPENDIX 5: TABLE 2. CORRELATION MATRIX

The table presents the pairwise correlations of all independent variables included in the empirical analysis. The variables relate to the high and non-CSR rated group of acquirers and includes 1 220 observations based on the selection criteria in section 4.2, but are adjusted for transactions within the same event window as well as for missing values. High CSR acquirers are defined as acquirers with a CSR rating that exceeds the median rating and non-CSR rated acquirers are companies that were not assigned a CSR score during the year of announcement.

	CSR measures		***Firm Characteristics***				***Deal Characteristics***							
	CSR Available	CSR rating	Firm Size	Leverage	Tobins Q	MB	Relative Deal Size	Cross Border Deal	Toehold	Hightech	Private Target	All Cash Deal	Tender Offer	Diversifying Acquisition
CSR measures														
CSR Available	1,00													
CSR Rating		1,00												
Firm Characteristics														
Firm Size	0,39	0,37	1,00											
Leverage	0,07	0,69	0,07	1,00										
Tobins Q	0,19	0,81	0,03	-0,02	1,00									
MB	0,11	0,31	0,03	0,00	0,47	1,00								
Deal Characteristics														
Relative Deal Size	0,19	0,23	0,14	0,01	0,10	0,07	1,00							
Cross Border Deal	0,29	0,77	0,18	0,11	0,32	0,12	0,10	1,00						
Toehold	0,05	0,15	0,13	0,15	0,04	0,02	0,09	0,05	1,00					
Hightech	-0,01	0,41	-0,01	-0,01	0,29	0,10	-0,01	0,15	-0,01	1,00				
Private Target	0,06	0,85	0,01	0,29	0,47	0,22	0,09	0,27	-0,05	0,20	1,00			
All Cash Deal	0,21	0,54	0,13	0,09	0,12	0,08	0,03	0,13	0,01	0,06	0,14	1,00		
Tender Offer	0,10	0,21	0,17	0,03	0,04	0,01	-0,01	0,02	0,18	0,07	-0,28	0,11	1,00	
Diversifying Acquisition	0,06	0,54	0,03	0,14	0,18	0,09	0,06	0,06	0,00	-0,10	0,29	0,04	0,02	1,00

Appendix 6.

APPENDIX 6: TABLE 1. OVERVIEW OF THE DATA

The table presents an overview of all independent variables included in the empirical analysis. The variables relate to the initial dataset of 2 856 observations based on the selection criteria in section 4.2. High CSR acquirers are defined as acquirers with a CSR rating that exceeds the median rating and low-rated acquirers have a CSR score which is lower than the median in our sample. Non-CSR rated acquirers are companies that were not assigned a CSR score during the year of announcement.

	Full					**High CSR**					**Low CSR**					**Non-CSR Rated**				
	1st Q	Mean	Median	3rd Q	N	1st Q	Mean	Median	3rd Q	N	1st Q	Mean	Median	3rd Q	N	1st Q	Mean	Median	3rd Q	N
Instrumental Variables																				
Scandinavian Dummy	0	0,28	0	1	2 856	0	0,25	0	0	413	0	0,22	0	0	411	0	0,30	0	1	2 032
2 year lagged ES rating	47,4	57,5	59,1	69,3	704	61,8	67,1	67,6	74,2	379	36,5	45,9	47,4	54,0	322					
Firm Characteristics																				
Firm Size	122	4 282	494	2 295	1944	2 539	17 293	4 640	17 475	357	908	3 280	1 669	4 493	353	68	801	171	528	1 233
Leverage	0,04	0,14	0,11	0,19	2 020	0,07	0,14	0,13	0,18	387	0,05	0,13	0,12	0,21	381	0,03	0,14	0,10	0,19	1 252
Tobins Q	1,20	1,82	1,56	2,14	2 039	1,34	1,99	1,79	2,50	387	1,29	1,75	1,73	2,22	381	1,12	1,80	1,46	2,01	1 271
MB	1,41	2,78	2,30	3,73	2 038	1,69	3,38	2,80	4,49	387	1,67	2,08	2,71	3,99	381	1,24	2,81	2,01	3,27	1 270
Deal Characteristics																				
Relative Deal Size	7,0	108,4	21,5	67,6	1925	20,7	266,5	60,0	180,5	357	15,9	141,7	42,5	122,5	353	5,2	52,3	13,6	37,6	1215
Cross Boarder Deal	0	0,51	1	1	2 716	1	0,76	1	1	392	0	0,65	1	1	386	0	0,43	0	1	1 938
Toehold	0	0,02	0	0	2 716	0	0,04	0	0	392	0	0,02	0	0	386	0	0,02	0	0	1 938
Hightech	0	0,34	0	1	2 681	0	0,30	0	1	385	0	0,25	0	0,25	372	0	0,36	0	1	1 924
Private Target	1	0,93	1	1	2 681	1	0,86	1	1	385	1	0,92	1	1	372	1	0,94	1	1	1 924
All Cash Deal	0	0,28	0	1	2 681	0	0,46	0	1	385	0	0,33	0	1	372	0	0,23	0	0	1 924
Tender Offer	0	0,03	0	0	2 681	0	0,07	0	0	385	0	0,02	0	0	372	0	0,03	0	0	1 924
Diversifying Acquisition	0	0,44	0	1	2 681	0	0,46	0	1	385	0	0,42	0	1	372	0	0,44	0	1	1 924

Appendix 7.

APPENDIX 7: TABLE 1. UNIVARIATE ANALYSIS ON CAPM BENCHMARKED RETURNS

A t-test was used to analyze the mean and a Wilcoxon Sign rank test to examine the median CAR's, to determine whether the CAR's are statistically significantly different from zero. Moreover, the high CSR group of acquirers is compared to the low as well as the benchmark group with no CSR scores, using a two-sided t-test for the mean and a Wilcoxon Rank Sum test for the median. The analysis is based on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. High CSR acquirers are defined as acquirers with a CSR rating that exceeds the median rating and low-rated acquirers have a CSR score which is lower than the median in our sample. Non-CSR rated acquirers are companies that were not assigned a CSR score during the year of announcement. All univariate results are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level.

	Full sample N= 2,716		High CSR Subsample N= 392		Low CSR Subsample N= 386		No CSR Rating Subsample N= 1,938		Test of Difference High vs. Low		Test of Difference High vs. No CSR Rating	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
CAR(-1,1)	0,0220***	0,0100***	0,0076***	0,0070***	0,0146***	0,0083***	0,0279***	0,0123***	-0,007**	-0,0014	-0,0203***	-0,0053***
Test for Robustness												
CAR(-2,2)	0,0259***	0,0133***	0,0080***	0,0061***	0,0167***	0,0111***	0,0322**	0,0175***	-0,0087**	-0,0049	-0,0252***	-0,0114***
CAR(-5,5)	0,0288***	0,0191***	0,0116***	0,0122***	0,0177***	0,0132***	0,0365***	0,0236***	-0,0061	-0,0010	-0,0250***	-0,0114***

Appendix 8.

APPENDIX 8: TABLE 1. MULTIVARIATE ANALYSIS WITH ROBUST STANDARD ERRORS AND THE CSR SCORE

The results from our multivariate regressions used to investigate the relationship between CSR and CAR's over the primary event window (-1,1) are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as missing values. Regression 1 and 3 are regular OLS regressions, while 2 is a 2SLS regression and 4 is a 3SLS regression. The results from the first and second stage regressions can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level based on robust standard errors. White robust standard errors are reported in parenthesis for both OLS regressions, while Huber-White standard errors are reported for both instrumental variables regressions.

	OLS CSR Rating	2SLS CSR Rating	OLS High vs. No CSR Rating	3SLS High vs. No CSR Rating
Variable	(1)	(2)	(3)	(4)
CSR measure	-0,0194	-0,0367**	-1,5877***	-1,6113***
	(0,0127)	(0,0174)	(0,3471)	(0,3440)
Other Acquirer Characteristics				
Firm Size	-0,0049	-0,0018	-0,0035	-0,0035
	(0,0041)	(0,0045)	(0,0044)	(0,0044)
Leverage	2,1535	2,2197	-0,0802	0,0542
	(1,5348)	(1,5011)	(0,8746)	(0,8857)
Tobins Q	0,4172***	0,4225***	-0,0076	0,0085
	(0,1542)	(0,1496)	(0,1630)	(0,1590)
Deal Characterics				
Relative Deal Size	-0,0006**	-0,0006**	-0,0002	-0,0002
	(0,0003)	(0,0003)	(0,0001)	(0,0001)
All Cash Deal	0,3403	0,3303	0,5441	0,5404
	(0,2912)	(0,2990)	(0,3425)	(0,3404)
Diversifying Acquisition	-0,0418	0,0305	-0,2829	-0,2671
	(0,2891)	(0,2898)	(0,3623)	(0,3593)
Cross Boarder Deal	0,0154	0,0885	-0,4133	-0,4245
	(0,3361)	(0,3389)	(0,4321)	(0,4298)
Tender Offer	0,6085	0,7178	-0,5396	-0,3783
	(0,7673)	(0,7609)	(0,1770)	(1,1744)
Toehold	1,0387*	1,0564*	-0,9691	-1,0151*
	(0,5590)	(0,5403)	(0,6107)	(0,6047)
Hightech	-0,5747*	-0,5713*	-0,2003	-0,2565
	(0,3166)	(0,3154)	(0,3800)	(0,3765)
Private Target	1,2982*	1,2867*	0,8163	0,8617
	(0,6873)	(0,6849)	(0,9932)	(0,9868)
Intercept	0,2910	0,9255	2,8995**	2,8619**
	(1,1414)	(1,3415)	(1,4037)	(1,2175)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes
Sample Size	677	677	1 461	1 461
Adjusted R^2	0,066	0,061	0,023	0,023
p-values				
Sargan Test		0,5089		
Wu Hausman Test		0,097 *		0,91
Weak Instrument Test		<2e-16 ***		<2e-16 ***

APPENDIX 8: TABLE 2. MULTIVARIATE ANALYSIS WITH ROBUST STANDARD ERRORS AND THE DECOMPOSED CSR SCORE AND GOVERNANCE SCORE

The results from our multivariate regressions used to investigate the relationship between CSR and CAR's over the primary event window (-1,1) are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window, for missing values as well as for the prerequisite of having an E, S and G score at the time of announcement. Regression 1, 3 and 5 are regular OLS regressions, while 2, 4 and 6 are 2SLS regressions. The results from the first stage regressions can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level based on robust standard errors. White robust standard errors are reported in parenthesis for all OLS regressions, while Huber-White standard errors are reported for all instrumental variables regressions.

	OLS	2SLS	OLS	2SLS	OLS	2SLS
	E Rating	E Rating	S Rating	S Rating	G Rating	G Rating
Variable	(1)	(2)	(3)	(4)	(5)	(6)
E, S, G measure	-0,0039	-0,0142	-0,0225**	-0,04560**	-0,0089	-0,0194*
	(0,0094)	(0,0121)	(0,0109)	(0,0177)	(0,0075)	(0,0100)
Other Acquirer Characteristics						
Firm Size	-0,0078**	-0,0062	-0,0042	0,0002	-0,0060	-0,0033
	(0,0038)	(0,0038)	(0,0040)	(0,0048)	(0,0039)	(0,0042)
Leverage	2,1739	2,3297	2,0196	1,9370	2,2668	2,3748
	(1,5364)	(1,4983)	(1,5508)	(1,5240)	(1,5467)	(1,51939
Tobins Q	0,4101***	0,4059***	0,4304***	0,4501***	0,4151***	0,4248***
	(0,1561)	(0,1526)	(0,1557)	(0,1510)	(0,1565)	(0,1537)
Deal Characterics						
Relative Deal Size	-0,0006**	-0,0006**	-0,0006**	-0,0007**	-0,0005**	-0,0005**
	(0,0003)	(0,0003)	(0,0003)	(0,0003)	(0,0002)	(0,0002)
All Cash Deal	0,2962	0,2558	0,3439	0,3587	0,3791	0,3366
	(0,2925)	(0,2955)	(0,2869)	(0,2986)	(0,2929)	(0,2961)
Diversifying Acquisition	-0,0835	-0,0244	-0,0370	0,0426	-0,0415	0,0115
	(0,2880)	(0,2884)	(0,2847)	(0,2864)	(0,2872)	(0,2857)
Cross Boarder Deal	-0,0428	0,0177	-0,0015	0,0655	-0,0457	0,0068
	(0,3359)	(0,3359)	(0,3355)	(0,3366)	(0,3414)	(0,3371)
Tender Offer	0,5323	0,6310	0,5799	0,6722	0,5750	0,6990
	(0,7734)	(0,7643)	(0,7595)	(0,7492)	(0,7655)	(0,7534)
Toehold	1,0574*	1,0919**	1,0343*	1,0359*	1,0836*	1,1333**
	(0,5677)	(0,5462)	(0,5633)	(0,5500)	(0,5721)	(0,5594)
Hightech	-0,5874*	-0,5998*	-0,5563*	-0,5309*	-0,6468**	-0,6548**
	(0,3165)	(0,3150)	(0,3167)	(0,3155)	(0,3245)	(0,3220)
Private Target	1,3165*	1,3195*	1,2864*	1,2583*	1,2817*	1,2716*
	(0,6840)	(0,6832)	(0,6814)	(0,6757)	(0,6793)	(0,6701)
Intercept	-0,4874	-0,2628	0,4267	1,3919	-0,3670	-0,2431
	(0,9981)	(1,1424)	(1,1064)	(1,3556)	(0,9731)	(1,0668)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Sample Size	677	636	677	677	667	667
Adjusted R^2	0,061	0,059	0,069	0,059	0,064	0,609
p-values						
Sargan Test		0,386		0,850		0,385
Wu Hausman Test		0,132		0,053 *		0,090*
Weak Instrument Test		<2e-16 ***		<2e-16 ***		<2e-16 ***

Appendix 9.

APPENDIX 9: TABLE 1. ROBUSTNESS TEST: MULTIVARIATE ANALYSIS FOR CAR'S OVER THE FIVE DAY EVENT WINDOW (-2,2) AND THE CSR SCORE

The results from our robustness tests on the multivariate regressions used to investigate the relationship between CSR and CAR's over the five-day event window (-2,2) are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. Regression 1 and 3 are regular OLS regressions, while 2 is a 2SLS regression and 4 is a 3SLS regression. The results from the first and second stage regressions can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis for the OLS regressions, while Huber-White standard errors are reported for the instrumental variables regressions when heteroscedasticity is detected in the Breusch-Pagan test.

	OLS CSR Rating	2SLS CSR Rating	OLS High vs. No CSR Rating	3SLS High vs. No CSR Rating
Variable	(1)	(2)	(3)	(4)
CSR measure	-0,0158	-0,0390**	-2,2276***	-2,2648***
	(0,0135)	(0,0190)	(0,4393)	(0,4475)
Other Acquirer Characteristics				
Firm Size	-0,0030	0,0030	0,0005	0,0005
	(0,0058)	(0,0062)	(0,0056)	(0,0056)
Leverage	1,5812	1,5609	-0,9638	-0,7962
	(2,7226)	(2,6575)	(1,0453)	(1,0477)
Tobins Q	0,7312***	0,7321***	-0,0593	-0,0400
	(0,1446)	(0,1365)	(0,1677)	(0,1632)
Deal Characterics				
Relative Deal Size	-0,0007**	-0,0007**	-0,0001	-0,0001
	(0,0003)	(0,0003)	(0,0002)	(0,0002)
All Cash Deal	0,5504	0,6773*	0,6207	0,6175
	(0,3588)	(0,3571)	(0,3878)	(0,3855)
Diversifying Acquisition	0,2326	0,3337	-0,1400	-0,1195
	(0,3592)	(0,3570)	(0,4126)	(0,4095)
Cross Boarder Deal	0,0577	-0,0261	0,0756	0,0640
	(0,4156)	(0,4110)	(0,4700)	(0,4684)
Tender Offer	0,3218	0,4224	-0,5003	-0,2949
	(0,8544)	(0,8474)	(1,4726)	(1,4550)
Toehold	1,9605***	1,8829***	-0,7994	-0,8553
	(0,7311)	(0,7009)	(0,8537)	(0,8458)
Hightech	-0,6916*	-0,8164**	-0,4696	-0,5394
	(0,3899)	(0,3932)	(0,4222)	(0,4169)
Private Target	1,3378*	1,3017*	1,0739	1,1310
	(0,6964)	(0,6993)	(1,1844)	(1,1738)
Intercept	-1,6472	0,1220	2,9292*	2,9311**
	(1,3163)	(1,4299)	(1,5881)	(1,3891)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes
Sample Size	677	677	1 461	1 461
Adjusted R^2	0,114	0,103	0,026	0,024
p-values				
Sargan Test		0,309		
Wu Hausman Test		0,113		0,979
Weak Instrument Test		<2e-16 ***		<2e-16 ***

APPENDIX 9: TABLE 2. ROBUSTNESS TEST: MULTIVARIATE ANALYSIS FOR CAR'S OVER THE FIVE DAY EVENT WINDOW (-2,2) AND THE DECOMPOSED CSR AND GOVERNANCE SCORE

The results from our robustness tests on the multivariate regressions used to investigate the relationship between CSR and CAR's over the five-day event window (-2,2) are presented below. All regressions are conducted on the initial dataset of 2,856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window, for missing values as well as for the prerequisite of having an E, S and G score at the time of announcement. Regression 1, 3 and 5 are regular OLS regressions, while 2, 4 and 6 are 2SLS regressions. The results from the first stage regressions can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digit SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis for the OLS regressions, while Huber-White standard errors are reported for the instrumental variables regressions when heteroscedasticity is detected in the Breusch-Pagan test.

	OLS	2SLS	OLS	2SLS	OLS	2SLS
	E Rating	E Rating	S Rating	S Rating	G Rating	G Rating
Variable	(1)	(2)	(3)	(4)	(5)	(6)
E, S, G measure	-0,0069	-0,0218	-0,0147	-0,0412**	-0,0037	-0,0198*
	(0,0102)	(0,0133)	(0,0121)	(0,0194)	(0,0090)	(0,0113)
Other Acquirer Characteristics						
Firm Size	-0,0047	-0,0004	-0,0031	0,0037	-0,0049	0,0012
	(0,0054)	(0,0054)	(0,0057)	(0,0065)	(0,0054)	(0,0057)
Leverage	1,6363	1,7382	1,4887	1,3046	1,6831	1,7259
	(2,7127)	(2,6541)	(2,7409)	(2,6853)	(2,7474)	(2,6922)
Tobins Q	0,7238***	0,7113***	0,7390***	0,7553***	0,7248***	0,7334***
	(0,1451)	(0,1380)	(0,1464)	(0,1390)	(0,1464)	(0,1402)
Deal Characterics						
Relative Deal Size	-0,0007**	-0,0006**	-0,0008**	-0,0008**	-0,0007**	-0,0006**
	(0,0003)	(0,0003)	(0,0003)	(0,0003)	(0,0003)	(0,0003)
All Cash Deal	0,5204	0,6214*	0,5467	0,6837*	0,6152*	0,7111**
	(0,3573)	(0,3541)	(0,3551)	(0,3555)	(0,3592)	(0,3537)
Diversifying Acquisition	0,2108	0,2960	0,2262	0,3292	0,2432	0,3258
	(0,3588)	(0,3565)	(0,3566)	(0,3545)	(0,3614)	(0,3563)
Cross Boarder Deal	0,0362	-0,0595	0,0335	-0,0714	-0,0232	-0,1294
	(0,4117)	(0,4049)	(0,4183)	(0,4106)	(0,4225)	(0,4085)
Tender Offer	0,2925	0,3882	0,2853	0,3490	0,2412	0,3841
	(0,8596)	(0,8557)	(0,8502)	(0,8345)	(0,8624)	(0,8397)
Toehold	1,9755***	1,9123***	1,9594***	1,8727***	2,0062**	1,9677***
	(0,7408)	(0,7182)	(0,7325)	(0,6988)	(0,7477)	(0,7279)
Hightech	-0,7013*	-0,8494**	-0,6811*	-0,7836**	-0,7554*	-0,8958**
	(0,3900)	(0,3931)	(0,3900)	(0,3916)	(0,3956)	(0,3988)
Private Target	1,3516*	1,3326*	1,3330*	1,2826*	1,3261*	1,2867*
	(0,6975)	(0,7047)	(0,6907)	(0,6863)	(0,6890)	(0,6815)
Intercept	-2,1213*	-0,7744	-1,7020	0,2367	-2,3667**	-1,1379
	(1,1878)	(1,2379)	(1,2829)	(1,4321)	(1,13028)	(1,1319)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Sample Size	677	677	677	677	667	667
Adjusted R^2	0,113	0,102	0,115	0.010	0,115	0,102
p-values						
Sargan Test		0,200		0,500		0,2023
Wu Hausman Test		0,099		0,105		0,039*
Weak Instrument Test		<2e-16 ***		<2e-16 ***		<2e-16 ***

Appendix 10.

APPENDIX 10: TABLE 1. ROBUSTNESS TEST: MULTIVARIATE ANALYSIS FOR CAR'S OVER THE ELEVEN DAY EVENT WINDOW (-5,5) AND THE CSR SCORE

The results from our robustness tests on the multivariate regressions used to investigate the relationship between CSR and CAR's over the five-day event window (-5,5) are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. Regression 1 and 3 are regular OLS regressions, while 2 is a 2SLS regression and 4 is a 3SLS regression. The results from the first and second stage regressions can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis for the OLS regressions, while Huber-White standard errors are reported for the instrumental variables regressions when heteroscedasticity is detected in the Breusch-Pagan test.

	OLS CSR Rating	2SLS CSR Rating	OLS High vs. No CSR Rating	3SLS High vs. No CSR Rating
Variable	(1)	(2)	(3)	(4)
CSR measure	-0,0187	-0,0458**	-1,7215***	-1,8472***
	(0,0176)	(0,0231)	(0,5503)	(0,5651)
Other Acquirer Characteristics				
Firm Size	-0,0036	0,0027	0,0031	0,0035
	(0,0081)	(0,0083)	(0,0082)	(0,0083)
Leverage	-0,0767	-0,0857	-0,6910	-0,4582
	(4,0027)	(3,9204)	(1,3684)	(1,3525)
Tobins Q	0,9056***	0,9091***	-0,2155	-0,1776
	(0,2477)	(0,2373)	(0,2385)	(0,2344)
Deal Characterics				
Relative Deal Size	-0,0008**	-0,0008**	-0,0004*	-0,0005*
	(0,0003)	(0,0003)	(0,0003)	(0,0003)
All Cash Deal	0,6736	0,7985*	0,8860*	0,8884*
	(0,4596)	(0,4523)	(0,4903)	(0,4868)
Diversifying Acquisition	-0,1902	-0,0906	0,2603	0,2833
	(0,4752)	(0,4753)	(0,4913)	(0,4876)
Cross Boarder Deal	-0,3741	-0,3879	-0,2157	-0,2260
	(0,5541)	(0,5423)	(0,5565)	(0,5544)
Tender Offer	-0,3267	-0,1959	-0,9278	-0,6831
	(1,1893)	(1,2014)	(1,3760)	(1,3771)
Toehold	3,7537***	3,6838***	-0,9433	-1,0395
	(1,0760)	(1,0533)	(1,1317)	(1,1258)
Hightech	-0,7199	-0,8016	-0,1787	-0,2898
	(0,5216)	(0,5203)	(0,5423)	(0,5332)
Private Target	2,0119**	1,9747**	1,2270	1,2761
	(0,9803)	(0,9827)	(1,2992)	(1,2963)
Intercept	-2,3701	-0,5613	2,6959	2,2602
	(1,9618)	(1,9438)	(1,7941)	(1,5936)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes
Sample Size	677	677	1 461	1 461
Adjusted R^2	0,096	0,091	0,024	0,023
p-values				
Sargan Test		0,282		
Wu Hausman Test		0,14		0,939
Weak Instrument Test		<2e-16 ***		<2e-16 ***

APPENDIX 10: TABLE 2. ROBUSTNESS TEST: MULTIVARIATE ANALYSIS FOR CAR'S OVER THE ELEVEN DAY EVENT WINDOW (-5,5) AND THE DECOMPOSED CSR AND GOVERNANCE SCORE

The results from our robustness tests on the multivariate regressions used to investigate the relationship between CSR and CAR's over the five-day event window (-5,5) are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window, for missing values as well as for the prerequisite of having an E, S and G score at the time of announcement. Regression 1, 3 and 5 are regular OLS regressions, while 2, 4 and 6 are 2SLS regressions. The results from the first stage regressions can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis for the OLS regressions, while Huber-White standard errors are reported for the instrumental variables regressions when heteroscedasticity is detected in the Breusch-Pagan test.

	OLS E Rating	2SLS E Rating	OLS S Rating	2SLS S Rating	OLS G Rating	2SLS G Rating
Variable	(1)	(2)	(3)	(4)	(5)	(6)
E, S, G measure	-0,0137	-0,0313*	-0,0120	-0,0422*	-0,0053	-0,0225
	(0,0131)	(0,0167)	(0,0159)	(0,0241)	(0,0112)	(0,0141)
Other Acquirer Characteristics						
Firm Size	-0,0046	-0,0003	-0,0047	0,0023	-0,0057	0,0003
	(0,0077)	(0,0074)	(0,0081)	(0,0088)	(0,0075)	(0,0078)
Leverage	0,0384	0,1744	-0,1549	-0,3512	-0,0613	-0,0016
	(3,9934)	(3,9190)	(4,0277)	(3,9548)	(4,0423)	(3,9685)
Tobins Q	0,8941***	0,8818***	0,9105***	0,9313***	0,8991***	0,9010***
	(0,2478)	(0,2384)	(0,2507)	(0,2417)	(0,2486)	(0,2409)
Deal Characterics	-0,0008**	-0,0007**	-0,0008**	-0,0009***	-0,0008**	-0,0007**
Relative Deal Size	(0,0003)	(0,0003)	(0,0003)	(0,0003)	(0,0003)	(0,0003)
	0,6569	0,7518*	0,6509	0,7857*	0,6713	0,7570*
All Cash Deal	(0,4609)	(0,4534)	(0,4589)	(0,4522)	(1,4262	(0,4584)
	-0,1991	-0,1180	-0,2111	-0,1106	-0,2507	-0,1762
Diversifying Acquisition	(0,4785)	(0,4740)	(0,4714)	(0,4730)	(0,4821)	(0,4745)
	-0,3679	-0,3925	-0,4163	-0,4592	-0,4642	-0,5105
Cross Boarder Deal	(0,5489)	(0,5310)	(0,5607)	(0,5473)	(0,5708)	(0,5428)
	-0,3152	-0,1878	-0,3886	-0,3038	-0,3915	-0,2303
Tender Offer	(1,1995)	(1,1992)	(1,1910)	(1,1960)	(1,1997)	(1,1873)
	3,7646***	3,7115***	3,7616***	3,6816***	3,7911***	3,7666***
Toehold	(1,0779)	(1,0605)	(1,0794)	(1,0531)	(1,0781)	(1,0461)
	-0,7353	-0,8430	-0,7131	-0,7716	-0,7894	-0,8920*
Hightech	(0,5230)	(0,5212)	(0,5218)	(0,5184)	(0,5276)	(0,5254)
	2,0251**	2,0079**	2,0144**	1,9615**	2,0240**	1,9848**
Private Target	(0,9779)	(0,9826)	(0,9779)	(0,9759)	(0,9715)	(0,9693)
	-2,6375	-1,3165	-2,7239	-0,7501	-3,1263*	-2,0262
Intercept	(1,7390)	(1,7703)	(1,9253)	(1,9294)	(1,6456)	(1,6157)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Sample Size	677	636	677	677	667	667
Adjusted R^2	0,096	0,092	0,095	0,088	0,096	0,609
p-values						
Sargan Test		0,171		0,418		0,199
Wu Hausman Test		0,123		0,146		0,090*
Weak Instrument Test		<2e-16 ***		<2e-16 ***		<2e-16 ***

Appendix 11.

APPENDIX 11: TABLE 1. MULTIVARIATE ANALYSIS BASED ON CAPM BENCHMARKED CAR'S AND THE CSR SCORE

The results from our robustness test on the multivariate regressions used to investigate the relationship between CSR and CAR's over the primary event window (-1,1) are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. Regression 1 and 3 are regular OLS regressions, while 2 is a 2SLS regression and 4 is a 3SLS regression. The results from the first and second stage regressions can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis for both OLS regressions, while Huber-White standard errors are reported for both instrumental variables regressions when heteroscedasticity is detected in the Breusch-Pagan test.

	OLS CSR Rating	2SLS CSR Rating	OLS High vs. No CSR Rating	3SLS High vs. No CSR Rating
Variable	(1)	(2)	(3)	(4)
CSR measure	-0,0191	-0,0384**	-2,2076***	-1,7588***
	(0,0131)	(0,0175)	(0,5274)	(0,5225)
Other Acquirer Characteristics				
Firm Size	-0,0057	-0,0022	-0,0069	-0,0042
	(0,0042)	(0,0046)	(0,0121)	(0,0120)
Leverage	-0,1541	-0,1224	-0,7246	0,1605
	(1,5927)	(1,5529)	(1,1369)	(1,0864)
Tobins Q	0,0869	0,0929	-0,0323	0,0191
	(0,1371)	(0,1313)	(0,1942)	(0,1785)
Deal Characterics				
Relative Deal Size	-0,0006**	-0,0006**	-0,0003	-0,0004
	(0,0003)	(0,0003)	(0,0004)	(0,0004)
All Cash Deal	0,2748	0,2896	0,5873	0,5942
	(0,2932)	(0,3003)	(0,4566)	(0,4328)
Diversifying Acquisition	-0,2419	-0,1794	-0,9764**	-0,3401
	(0,2912)	(0,2922)	(0,4100)	(0,3813)
Cross Boarder Deal	-0,0356	0,0441	-0,0570	-0,3100
	(0,3403)	(0,3426)	(0,4300)	(0,4018)
Tender Offer	0,3303	0,4397	-0,0846	-0,5141
	(0,8136)	(0,8057)	(1,3939)	(1,3078)
Toehold	0,9734*	0,9707*	1,2682	-1,1213
	(0,5590)	(0,5397)	(1,3103)	(1,2287)
Hightech	-0,6504**	-0,6452**	-0,3326	-0,5175
	(0,3213)	(0,3199)	(0,4519)	(0,4187)
Private Target	1,0397	1,0157	1,0174	0,8777
	(0,7612)	(0,7512)	(1,0636)	(0,9890)
Intercept	1,5689	2,3930*	3,0890**	2,9034**
	(1,2226)	(1,3920)	(1,3426)	(1,1782)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes
Sample Size	676	676	1 296	1 472
Adjusted R^2	0,017	0,011	0,026	0,024
p-values				
Sargan Test		0,836		
Wu Hausman Test		0,077*		0,900
Weak Instrument Test		<2e-16 ***		<2e-16 ***

APPENDIX 11: TABLE 2. MULTIVARIATE ANALYSIS BASED ON CAPM BENCHMARKED CAR'S AND THE DECOMPOSED CSR AND GOVERNANCE SCORE

The results from our robustness test on the multivariate regressions used to investigate the relationship between CSR and CAR's over the primary event window (-1,1) are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window, for missing values as well as for the prerequisite of having an E, S and G score at the time of announcement. Regression 1, 3 and 5 are regular OLS regressions, while 2, 4 and 6 are 2SLS regressions. The results from the first stage regressions can be found in Appendix 12. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All coefficients are modelled as percentages. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis for the OLS regressions, while Huber-White standard errors are reported for the instrumental variables regressions when heteroscedasticity is detected in the Breusch-Pagan test.

	OLS E Rating	2SLS E Rating	OLS S Rating	2SLS S Rating	OLS G Rating	2SLS G Rating
Variable	(1)	(2)	(3)	(4)	(5)	(6)
E, S, G measure	-0,0047	-0,0151	-0,0214*	-0,0467***	-0,0094	-0,0210**
	(0,0082)	(0,0108)	(0,0114)	(0,0157)	(0,0078)	(0,0099)
Other Acquirer Characteristics						
Firm Size	-0,0084	-0,0067	-0,0051	-0,0004	-0,0066	-0,0036
	(0,0067)	(0,0069)	(0,0041)	(0,0073)	(0,0040)	(0,0072)
Leverage	-0,1157	0,0117	-0,2812	-0,4106	-0,1184	-0,0307
	(1,2640)	(1,2689)	(1,6118)	(1,2711)	(1,6047)	(1,2761)
Tobins Q	0,0792	0,0749	0,0993	0,1208	0,0892	0,0999
	(0,0752)	(0,0754)	(0,1392)	(0,0764)	(0,1402)	(0,0762)
Deal Characterics						
Relative Deal Size	-0,0006**	-0,0006**	-0,0007**	-0,0007***	-0,0006**	-0,0006**
	(0,0003)	(0,0003)	(0,0003)	(0,0003)	(0,0003)	(0,0003)
All Cash Deal	0,2355	0,2156	0,2776	0,3177	0,2743	0,2557
	(0,3072)	(0,3177)	(0,2893)	(0,3202)	(0,2983)	(0,3223)
Diversifying Acquisition	-0,2767	-0,2287	-0,2405	-0,1726	-0,2625	-0,2164
	(0,3097)	(0,3121)	(0,2876)	(0,3127)	(0,2916)	(0,3151)
Cross Boarder Deal	-0,0874	-0,0249	-0,0565	0,0131	-0,0777	-0,0176
	(0,3533)	(0,3566)	(0,3407)	(0,3534)	(0,3467)	(0,3588)
Tender Offer	0,2648	0,3548	0,3041	0,3981	0,3165	0,4426
	(0,8604)	(0,8637)	(0,8080)	(0,8620)	(0,8153)	(0,8704)
Toehold	0,9933	1,0096	0,9722*	0,9554	1,0106*	1,0438
	(0,8212)	(0,8241)	(0,5633)	(0,8250)	(0,5681)	(0,8288)
Hightech	-0,6625*	-0,6748*	-0,6314**	-0,6010*	-0,6702**	-0,6804*
	(0,3503)	(0,3510)	(0,3215)	(0,3519)	(0,3321)	(0,3578)
Private Target	1,0618*	1,0537*	1,0345	0,9978*	1,0484	1,0249*
	(0,5949)	(0,5961)	(0,7547)	(0,5970)	(0,7561)	(0,6004)
Intercept	0,8369	1,1751	1,6549	2,8059**	0,9568	1,2241
	(0,8739)	(1,0071)	(1,1867)	(1,1650)	(1,0208)	(0,9247)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Sample Size	676	676	676	676	666	666
Adjusted R^2	0,013	0,010	0,020	0,008	0,015	0,010
p-values						
Sargan Test		0,678		0,794		0,688
Wu Hausman Test		0,135		0,041**		0,068*
Weak Instrument Test		<2e-16 ***		<2e-16 ***		<2e-16 ***

Appendix 12.

APPENDIX 12: TABLE 1. THE FIRST STAGE REGRESSION IN THE 2SLS & THE FIRST AND SECOND STAGE REGRESSION IN THE 3SLS REGRESSION

The results from our first and second stage regressions of the multivariate regressions used to investigate the relationship between CSR and CAR's are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. Regression 1 and 3 are regular OLS regressions, while regression 2 is a probit regression. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis for the OLS regressions when heteroscedasticity is detected in the Breusch-Pagan test. The probit regression is reported based on regular standard errors. Marginal effects from the probit regression are reported in hard brackets.

Variable	First Stage 2SLS CSR Rating	First Stage 3SLS Probit Regression High vs. No CSR Rating	Second Stage 3SLS OLS Regression High vs. No CSR Rating
	(1)	(2)	(3)
Scandinavian Dummy	0,8437	0,5427*	
	(0,9935)	(0,2976)	
		[0,0415]	
2 Year Lagged CSR Score	0,4469***	0,3909***	
	(0,0185)	(0,0308)	
Other Acquirer Characteristics			
Firm Size	0,0697***	0,1289***	0,0000
	(0,0172)	(0,0274)	(0,0001)
		[0,0114]	
Leverage	-6,3138*	-1,1554	0,0000
	(3,4251)	(0,9430)	(0,0129)
		'[-0,1019]	
Tobins Q	0,2802	0,1081	-0,0006
	(0,2017)	(0,1029)	(0,0021)
		[0,0095]	
Deal Characterics			
Relative Deal Size	-0,0004	-0,0006	0,0000
	(0,0007)	(0,0008)	(0,0000)
		[-0,0001]	
All Cash Deal	1,1010	-0,2675	0,0009
	(0,8470)	(0,3384)	(0,0051)
		[-0,0261]	
Diversifying Acquisition	0,9593	-0,0379	-0,0013
	(0,8254)	(0,2599)	(0,0045)
		[-0,0033]	
Cross Boarder Deal	0,8161	0,36619	0,0001
	(0,9595)	(0,3224)	(0,0047)
		[0,0326]	
Tender Offer	2,8584	-3,1209***	0,0000
	(2,2860)	(0,5214)	(0,0155)
		[-0,8665]	
Toehold	-0,3443	-7,8205***	0,0003
	(2,2077)	(1,6355)	(0,0144)
		[-0,9732]	
Hightech	0,0458	-0,9254**	0,0004
	(0,9313)	(0,4118)	(0,0049)
		[-0,1094]	
Private Target	1,3560	3,9658***	-0,0001
	(1,5889)	(0,2908)	(0,0117)
		[0,9526]	
Intercept	34,0307***	-6,6270***	0,0009
	(2,3078)	(0,6006)	(0,0139)
Industry and Year Fixed Effects	Yes	Yes	Yes
Sample Size	693	1 546	1 546
Adjusted R^2	0,548	AIC =142,78	0,96

APPENDIX 12: TABLE 1. THE FIRST STAGE REGRESSIONS IN THE 2SLS REGRESSION OF THE DECOMPOSED CSR MEASURE AND GOVERNANCE SCORE

The results from our first stage regressions of the multivariate regressions used to investigate the relationship between CSR and CAR's are presented below. All regressions are conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window, for missing values as well as for the prerequisite of having an E, S and G score at the time of announcement. All regressions are regular OLS regressions. The industry and year fixed effects included are dummy variables controlling for year of announcement and the two digits SIC code. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. White robust standard errors are reported in parenthesis when heteroscedasticity is detected in the Breusch-Pagan test.

	First Stage 2SLS E Rating	First Stage 2SLS S Rating	First Stage 2SLS G Rating
Variable	(1)	(3)	(3)
Scandinavian Dummy	4,8512***	-2,3291*	0,8023
	(1,3025)	(1,2523)	(1,2471)
2 Year Lagged CSR Score	0,5791***	0,4011***	0,6329***
	(0,0270)	(0,0281)	(0,0247)
Other Acquirer Characteristics			
Firm Size	0,0304**	0,0840***	0,0467***
	(0,0154)	(0,0172)	(0,0129)
Leverage	-4,6747	-8,4607**	-7,2447
	(4,1508)	(4,2005)	(5,1011)
Tobins Q	-0,0516	0,6063**	0,5675*
	(0,1836)	(0,2771)	(0,2930)
Deal Characterics			
Relative Deal Size	0,0001	-0,0012*	0,0013**
	(0,0007)	(0,0007)	(0,0005)
All Cash Deal	0,7983	1,0895	0,8644
	(0,9611)	(1,0363)	(1,0598)
Diversifying Acquisition	0,4368	0,9932	1,3836
	(0,9692)	(0,9886)	(0,9950)
Cross Boarder Deal	-0,0021	0,9429	-0,8929
	(1,1885)	(1,2592)	(1,2875)
Tender Offer	1,8048	2,8527	3,4951
	(2,2830)	(2,6278)	(2,3714)
Toehold	-0,2532	-0,4250	3,3492
	(3,0664)	(2,0286)	(3,3702)
Hightech	-0,0309	0,3247	-1,8867*
	(0,9657)	(1,1602)	(1,1231)
Private Target	1,9413	1,0132	0,4754
	(1,8572)	(2,2980)	(1,8516)
Intercept	28,6930***	35,8083***	22,9667***
	(2,9078)	(3,3689)	(2,8825)
Industry and Year Fixed Effects	Yes	Yes	Yes
Sample Size	693	693	683
Adjusted R^2	0,619	0,432	0,677

Appendix 13.

APPENDIX 13: TABLE 1. THE SCHOENFELD RESIDUALS TEST STATISTICS

The p-values from the Schoenfeld residuals test are reported below. The null hypothesis is that the covariate is not time dependent, hence that the covariate has a proportional hazard. The analysis is conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level.

Variable	Private Deals Cox Model CSR Rating (1)	Public Deals Cox Model CSR Rating (2)	Private Deals Cox Model H vs. No CSR Rating (3)	Public Deals Cox Model H vs. No CSR Rating (4)
CSR measure	0,5670	0,4509	0,9910	0,9785
Other Acquirer Characteristics				
Firm Size	0,0222**	0,5892	0,0008***	0,0263**
MB	0,5898	0,1350	0,5426	0,0013***
Deal Characterics				
Relative Deal Size	0,0021***	0,1556	0,1445	0,5957
Toehold	0,2955	0,8722	0,5367	0,0127**
All Cash Deal	0,0961*	0,0117**	0,1376	0,7084
Tender Offer	0,6626	0,2383	0,0839*	0,2762
Diversifying Acquisition	0,2204	0,5340	0,8823	0,0253**
Global	***0,0229****	***0,6266***	***0,0422****	***0,0391****

APPENDIX 13: TABLE 2. THE SCHOENFELD RESIDUALS TEST STATISTICS FOR THE DECOMPOSED CSR MEASURE

The p-values from the Schoenfeld residuals test are reported below. The null hypothesis is that the covariate is not time dependent, hence that the covariate has a proportional hazard. The analysis is conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window, for missing values as well as for the prerequisite of having an E, S and G score at the time of announcement. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level.

Variable	Private Deals Cox Model E Rating (1)	Public Deals Cox Model E Rating (2)	Private Deals Cox Model S Rating (3)	Public Deals Cox Model S Rating (4)	Private Deals Cox Model G Rating (5)	Public Deals Cox Model G Rating (6)
E, S, G measure	0,5230	0,0465**	0,5655	0,9986	0,2910	0,0638*
Other Acquirer Characteristics						
Firm Size	0,0294**	0,8495	0,0061***	0,1821	0,0819**	0,8251
MB	0,6214	0,2696	0,5728	0,0565*	0,7264	0,1474
Deal Characterics						
Relative Deal Size	0,0021***	0,2372	0,0015***	0,2786	0,0006***	0,3780
Toehold	0,3241	0,9202	0,3192	0,9388	0,2947	0,9577
All Cash Deal	0,1176	0,0192**	0,0700*	0,0037***	0,1537	0,0031***
Tender Offer	0,5332	0,6522	0,8448	0,1706	0,7743	0,4291
Diversifying Acquisition	0,1967	0,2844	0,2545	0,6033	0,1031	0,6232
Global	***0,0294****	***0,5454***	***0,0089****	***0,5639***	***0,0243****	***0,4012***

Appendix 14.

APPENDIX 14: TABLE 1. THE PROPORTIONAL HAZARD COX REGRESSION

The results from the multivariate Cox regression used to investigate the relationship between CSR and deal duration are presented below. All regressions are based on the initial dataset of 2 856 observations but adjusted for transactions within the same event window as well as for missing values. Only completed deals are included in the regression. Regression 1 and 2 are based on a continuous CSR rating variable, whereas regression 3 and 4 on CSR availability which is a dummy variable that is 1 if the acquirer has a high CSR score and zero if the acquirer does not have any CSR score. All variables which satisfy the proportional hazard assumption are included in the Cox regression and presented below denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. The hazard ratios are reported as coefficients and the corresponding robust standard errors in parenthesis. Note that a hazard ratio of 1 means that the factor has no impact, a ratio below 1 implies a positive relationship between the predictor and deal duration and a ratio above 1 indicates an opposite relationship.

	Private Deals Cox Model CSR Rating	Public Deals Cox Model CSR Rating	Private Deals Cox Model H vs. No CSR Rating	Public Deals Cox Model H vs. No CSR Rating
Variable	(1)	(2)	(3)	(4)
CSR measure	0,9904***	0,9782**	0,6375***	0,5581**
	(0,0026)	(0,0089)	(0,0662)	(0,2435)
Other Acquirer Characteristics				
Firm Size		1,0068*		1,0019
		(0,0041)		(0,0041)
MB	1,0057	0,9857***	1,0029	
	(0,0056)	(0,0054)	(0,0056)	
Deal Characterics				
Relative Deal Size		1,0007	1,0001***	1,0004
		(0,0006)	(0,0000)	(0,0005)
Toehold	0,6982**	1,0466	1,0119	1,3553
	(0,1635)	(0,4197)	(0,0621)	(0,3727)
All Cash Deal			0,5405***	
			(0,2337)	
Tender Offer	0,6558**	0,8522	0,513***	1,0056
	(0,1735)	(0,3082)	(0,1423)	(0,2387)
Diversifying Acquisition	1,3727***	0,8108	1,1579***	1,1486
	(0,0809)	(0,2607)	(0,0513)	(0,2309)
Industry and Year Fixed Effects	Yes	Yes		Yes
Sample Size	667	78	1465	99
Adjusted R^2	0,075	0,259	0,066	0,182

APPENDIX 14: TABLE 2. THE PROPORTIONAL HAZARD COX REGRESSION IN RELATION TO THE DECOMPOSED CSR MEASURE

The results from the multivariate Cox regression used to investigate the relationship between CSR and deal duration are presented below. All regressions are based on the initial dataset of 2 856 observations but adjusted for transactions within the same event window, for missing values as well as for the prerequisite of having an E, S and G score respectively. Only completed deals are included in the regression. All regressions are based on a continuous CSR rating variable. All variables which satisfy the proportional hazard assumption are included in the Cox regression and presented below denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level. The hazard ratios are reported as coefficients and the corresponding robust standard errors in parenthesis. Note that a hazard ratio of 1 means that the factor has no impact, a ratio below 1 implies a positive relationship between the predictor and deal duration and a ratio above 1 indicates an opposite relationship.

	Private Deals Cox Model E Rating	Public Deals Cox Model E Rating	Private Deals Cox Model S Rating	Public Deals Cox Model S Rating	Private Deals Cox Model G Rating	Public Deals Cox Model G Rating
Variable	(1)	(2)	(3)	(4)	(5)	(6)
E, S, G measure	0,9917***	0,9816**	0,9950**	0,9900	0,9924***	0,9937
	(0,0021)	(0,0080)	(0,0024)	(0,0077)	(0,0020)	(0,0064)
Other Acquirer Characteristics						
Firm Size		1,0085**		1,0040	0,9943***	1,0039
		(0,0041)		(0,0042)	(0,0018)	(0,0043)
MB	1,0045	0,9863***	1,0059	0,9886**	1,0053	0,9904*
	(0,0063)	(0,0046)	(0,0054)	(0,0054)	(0,0058)	(0,0050)
Deal Characterics						
Relative Deal Size				1,0007		1,0005
				(0,0006)		(0,0006)
Toehold	0,7188*	1,0945	0,6735**	1,0777	0,7910	1,1583
	(0,1695)	(0,3597)	(0,1638)	(0,4460)	(0,1530)	(0,4399)
All Cash Deal						
Tender Offer	0,6659**	0,8539	0,6426***	0,7636	0,6811**	0,8204
	(0,1924)	(0,3104)	(0,1309)	(0,3014)	(0,1613)	(0,2960)
Diversifying Acquisition	1,3767***	0,9357	1,3728***	0,8124	1,4237***	0,8502
	(0,0806)	(0,2400)	(0,0811)	(0,2496)	(0,0886)	(0,2519)
Industry and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Sample Size	667	78	667	78	605	78
Adjusted R^2	0,079	0,243	0,064	0,219	0,120	0,214

Appendix 15.

APPENDIX 15: TABLE 1. THE SCHOENFELD RESIDUALS TEST STATISTICS FOR THE PROPORTIONAL HAZARD REGRESSION

The p-values from the Schoenfeld residuals test are reported below. The null hypothesis is that the covariate is not time dependent, hence that the covariate has a proportional hazard. The analysis is conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level.

Variable	Private Deals Cox Model CSR Rating (1)	Public Deals Cox Model CSR Rating (2)	Private Deals Cox Model H vs. No CSR Rating (3)	Public Deals Cox Model H vs. No CSR Rating (4)
CSR measure	0,3051	0,2340	0,2747	0,9492
Other Acquirer Characteristics				
Firm Size		0,6730		0,6047
MB	0,5561	0,7810	0,4670	
Deal Characterics				
Relative Deal Size		0,1100	0,2975	0,1171
Toehold	0,1798	0,9730	0,4522	0,5151
All Cash Deal			0,3586	
Tender Offer	0,2900	0,1820	0,1160	0,8659
Diversifying Acquisition	0,4120	0,5090	0,9334	0,3258
Global	***0,6536***	***0,8800***	***0,5276***	***0,7560***

APPENDIX 15: TABLE 2. THE SCHOENFELD RESIDUALS TEST STATISTICS FOR THE PROPORTIONAL HAZARD REGRESSION FOR THE DECOMPOSED CSR MEASURE

The p-values from the Schoenfeld residuals test are reported below. The null hypothesis is that the covariate is not time dependent, hence that the covariate has a proportional hazard. The analysis is conducted on the initial dataset of 2 856 observations based on the selection criteria in section 4.2, but adjusted for transactions within the same event window as well as for missing values. All variables included are presented below and denoted with the subscript of * for 10% significance, ** for 5% significance and *** for <1% significance level.

Variable	Private Deals Cox Model E Rating (1)	Public Deals Cox Model E Rating (2)	Private Deals Cox Model S Rating (3)	Public Deals Cox Model S Rating (4)	Private Deals Cox Model G Rating (5)	Public Deals Cox Model G Rating (6)
E, S, G measure	0,2100	0,1450	0,4554	0,6203	0,3550	0,0668*
Other Acquirer Characteristics						
Firm Size		0,4080		0,9675	0,1340	0,4879
MB	0,5800	0,9130	0,5755	0,5038	0,6570	0,6217
Deal Characterics						
Relative Deal Size				0,0928		0,2038
Toehold	0,2140	0,7420	0,1645	0,9707	0,3480	0,8214
All Cash Deal						
Tender Offer	0,2870	0,3110	0,2674	0,1255	0,4090	0,2330
Diversifying Acquisition	0,3730	0,4870	0,4934	0,3649	0,1200	0,3095
Global	***0,5780***	***0,9070***	***0,7299***	***0,9126***	***0,4440***	***0,7673***

Appendix 16.

Previous Literature on CSR and its Relation to Risk

The literature on CSR recognize risk reduction as one of the potential benefits associated with CSR activities (e.g. Kim et al., 2014). The stakeholder theory is commonly used in order to motivate such connection, as increased stakeholder support and better access to critical resources are expected to have a risk-reducing effect (El Ghoul et al., 2011). Lins et al. (2017) investigated the implications of CSR during the financial crisis, arguing that stakeholder trust and "social capital" is positively associated with high CSR performance. They demonstrated that high CSR performers tend to perform significantly better in crisis periods when the overall uncertainty is high, which indicates that CSR could be related to a firm's sensitivity to systematic risk. In fact, several researchers have demonstrated a negative association between CSR and risk (e.g., Spicer, 1978)

Methodology

We compared the average variance of the underlying stock of the high CSR performers to the low CSR performance during a specified event window of 11 days, as this is generally regarded to be enough observations to compute a statistically meaningful variance measure. This was examined to see whether higher CSR performing acquirers had a lower variance than the benchmark group did. The CAR's of the equally weighed portfolios between (-5,5) was set relative to the average variance to facilitate a comparison of a risk adjusted return of the higher performing CSR acquirers to the expectedly lower performing acquirers.

APPENDIX 16: TABLE 1. RESULTS OF THE RISK RETURN ANALYSIS

	Full sample N= 2,716				High CSR Subsample N= 392				Low CSR Subsample N= 386				No CSR Rating Subsample N= 1,938			
	Mean	Median	Variance	Risk Adj. Ret	Mean	Median	Variance	Risk Adj. Ret	Mean	Median	Variance	Risk Adj. Ret	Mean	Median	Variance	Risk Adj. Ret
CAR(-5,5)	0,0244***	0,0157***	0,0011	21,92	0,0100***	0,0127***	0,0003	30,26	0,0139***	0,0096***	0,0005	59,41	0,0309***	0,0187***	0,0015	20,97

References

Spicer, Barry H., 1978, Corporate Social Performance and Information Disclosure: An Empirical Study, Accounting Review 53, 94–111