



*“The effect of corporate social performance on shareholder wealth in Mergers & Acquisitions”*

**Master Thesis Finance**

**by**

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## **Abstract**

This thesis investigates the impact of Corporate Social Performance on shareholder wealth around the announcement dates of mergers and acquisitions. The mergers and acquisitions consider only U.S. firms and have taken place in the period of January 1<sup>st</sup> 2003 until December 31<sup>st</sup> 2012. A gap exists in literature when it comes to linking Corporate Social Performance of firms to the shareholder wealth effects in mergers and acquisitions. This thesis tries to fill that gap and add to existing literature by using a sample of 442 U.S. deals, dividing the total sample into four types of deals, based on the social score for both the acquirer as well as the target firm. An event study is performed on three different event windows to find the cumulative average abnormal returns for each group of firm and type of deal. These cumulative average abnormal returns are then compared to each other to find whether a significant difference can be found. Based on the analysis performed in this thesis, I conclude that few significant statements can be made based on this research, as most hypotheses are rejected due to insignificance. However, the cumulative abnormal returns differ and four hypotheses are tested significantly. The main interesting results are for target shareholder's abnormal returns; a field of interest which has not been investigated before. Finally, the thesis gives multiple recommendations for future research.

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## 1. Introduction

*“Corporate Social Responsibility is a hard-edged business decision. Not because it is a nice thing to do or because people are forcing us to do it... because it is good for our business.”*

- Niall Fitzgerald, Former CEO of Unilever

During the past decades, both interest in Mergers & Acquisitions<sup>1</sup> and Corporate Social Responsibility<sup>2</sup> have grown substantially. But the combination of both cannot be overlooked as well. When CSR influences the financial performance of firms, it might just be a relevant factor in M&A too. As research and awareness increase both in M&A and in the field of CSR, it is evident to see what the impact of the combination could be.

As for companies focusing on CSR, there has been a large growth in the 21<sup>st</sup> century. Matten & Moon (2004) however, state that *“despite a vast and growing body of literature on the concept of CSR, defining CRS is not as easy as it might first appear. CSR is an ‘essentially contested concept’ as it is considered appraisive, and different across nations.”* McWilliams and Siegel (2000) explain CSR as the *“actions that appear to further some social good, beyond the interests of the firm and that which is required by the law.”*

Also, scandals concerning e.g. Enron, Bear Sterns and AIG have stirred up both the financial world as well as global news. Deng et al. (2013) state that many U.S. companies have increased investments in CSR, both resulting from pressure from shareholders as well as on a voluntarily basis, when it is in line with the firm’s strategy or vision.

Multiple papers have been written on the effect of CSR on financial performance of firms. However, not much research has been conducted on the effect of CSR on M&A. Aktas et al. (2010) state that *“social and environmental dimensions in M&A decisions generally have been overlooked in the finance literature”*. This creates an interesting opening in the research field for this paper to enquire after.

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<sup>1</sup> Hereafter: M&A

<sup>2</sup> Hereafter: CSR

M&A has been a popular field of interest in financial research for the past years. Most research regarding M&A has shown that a lot of deals, especially for acquirer firms, have not led to the desired increase in shareholder wealth or the creation of value. Shimizu et al. (2004) cite from a KPMG study that only 17% of the (cross-border) M&A deals create value for shareholders, whereas 53% seemed to destroy value. Cartwright and Schoenberg (2006) declare that *“managers of acquiring firms report that only 56% of their acquisitions can be considered successful against the original objectives set for them”*. Commonly, research shows that around 50% of M&A deals can be considered as failures. *“The sobering reality is that only about 20 percent of all mergers really succeed. Most mergers typically erode shareholder wealth (...) the cold, hard reality that most mergers fail to achieve any real financial returns (...) very high rate of merger failure (...) rampant merger failure...”* (Grubb & Lamb, 2000). Current research shows some evidence on factors that are potentially causing either more positive/negative results on shareholder wealth of M&A transactions. Schwert (2000) explains that since researches cite various causes for M&A failure, it is yet to be determined as to what really explains it. However, as stated earlier, more research can be conducted on the impact of CSR and socially responsible investments.

Next to the combination of CSR and M&A, Socially Responsible Investing<sup>3</sup> is also on the rise. The amount invested in SRI funds grew from \$ 2,16 trillion in 2003 up to \$ 3,07 trillion in 2009 (Deng et al., 2013). Also, the total assets under professional management by SRI funds have substantially increased during the last decades. Between 1995 and 2007, this number increased by 250% (from \$7 to \$25 trillion) (Aktas et al., 2010).

Unfortunately, little research exists on the impact of CSR and the forth flowing Corporate Social Performance<sup>4</sup>. To the author’s best knowledge, only two papers empirically look into the influence of CSP when it comes to shareholder wealth in M&A: the work of Aktas et al. (2010) and the work of Deng et al. (2013). Whereas Aktas et al. considered their work to be the first on CSP and M&A, Deng et al. recognize their paper is the second but differs a lot from the first. Some other papers have also checked (theoretical) relationships between CSP and M&A, however the above mentioned papers are the sole two to have performed an event study

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<sup>3</sup> Hereafter: SRI. The Social Investment Forum (2007) defines SRI as “an investment process that considers the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis. Source: Aktas et al., 2010.

<sup>4</sup> Hereafter: CSP

combining these two concepts. Both papers find some evidence on the existence of an influence of CSP on shareholder wealth in M&A. This paper adds to the existing literature as it uses a better dataset compared to Aktas et al. (2010), which use the Innovest database in their research. This paper uses the Kinder, Lydenberg and Domini<sup>5</sup> database instead, as it is considered to be the best when it comes to social scores (Waddock & Graves, 1997). Also, it proposes a different line of tests when compared to Deng et al. (2013), who do use a similar dataset. This leads to an interesting opening in the field of research on CSP and M&A.

Chase et al (1997) believe that an ethical approach and CSR are essential for creating value in the long-run, which would otherwise be disrupted by M&A activity. As CSR creates a stream of positive messages to stakeholders, it is able to create value. Also, as a part of corporate governance and decision-making, CSR is appointed a major element in growth strategies, whereas takeovers<sup>6</sup> are considered as major tools for growth as well (Golja et al, 2012). Moreover, CSR is regarded as a contributing factor to synergetic value-creation from M&A. Following a survey by KPMG LLP, impact of environmental due diligence on M&A deals is quite large; seven out of ten companies have backed out of/renegotiated a deal due to CSR issues following the environmental due diligence.

There appear to be several connections and influences between CSR and M&A, but as stated earlier, not much research has been conducted so far. Therefore in this paper, the linkage between these two concepts will be investigated further.

## 1.1 Research Problem and Objectives

Following the current state of literature, the main research question that will be interesting to conduct will be stated as follows:

*“What is the Effect of Corporate Social Performance on Shareholder Wealth in Mergers & Acquisitions?”*

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<sup>5</sup> Hereafter: KLD. Independent rating agency that specializes in assessing corporate social responsibility.

<sup>6</sup> Takeover: in this paper, the term takeover will be used for all relevant M&A activity.

In order to provide answers to this research question, an event study will be performed on deals in the U.S., then comparing the abnormal returns of different groups of socially well- or badly performing firms. First, this paper conceptualizes CSP and explains the current state of literature on the impact of CSP on financial performance; common M&A literature; and previous research on links between M&A and CSP, and vice versa. Ten hypotheses will test whether CSP influences abnormal returns obtained by shareholders around the announcement dates of mergers or acquisitions.

## 1.2 Thesis Structure

The following part of the thesis is structured as follows. Section 2 represents the theoretical background on all relevant subjects in this paper. Firstly, it describes CSR and CSP and their impact and directions of causality on Corporate Financial Performance<sup>7</sup>. Then, it provides a literature overview of M&A and the impact on shareholder wealth effects stemming from them. Finally, it concludes by linking CSP, M&A and shareholder wealth effects. Section 3 exhibits the 10 hypotheses used to test whether effects of CSP on shareholder wealth in M&A exist, based on Section 2 of this paper. In Section 4, the methodology and data will be explained in detail. Section 5 shows the results from the research and last, Section 6 will provide conclusions, recommendations and limitations of this research.

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<sup>7</sup> Hereafter: CFP.



## 2. Theoretical Background

As mentioned in the introduction part of this paper, a lot of research has been conducted on both CSP as well as M&A; however, the combination has not been studied often. This section describes the theoretical background of empirical research with respect to the (potential) relationship between CSP and shareholder wealth effects following M&A. Section 2.1 conceptualizes CSP and its financial implications, Section 2.2 contains an overview of relevant literature regarding M&A and their effect on shareholder wealth, and finally Section 2.3 will review all existing literature on the specific effects of CSR on financial performance effects related to M&A.

### 2.1 Corporate Social Responsibility

Both the definition of CSR as well as the discussion of the impact of CSR have started from the 1960s, leading to an extensive set of papers on the matter. As time passed and research methods improved, more evidence was gathered on the subject. Friedman (1970) has written an essay stating that businesses do not have social responsibilities, people do. He declares that the only responsibility of firms is to increase shareholder wealth. During the last few decades, research has provided insights in whether there is a relationship between being socially responsible and thereby increasing shareholder wealth.

#### 2.1.1 Corporate Social Performance

CSR policies of firms lead to their actual performance, socially: Corporate Social Performance. Early research is rather inconclusive on the matter; Arlow & Gannon (1982) review some empirical studies on the subject and conclude that financial performance cannot be directly linked to social responsiveness. Cochran & Wood (1984) only find a relationship between asset age and CSP, and indicate that they struggle to find good measures of CSR and CSP, as the reputation indices they use tend to be too subjective, and sample sizes too small. Another difficulty with CSR would be the definition, as it is a rather broad concept. Davis (1973) states that *“social responsibility begins where the law ends”*, and Frooman (1997) defines CSR as actions that *“the firm chooses to take, that substantially affects an identifiable social*

*stakeholder's welfare*". McWilliams & Siegel (2001) define it as *"actions that appear to further some social good, beyond the interests of the firm and that which is required by law"*. However, no clear definition or framework for CSP or CSR has been established yet, as is acknowledged by Wood (1991) and Clarkson (1995). Dahlsrud (2008) analyzes 37 different definitions of CSR , leading to five dimensions recurring in most definitions. These dimensions are backed by frequency counts using Google. Table 1 shows the five dimensions and their corresponding dimension frequency scores.

**Table 1**

Table 1 displays the dimensions and their respective ratio's found.

Dimension	Dimension Ratio
Stakeholder	88%
Social	88%
Economic	86%
Voluntariness	80%
Environmental	59%

Source: Dahlsrud (2008).

CSP captures how firms score on CSR, and is conceptualized by Orlitzky et al (2003) as follows: a firm's *"configuration of principles of social responsibility, processes of social responsiveness, and policies, programs and observable outcomes as they relate to the firm's societal relationships"* (Wood, 1991). Wood also constructs a simple CSP model, which is shown in Table 2 below. He divides CSP into 3 principles, combining social responsibility at the institutional, organizational and individual levels. Explicit links between the 3 principles can be made through this framework, exposing the different channels through which firms can practice CSR.

**Table 2: Wood's Corporate Social Performance Model**

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*Principles of Corporate Social Responsibility*

Institutional Principle: Legitimacy

Organizational Principle: Public Responsibility

Individual Principle: Managerial Discretion

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*Processes of Corporate Social Responsiveness*

Environmental Assessment

Stakeholder Management

Issues

Management

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*Outcomes of Corporate Behavior*

Social Impacts

Social Programs

Social Policies

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Table 2. The Corporate Social Performance Model of Wood (1991). CSP is divided into three principles in this model, each containing another three elements. Source: Wood (1991).

### 2.1.2 Corporate Financial Performance

Literature tries linking CSP to CFP, finding mixed results. Two measures of CFP are generally used in literature; accounting-based measures and market-based measures. McGuire et al. (1988) analyze in their study the importance of the differences in types of measures. They use both accounting-based measures as well as market-based measures, concluding that market-based measures have multiple advantages over accounting-based measures. They tend to be less susceptible to accounting procedures and manipulation, and they represent the opinions and analyses of investors as to whether the firm will be able to generate revenue in the future, instead of solely looking at past performance, as accounting does. The downside of market-based measure, according to Ullmann (1985), would be that basing performance on just the evaluations of investors might not be sufficient.

Margolis et al. (2009) review 192 studies in their meta-analysis, of which approximately one-third uses accounting-based measures, and the other two-third use market-based measures. They quote Mackey et al. (2007) stating that market-based measures are more appropriate when it

comes to measuring the impact on shareholder wealth. Shreck (2011) contributes to this by stating that market-based measures are superior as they fully incorporate all relevant information of the firm when the firm's value is assessed.

### 2.1.3. Linking CSP and CFP

Much research has been conducted on the (potential) relationship between CSP and CFP. Section 2.1.3 summarizes the findings in literature on this topic, and Section 2.1.4 discusses research on the directions (of causality) of these relationships.

Waddock & Graves (1997) indicate that as both the number of social investment funds and the amount of wealth they invest rise, companies rating other organizations on their social responsibility and social behavior, have sprouted. They acknowledge the fact that the ratings services have an impact on investment decisions, and claim that, *ceteris paribus*, “*institutional investors are favorably inclined toward companies with higher corporate social performance*” (Teoh & Shiu, 1990; Waddock & Graves, 1994). Furthermore, they suggest as an underlying theory for a positive linkage that one must look at explicit versus implicit costs. If a firm uses socially irresponsible actions to lower implicit costs, then explicit costs will rise (diminishing competitive advantage). Moskowitz (1972) provides the example of companies with higher social scores being able to attract more (potential) employees. Waddock & Graves (1997) find a positive, reinforcing relationship between CSP and financial performance, providing some evidence for the two different directions of reinforcement. This bi-directionality of this relationship is supported by Orlitzky et al (2003) in their meta-analysis of studies on CSP and CFP. The Waddock & Graves study however is criticized by McWilliams & Siegel (2000), as R&D is omitted from their model. McWilliams & Siegel indicate that since R&D has a major positive influence on financial performance, any variable highly correlated with R&D could be overestimated. They find that CSP and R&D are indeed highly correlated, and that when an R&D variable is included, the positive effect of CSP on financial performance is neutralized. In their 2001 study, they complement to this statement by rationalizing that for two comparable firms, higher CSP leads to higher revenues but also higher costs, and therefore the relationship between CSP and financial performance remains neutral.

Another influence of CSP on investment decisions is discovered by Waddock & Graves in their 1994 study: they indicate that improved CSP leads to lower investment risk. Henceforth, they link risk aversion to a preference for high CSP, further rationalizing that a risk reduction lowers the risk-adjusted discount rate, which in turn would lead to a higher stock valuation by investors, causing managers to try to yield higher CSP.

Hillman & Keim (2001) make a clear distinction in CSR, dividing it into stakeholder management on one side and social issue participation on the other side. They find a positive relation between stakeholder management and Market Value Added (their indicator of shareholder wealth creation/destruction), but a negative relation between social issue participation and Market Value Added. However, they question their research method as most other tests they use produce insignificant results. Dowell et al. (2000) find evidence that there is a positive relationship between the market value of firms and their environmental performance. Measuring the quality of firms through Tobin's  $q$ , they find that firms with higher CSP are valued at a premium. Adapting to more stringent standards is declared to be more profitable than defaulting to lower (local) standards.

A more theoretical approach is brought by Orlitzky et al (2003), claiming that CSP increases managerial competencies, organizational knowledge on its market, social, environmental and political environments (enhancing organizational efficiency) and boosts the firm's reputation and creates goodwill to external stakeholders. The combination of these elements is ought to increase CFP.

Renneboog et al. (2008) find that investors investing through SRI funds pay a price; the average risk-adjusted returns of these funds underperforms benchmark funds (in most countries) by -2,2% to -6,5% per year. Potential explanations are intensive screening by SRI funds and the fact that companies with high ethical scores may be overpriced in stock markets. Renneboog et al. (2007) had already found evidence that CSR is associated with higher shareholder value; however, no clear evidence was discovered on the direction of causality.

Goss & Roberts (2008) investigate the relationship from a different point of view; whether banks regard CSR as value-maximizing or value-destroying, by looking at the impact of CSR on the cost of private debt. They consider banks to be solid monitors of firms, and figure there could be

a possibility for banks to discriminate on firms' CSR. This is backed by the reputational perspective on CSP as considered by Frombrun & Shanley (1990), stating that a firm's communication regarding CSP with external parties (such as investors and banks) may help build a more positive image of the firm. They hypothesize that if the stakeholder theory on CSR holds, and investments in CSR lead to lower risk and improved financial performance, then banks could favor loan terms for companies scoring high on CSR. They do not find strong evidence however; firms with high or medium scores on CSR do not gain any favors or premiums, but firms with low CSR scores do meet small but significant penalties of up to 20 bps.

Yang et al. (2010) also indicate in their research that firms can increase CSP by lowering short-term CFP, thereby increasing long-run CFP. The rationale is that firms invest (short-term) in their CSP, leading to an enhanced company image/reputation, which in turn will lead to multiple advantages concerning different stakeholders, boosting the companies' financial performance in the future. Their empirical research in the Taiwanese market shows a lot of insignificant results however, as controlling for R&D and size is necessary, and the positive relation between CSP and RoA<sup>8</sup> is not supported by the relation between CSP and RoE<sup>9</sup> or RoS<sup>10</sup>.

Servaes & Tamayo (2012) also find some points of relatedness between CSR and firm value, indicating two factors of importance in this relationship. First, for firms with high public awareness, CSR activities can enhance firm value, whereas the effect of CSR activities is insignificant or negative for firms with low public awareness. Next, participating in CSR activities should be in line with the firm's reputation. If the firm has poor reputation, engaging in CSR activities could even result in a negative impact.

Another positive relationship is discovered in the research of Dimson et al (2013). They find evidence that engaging in CSR activities increases the one-year abnormal returns for companies in the U.S. by 1,8% . However, they are not entirely sure whether the causality might in fact be reversed; that CSR activities are undertaken because the stock market reacted positively before.

Throughout decades, a lot of different relationships between CSP and CFP have been discovered. Table 3 shows a collection of outcomes of papers on the subject.

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<sup>8</sup> Return on Assets

<sup>9</sup> Return on Equity

<sup>10</sup> Return on Sales

**Table 3.**

Influences of Corporate Social Performance on Corporate Financial Performance discovered in existing literature. Sorted on chronological order. Ten papers find positive relationships; four are neutral; and six find negative links between CSP and CFP.

Author	Year	Positive/Neutral/Negative
Bragdon & Marlin	1972	Positive
Moskowitz	1972	Positive
Bowman & Haire	1975	Positive
Parket & Eibert	1975	Positive
Vance	1975	Negative
Alexander & Bucholz	1982	Neutral
Shane & Spicer	1983	Neutral
Caroll et al	1985	Neutral
Ullmann et al	1985	Neutral
Aupperle et al	1985	Negative
Marcus & Goodman	1986	Negative
Wokutch & Spencer	1987	Positive
McGuire et al	1988	Positive
Lerner & Fryxell	1988	Negative
Holman et al	1990	Negative
Waddock & Graves	1997	Positive
Wright & Ferris	1997	Negative
Posnikoff	1997	Positive
Orlitzky et al	2003	Positive
Barnett & Salomon	2006	Positive

Source: multiple papers

#### 2.1.4 Direction of Causality

In the majority of the papers that investigate whether a significant link exists between CSP and CFP, authors conclude that despite them finding a significant relationship, in most cases it is unclear what the direction of the causality behind this relationship is. For example, Renneboog et al. (2007) conclude that the question whether CSR is priced by capital markets remains unanswered. They state that, despite the fact that CSR is associated with higher shareholder value; no clear evidence is found on the direction of the causality.

Years of research on CSR provide multiple theories on the relationship between CSP and CFP. Waddock & Graves (1997) question whether better CSP results in better financial outcomes, or whether financially well-performing companies simply have more money to spend on CSR, obtaining higher CSP scores. Orlitzky et al (2003) produced a meta-analysis on this topic containing these theories, summarized below, of which the most used theories are the Good Management Theory and the Slack Resources Theory.

The Good Management Theory, sometimes also referred to as the Instrumental Stakeholder Theory, suggests that a positive link exists between CFP and CSP (Orlitzky et al, 2003). The theory implicates that financial performance can be boosted by satisfying various stakeholders across the firms. It is also conjectured that CFP will go up due to the alignment and coordination of the interests of the different types of stakeholders. By obtaining high CSP, the firm's competitive advantage is bolstered (Jones, 1995). By conducting their meta-analysis, Orlitzky et al (2003) find a positive relationship between CFP and CSP following this theory, denying any potential halo effects.

The Slack Resources Theory, which might be referred to in existing literature as the Temporal Sequence Theory (Orlitzky et al, 2003), also implicates that a positive relationship exists between CFP and CSP. However, this theory suggests a reversed causality in which (prior) CFP boosts CSP. When firms have high levels of CFP, it might provide the firm with considerable excess funds to engage more in CSR, raising the CSP level of the firm consequently (McGuire et al, 1988; Ullman, 1995; Waddock & Graves, 1997). This theory is also supported by Orlitzky et al (2003), following their results stemming from the meta-analysis. They conclude that the bi-directionality in causality exists.

## **2.2 M&A's and Shareholder Wealth Effects**

For decades, research has been conducted in the field of mergers and acquisitions. In Section 1, it shows that an extensive literary framework of papers exists on the effects of M&A on shareholder wealth, as is investigated in this paper. Many factors turn out to be of importance when it comes to indicating the correct variables responsible for the change in shareholder wealth of announcement returns. This section summarizes the research conducted in this field so



far, gathering an overview of drivers/variables determining M&A success/failure in Table 6<sup>11</sup>, and providing an overview of abnormal returns found in research in M&A in Table 7<sup>12</sup>.

Jensen and Rubach (1983) state that despite the fact that much research is needed in this field, they can conclude that corporate takeovers (in the U.S.) generate positive gains for shareholders, as target firm shareholders gain, and bidder firm shareholders do not lose. Franks & Harris (1989) indicate that for U.K. takeovers, no conclusive evidence yet exists. They increase the sample size to 1955-1985, then finding significant (on average) value-creation for shareholders of target firms and as for bidder firm shareholders, value remains equal. Healy et al. (1990) find, for U.S. firms, that there is a strong positive relation between mergers and abnormal stock returns around announcement dates, as well as higher post-merger operating cash flows for the merged company.

Franks et al. (1991) take a closer look at post-merger performance instead of solely looking at abnormal returns around the announcement dates. They question whether the abnormal returns in the long run are caused by methods of payment, size and if they are adjusted for risk. They consider the possibility that positive abnormal returns around the announcement date are due to overoptimistic expectations, which will not be met or realized in the future. The efficiency of the market is challenged; it is questioned whether the market fully incorporates all existing information into the share prices, especially around the date of announcement. They conclude that the negative post-merger performance discovered in earlier research is more likely due to benchmark errors than to mispricing. Several portfolios are constructed, each leading to a different result, varying from negative to positive outcomes. The measurement they consider most appropriate leads to insignificant results.

As to explanations of the abnormal returns around the announcement date, Grinblatt and Titman (2002) state that the stock return at the time of the bid cannot be completely attributed to the expected effect of the acquisition on profitability, arguing that: *“the stock returns of the bidder at the time of the announcement of the bid may tell us more about how the market is reassessing the bidder’s business than it does about the value of the acquisition.”* Hietala et al. (2000) note that the announcement of a takeover reveals information about the potential synergies in the combination, the stand-alone values of the bidder(s) and target(s), and the bidder overpayment.

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<sup>11</sup> Table 6 is listed at the end of Section 2

<sup>12</sup> Table 7 is listed at the end of Section 2

They argue that it is often impossible to isolate these effects and thus know the meaning of the market's reactions to a takeover announcement.

Datta et al. (1992) perform a meta-analysis of 41 studies on the wealth creation of mergers and takeovers. In their empirical review they find shareholder gains for target firms of 22 percent, whereas shareholder gains for bidder firms account for 0,5 percent. They use a five-factor model to analyze shareholder wealth gains or losses when it comes to M&A. The five factors they use are regulatory changes (in 1968 and 1969), number of bidders, type of transactions (mergers vs. tender offers), type of payment (cash vs. stock) and type of acquisition (conglomerate vs. non-conglomerate). The results and directions of these factors are included in Table 6.

Loughran & Vjih (1997) found in previous research that abnormal returns for shareholders of target companies are always positive, whereas those for shareholders of bidder companies are neutral to slightly positive for tender offers and negative for mergers. They analyze the post-acquisition returns in the period of 1970-1989 by using a sample of 947 U.S. firms. Their results enforce some existing statements in M&A research, and contribute by indicating that even though short-term wealth gains for target companies are generally positive; these wealth gains diminish over time, sometimes leading to negative long-term wealth gains for target company shareholders. Agrawal & Jaffe (1999) also conclude that, when regarding long-term shareholder wealth, a negative impact is found when it comes to mergers, and a non-negative impact when regarding tender offers.

The differences in abnormal returns between the U.S. and European market are supported by Cybo-Ottone & Murgia (2002), who take a closer look at M&A in (European) banking. In contrary to previous research on banking M&A in the U.S. market, where they claim no significant value is created on average, they find positive and significant increases in stock market value at the announcement date, on average. The differences between the U.S. market and the European market are explained as the result of different regulations and structure.

Andrade et al. (2001) show a table containing announcement period abnormal returns of U.S. companies during the 70's, 80's and 90's, which is presented in Table 4 below.

**Table 4**

Announcement Period Abnormal Returns listed by Decade. The total time period runs from 1973-1998. The first three columns show CAARs per decade; the fourth column combines the three decades.

	1973-1979	1980-1989	1990-1998	1973-1998
<i>Combined</i>				
[-1,1]	1,5%	2,6%	1,4%	1,8%
[-20,Close]	0,1%	3,2%	1,6%	1,9%
<i>Target</i>				
[-1,1]	16,0%	16,0%	15,9%	16,0%
[-20,Close]	24,8%	23,9%	23,3%	23,8%
<i>Acquirer</i>				
[-1,1]	-0,3%	-0,4%	-1,0%	-0,7%
[-20,Close]	-4,5%	-3,1%	-3,9%	-3,8%

Source: Andrade et al. (2001)

This table shows the returns for both the announcement [-1, 1] period as well as a period of 20 days prior to the announcement until the actual closing of the merger [-20, close]. They explain that abnormal returns are fairly stable between decades. They state that “*the long-term negative drift in acquiring firm stock prices overwhelm the positive combined stock price reaction at announcement, making the net wealth effect negative.*” This gives a simple but fit presentation of average abnormal returns found in M&A literature.

They also show in Table 5 below the differences in stock-financed, cash-financed mergers and mergers of large size. This table shows significant differences in methods of payment, as payments in stock result in considerably lower abnormal returns for both firms, regardless of the event window. Abnormal returns turn out positive (combined) even when controlled for size.

**Table 5**

This table shows the Announcement Period Abnormal Returns, showing the impact of all-Stock offers, all-Cash offers and of offers impacted by the Relative Size (Large Targets).

	<i>Stock</i>	<i>Cash</i>	<i>Large Targets</i>
<i>Combined</i>			
[-1,1]	0,6%	3,6%	3,0%
[-20,Close]	-0,6%	5,3%	6,3%
<i>Target</i>			
[-1,1]	13,0%	20,1%	13,5%
[-20,Close]	20,8%	27,8%	21,6%
<i>Acquirer</i>			
[-1,1]	-1,5%	0,4%	-1,5%
[-20,Close]	-6,3%	-0,2%	-3,2%

Source: Andrade et al. (2001)

They also find differences in Market-to-Book ratios, in the long-term, whereas acquired firms with high MTB (value firms) can lead to a 7,6% increase in shareholder wealth, contrary to the 17,3% decrease in shareholder wealth for firms acquired with low MTB (growth firms).

Fuller et al (2001) contribute to the existing collection of empirical literature by investigating the differences in abnormal returns when it comes to bidder firms. Acquiring firms turn out to have significantly negative returns when acquiring a public firm, and significantly positive returns when acquiring private firms. The difference is dedicated to the (il-)liquidity of firms, as private firms cannot be traded as easy as public firms, so acquirers could face an illiquidity discount when acquiring private firms. When checking for payment method, they find that for firms acquiring private firms, it does not matter whether the deal is paid for by cash or stock. When it comes to firms acquiring public firms, there is a difference: when stock is offered, negative returns occur whereas cash offers result in no significant returns. Grinblatt & Titman (2002) add that the returns at the announcement date cannot be entirely attributed to the implication of the takeover on profitability; the abnormal returns might inform better how the market reassesses the acquirer firm's business than the actual value of the takeover itself. Hietala et al. (2002) contribute by stating that the takeover announcement informs about the (potential) synergies of

the takeover, the separate values of the acquirer and target firm and the premium involved with the takeover. They remark that as it is hard or nearly impossible to isolate these four values, hence it is hard to establish the reaction of the market to the announcement as too many factors are involved in the returns around the announcement date.

Beitel et al. (2004) study European M&A in banking to see whether the explanatory drivers in U.S. M&A also check out in Europe. They find large consistencies between these two markets and indicate that the 13 drivers they found can partly be used to forecast the abnormal results in stock prices at announcement dates. The contrast they find between U.S. and European M&A's is that in Europe, less active/inexperienced bidders outperform more active/experienced bidders, contrary to U.S. research.

Rossi and Volpin (2004) and Shimizu et al. (2004) investigate the drivers of success in cross-border M&A's, and consider both the U.S. as well as the European market. Shareholder protection turns out to be a major factor influencing the balance in cross-border versus domestic takeovers. Moreover, the takeover premium is higher in countries with larger shareholder protection, and that in countries with lower shareholder protection, a cash offer is more frequent than stock offers.

Moeller et al. (2004) investigate wealth effects of M&A's, focusing on the size of companies. Despite relative but small gains for acquirers in abnormal returns (1,1%), in absolute values they find losses, pointing to a potential size effect in acquisition announcement returns. They reckon that small firms make better acquisitions, which could potentially be explained by the fact that small firms' acquisitions mostly target private firms, whereas large firms target more public firms. Following Fuller et al (2001), this should be in line with the degree of success of the acquisition. The size effect could further be explained by the notion that small firms are more likely to pay by cash than by stock, which has been largely agreed on in literature to generate more positive abnormal returns.

Martyna & Renneboog (2005) state that six studies have revealed that for target firms in some cases the run-up sometimes exceeds the announcement effect; potential causes are appointed such as insider trading and rumors. This should be taken into consideration when deciding on the event window chosen for the event study. They also observe that on average, the bidder firm's

share price tends to decline in the five years following the announcement.

Straub(2007) further analyzes the different dimensions of M&A, identifying several variables to be considered in the process of making a deal. They consider three dimensions as reasons for potential M&A failure: the strategic logic perspective (selecting the wrong target), the organizational behavior perspective (poor integration of the target firm) and the financial perspective (overpaying by the bidder firm). Within each dimension, they point out various sub-dimensions, of which the results are shown in Table 6. A somewhat similar framework is constructed by Bauer & Matzler (2013), they sub-divide the strategic perspective into a process perspective and a strategic perspective.

**Table 6**

This table shows per author, which determinant factors have been discovered in literature.

The direction shows either a positive (+) or negative (-) signal. The Firm Type can be Combined (C), Acquirer (A) or Target (T) firm. E.g. a cash offer has a positive influence on the abnormal returns of both the Target as well as the Acquirer firm (combined firms).

<b>Author</b>	<b>Year</b>	<b>Determinant</b>	<b>Direction</b>	<b>Firm Type</b>
Renneboog	2003	Cash Offer	+	C
		Hostile Offer	+	C
		Target has high MTB	-	A
		Domestic	+	C
Datta	1992	Regulatory Changes ('68 & '69)	-	A
		Regulatory Changes ('68 & '69)	+	T
		Number of Bidders	-	A
		Number of Bidders	+	T
		Tender Offer (ifo Merger)	-	A
		Tender Offer (ifo Merger)	+	T
Bruner	2001	Focus (ifo Diversification)	+	C
		MTB - Value (ifo Glamour)	+	C
		Low equity stake of Manager	-	C
Fuller	2001	Target is Private (ifo Public)	+	C
Beitel	2004	Product Focus	+	A
		Geographic Focus	+	A
		Target's Relative Asset Size	+	T

Campa	2004	Regulated Industry	-	C
		High Management Involvement	+	C
Morck	1992	R&D Intensity/Quality Higher	+	C
		Management Quality Higher	+	C
Flugt	2009	UK Firms (ifo European firms)	+	C
Straub	2012	Acquirer Acquisition Experience	+	C
		Due Diligence	+	C
		Similarity	+	C
		Complementarity	+	C
		Acquisition Premium Paid	-	C
Bauer	2013	Target is from Less-Developed Country	+	C

Source: Multiple papers (listed in the Table).

**Table 7**

Table 7 shows a selection of papers displaying CAARs for either the acquirer company, both the acquirer and the target company or for the acquirer, target and combined firm. The last column shows the event window used in their research.

<b>Author</b>	<b>Year</b>	<b>Target</b>	<b>Acquirer</b>	<b>Combined</b>	<b>Event window</b>
Eckbo et al	1990		2,1%		[0,20]
Morck et al	1990		-0,7%		[-2,1]
Loderer & Martin	1990		0,7%		[-5,0]
Franks et al	1991	28,0%	-1,5%	3,9%	[-5,5]
Jennings & Mazzeo	1991		-0,8%		[-1, 0]
Servaes	1991	23,6%	-1,1%	3,7%	[-1, Close]
Kaplan & Weisbach	1992	26,9%	-1,5%	3,7%	[-5,5]
Byrd & Hickman	1992		-1,2%		[-1, 0]
Sirrower	1994		-2,3%		[-1,1]
Schwert	1996	26,3%	1,4%		[-42,126]
Higson & Elliott	1998	31,5%	0,2%		[0,20]
Higson & Elliott	1998	37,5%	0,4%		[0, Close]
Walker	2000		-0,8%		[-2,2]
Leeth & Borg	2000		3,1%		[-40,0]
Mitchell & Stafford	2000		-0,1%		[-1,0]
Mulherin & Boone	2000	21,2%	-0,4%	3,6%	[-1,1]
DeLong	2001	16,6%	-1,7%		[-10,1]
Houston et al	2001	20,8%	-3,5%	1,9%	[-4,1]
Graham et al	2002	22,5%	-0,8%	3,4%	[-1,1]
Sudarsanam & Mahate	2003		-1,4%		[-1,1]
Sudarsanam & Mahate	2003		0,1%		[2,40]
Bradley & Sundaram	2004		1,5%		[-2,2]
Ang & Cheng	2006	26,1%	-0,5%		[-1, Close]

Source: Multiple papers (listed in the table)



## 2.3 Influence of CSP on Shareholder Wealth

As stated in Section 1 of this paper, social investing is on the rise, as can be concluded from the increasing number of SRI funds and the value of their investments. Strugatch (2011) state that the rankings compiled by researchers in SRI funds increasingly inform not only personal investments and fund acquisitions, but also corporate M&A activity around the world. They also cite a Thomson Reuters study that says that “82 percent of investors evaluate environmental, social and governance criteria as part of their investment decision because they believe these actions impact share price.” If social behavior by firms is thought to impact share price, then it is reasonable to consider the effect of social behavior of firms within mergers or acquisitions. SRI funds however, are left out of this research on purpose, as this paper focuses solely on mergers and acquisitions, and the influence of CSP on the shareholder wealth effects associated with those takeovers<sup>13</sup>.

Davidson and Worrell (1988) try to capture the effects of announcements of corporate illegalities on shareholder returns by conducting an event study. Their event study results in the finding that there is a significant negative impact of social irresponsibility on the stock price, but only at the announcement date and the day immediately after. Rao and Hamilton (1996) contribute to this conclusion by researching this on a much broader sample of firms and their stock prices, leading to the same conclusion as drawn by Davidson & Worrell.

Following these studies on the negative side of CSR influence on stock prices, Hall and Rieck (1998) investigate whether announcements of positive social behavior has effect on stock prices. Although Anderson and Frankle (1980) had already found that firms that voluntarily disclosed social responsibility information earned higher returns than firms that do not, their study was no event study; making the Hall and Rieck study very relevant with respect to adding to the existing literature. Their sample of U.S. firms as a whole does not generate significant effects, but they find that when they split up CSP and investigate individual characteristics, some are significant. Donations and environmental-friendly behavior is significantly positively awarded through stock prices. All of the other variables turn out insignificant in their study. Fisher-Vanden and

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<sup>13</sup> SRI is included to point out the increasing market for social investing, and the increasing awareness by investors and financial markets for CSP.

Thorburn (2008) also investigate whether announcements of positive social behavior influences stock prices. They analyze whether U.S. firms announcing they will join the Climate Leaders, a climate change program, has an effect on the shareholder wealth. Their study shows that these firms face small but significant negative returns around the announcement of the firm joining this program.

Next to shareholder wealth effects, research exists on the influence of CSP on other factors of M&A, such as the integration speed following the takeover. Homburg and Bucerius (2006) state that M&A failure can often be attributed to firms being unable to achieve the objectives set within the right time, from an economic point of view. Buckley and Ghauri (2002) found that integration between firms after the takeover benefits most from high internal relatedness. When firms' CSR policies are aligned, or similar, this could improve the speed of integration.

Aktas et al. (2010) provide a paper which investigates whether stock markets reward bidder firms for making socially responsible investments; they question whether financial markets care for socially responsible investing, and provide evidence from takeovers. They conduct an event study on the acquirer firm abnormal returns around the announcement date of a takeover, analyzing the target firms' social and environmental performance, in the period 1997-2007. In contrary to this paper, the scores they use to establish CSP are taken from the Innovest Group's ratings<sup>14</sup>. They also select completed deals, of which the deal size should be over \$1 million, and both the acquirer as well as the target firm should be listed. Their final dataset contains 106 deals, which is much smaller than the dataset used in this paper. The endogeneity issues as discussed in Section 2.1.4 are avoided in this case, as the financial performance of one company is related to the social performance of a different company. Therefore, the direction of causality of CSP and CFP as described in Section 2.1.4 is evaded in this research.

Aktas et al. (2010) find positive, significant results in their research; acquirer abnormal returns are positively related to target firm's CSP. They also conclude it is economically substantial; an increase of 1 point in the target's CSP rating (on 7-unit scale) leads to a 0,9% abnormal return increase for the acquiring firm. Moreover, the acquirer firm's CSP score also increases following

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<sup>14</sup> Constructed by the Innovest Strategic Value Advisors Group. Their Intangible Value Assessment measures 120 performance factors, amongst others governance, human capital, emerging markets, environmental opportunities. Two components of the IVA score are environmental and social ratings, which are used in the Aktas et al. (2010) paper. The companies are rated from AAA (best) to CCC (worst) in this database.

the takeover of an SRI aware target. Last, they try to discover the source of the value creation they found, and use two perspectives for this: the learning versus the disciplinary view. The learning view suggests that the acquirer firm's rating will go up after acquiring a target firm with a high social score. The disciplinary view states that socially responsible companies should be targets of disciplinary takeover bids more often (following theory of market for corporate control) (Jensen & Ruback, 1983). They find evidence that rejects the disciplinary view, but that does not reject the learning view.

Deng et al (2013) also examine whether higher CSP creates value for acquirer firms' shareholders in the U.S. market in the period 1992-2007. Their research is much more alike this paper. They decide however, to solely use mergers in their research and exclude acquisitions. The rationale is that it will bias a part of their research which is less relevant to this paper. To make sure they do not draw wrong conclusions, to control they also check the influence on shareholder wealth, this time including acquisitions. A few coefficients turn insignificant, but most of the results remain almost unaltered. They even state that *"It is worth noting that if high CSP firms undertake actions that benefit other stakeholders and thus ultimately benefit shareholders, they should engage in good mergers as well as good acquisitions."* Their paper is based on two types of views on CSP; the stakeholder value maximization view and the shareholder expense view. The first implicates a positive effect of CSP on shareholder wealth whereas the second view suggests that CSP is achieved at the expense of shareholders, and consequently shareholder wealth.

Deng et al use the same database for CSP scores as this paper: the KLD database. They use an elaborate sample of 1556 deals of U.S. firms. In contrary to this paper, they use a 2SLS regression analysis on the CSP score, and only consider the abnormal returns for acquirer firms. They find evidence that there is a significant positive effect of CSP ratings on announcement stock returns in mergers, both on short-term as well as in the long-run. Also, mergers by companies with high CSP scores tend to take less time and have lower probabilities of failure compared to mergers by companies with low CSP scores.

Also, Deng et al. (2013) try to counter the fact that firms with high CFP will also be able to spend more on CSR, improving their CSP. This might in turn bias the research. They state however that *"For example, firms with good performance may invest more in CSR, so that firms*

*with high CSR show high Tobin's q or good accounting performance (McGuire et al., 1988). This concern is partially alleviated by using abnormal announcement returns associated with unexpected events such as mergers.*" The use of mergers and/or acquisitions is ought to reduce the bias.

### 3. Hypotheses

Based on the theoretical background to this paper, as described in Section 2, several hypotheses can be formulated which might show potential influences of firms' CSP on the shareholder wealth effects surrounding takeover announcement dates. This paper considers both the differences in returns for acquirer firms as well as differences in returns for target firms.

Following the research provided by Aktas et al. (2010) and Deng et al. (2013), which are to my best knowledge the only existing papers which resemble this paper, an impact of social performance on abnormal returns in M&A is expected.

Aktas et al. (2010) find that acquirer firms are rewarded for making socially responsible investments in M&A; their abnormal returns are higher when taking over a company with higher CSP. However, they do not state whether a difference exists if the acquirer firm has a high CSP or not. Deng et al. (2013) compare acquirer firms' abnormal returns, finding that acquirers with higher CSP acquire higher abnormal returns than acquirer firms with low CSP.

This paper will try to explain the various relations and differences between target firms and acquirer firms further by presenting ten hypotheses in total in this Section. In Section 4, the methodology and set-up of the research is explained in detail, and shows what steps are necessary to undertake to test the following hypotheses. This paper divides both the acquirer firms as well as the target firms into two categories of CSP: High and Low social performance. Few theoretical fundamentals however were found for the specific hypotheses in this Section, so intuition will also play a major role in constructing the hypotheses. In order to prevent speculation, rationales behind hypotheses will be brief.

This research finds, for each deal, the respective CAR<sup>15</sup> and KLD score for both the acquirer firm as well as the target firm. When combined with the takeovers, this leads to 4 types of possible deals:

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<sup>15</sup> Cumulative Abnormal Return

- 1) A firm with a “High” KLD score acquires a company with a “High” KLD score.
- 2) A firm with a “High” KLD score acquires a company with a “Low” KLD score.
- 3) A firm with a “Low” KLD score acquires a company with a “High” KLD score.
- 4) A firm with a “Low” KLD score acquires a company with a “Low” KLD score.

Table 8 below shows these four types of deals.

**Table 8**

Table 8 shows the four types of deals used in this research. The numbers refer to the four types of deals stated above Table 8.

		<b>Target</b>	
		<i>High CSP</i>	<i>Low CSP</i>
<b>Acquirer</b>	<i>High CSP</i>	(1)	(2)
	<i>Low CSP</i>	(3)	(4)

Source: Own paper

Table 8 illustrates these four types of deals. The CARs of the acquirer companies and target companies are accumulated and then averaged into CAARs<sup>16</sup>, so that each type of takeover has a set of 2 CAARs; one for the acquirer firm and one for the target firm. These CAARs will be compared in order to check whether the following hypotheses hold. The tests used to test the hypotheses are explained in Section 4 of this paper. First, seven hypotheses are provided for acquiring firm and then, three more hypotheses remain from the perspective of target firms.

<sup>16</sup> Cumulative Average Abnormal Returns

### 3.1 Hypotheses for Acquirer Firms

The following hypotheses are constructed from the perspective of acquirer firms, and will compare the CAARs of acquirer firms only. The hypotheses are sorted by the four types of deals discussed earlier.

*H1: Acquiring firms with High CSP scores acquiring targets with High CSP scores will obtain higher abnormal returns than acquiring firms with Low CSP scores acquiring targets with High CSP scores.*

The rationale behind this hypothesis is that firms with highly rated CSR policies taking over firms which also have highly rated CSR policies, will be easily adapting and integrating (Aktas et al., 2010). This might lead to higher synergies and speed of integration, which could be captured in the stock prices around the announcement date (Buckley & Ghauri, 2002). This hypothesis is not in line however, with the work of Deng et al. (2013). They suggest that high CSP acquirers will realize lower abnormal returns than their low CSP counterparts, following their research.

*H2: Acquiring firms with Low CSP scores acquiring targets with High CSP scores will obtain higher abnormal returns than acquiring firms with High CSP scores acquiring targets with High CSP scores.*

This hypothesis is the opposite of H1; the explanation for this hypothesis is that a different point of view when it comes to this comparison would be the fact that the acquiring firm can adopt the target firm's CSR policies and know-how, thereby increasing its own CSP. Moreover, it could send out a positive signal showing they are willing to invest in highly rated CSR policies, which could be rewarded by the stock market. This "learning" is mentioned in Section 2, and is also supported by Aktas et al. (2010).

*H3: Acquiring firms with High CSP scores acquiring targets with Low CSP scores will obtain higher abnormal returns than acquiring firms with Low CSP scores acquiring targets with Low CSP scores.*

This hypothesis tests whether, when a firm with Low CSP score is acquired, a firm with High CSP will obtain higher returns than a firm with Low CSP. This would be in line with the projections by Aktas et al. (2010) and Deng et al. (2013).

*H4: Acquiring firms with Low CSP scores acquiring targets with Low CSP scores will obtain higher abnormal returns than acquiring firms with High CSP scores acquiring targets with Low CSP scores.*

This hypothesis, compared to hypothesis 3, conjectures less friction as CSR policies are less distant from one another. Integration will be less hard compared to the type of deal used in hypothesis 3.

*H5: Acquiring firms with High CSP scores acquiring targets with High CSP scores will obtain higher abnormal returns than acquiring firms with High CSP scores acquiring targets with Low CSP scores.*

When taking over or merging with a firm scoring Low on CSP, the integration process could be disturbed and a lack of synergies could show. Relatively, compared to target firms highly rated on CSR, the signal provided by the takeover could be negative, which could be imprinted in the results surrounding the announcement date. Also, by taking over a company scoring well on CSP, the signal sent out by the merger might be more positive. Fisman et al. (2006) consider good CSP can be a credible signal of firm trustworthiness (in providing quality products), which could also back the argument that taking over a firm with a high CSP score could also be a powerful positive signal.

*H6: Acquiring firms with High CSP scores acquiring targets with Low CSP scores will obtain higher abnormal returns than acquiring firms with High CSP scores acquiring targets with High CSP scores.*

The possibility exists that target firms with higher social scores, are to be taken over at a higher premium compared to target firms scoring Low on CSP. Paying higher premiums might reduce the abnormal returns for acquirer firms.



*H7: Acquiring firms with Low CSP scores acquiring targets with High CSP scores will obtain higher abnormal returns than acquiring firms with Low CSP scores acquiring targets with Low CSP scores.*

This hypothesis is supported by the thought that the acquiring firm can adopt the target firm's CSR policies and know-how, thereby increasing its own CSP. This is backed by the learning theory in Aktas et al. (2010). Moreover, it could send out a positive signal showing they are willing to invest in highly rated CSR policies, which could be rewarded by the stock market. Fisman et al. (2006) back this theory, which is already explained at hypothesis 5.

### **3.2 Hypotheses for Target Firms**

The following hypotheses are constructed from the perspective of acquirer firms, and will compare the CAARs of acquirer firms only. The hypotheses are sorted by the four types of deals discussed earlier.

*H8: Target firms with High CSP scores acquired by acquirer firms with High CSP scores will obtain higher abnormal returns than target firms with High CSP scores acquired by acquirer firms with Low CSP scores.*

High premiums are expected to be paid in these takeovers, and combined with the expected synergies, shareholders of the target company with a High CSP score are expected to be rewarded for this. A higher premium invokes more wealth, which is transferred to the target firm's shareholders.

*H9: Target firms with Low CSP scores acquired by acquirer firms with High CSP scores will obtain higher abnormal returns than target firms with High CSP scores acquired by acquirer firms with High CSP scores.*

For this hypothesis, both target firms are expected to receive a premium, as the acquirer has a high CSP score (as discussed in previous hypotheses). Abnormal returns however might be higher for target firms with Low CSP scores as the abnormal returns for the acquirer firm might be higher as well. This is explained at hypothesis 1, following the research of Deng et al. (2013).

*H10: Target firms with Low CSP scores acquired by acquirer firms with High CSP scores will obtain higher abnormal returns than target firms with Low CSP scores acquired by acquirer firms with Low CSP scores.*

As the acquirer firm has a good reputation on CSP, it is likely to have a good overall reputation, which could incur higher premium paid<sup>17</sup>. Target firms with Low CSP scores acquired by firms with already highly rated social performance are likely to need to adapt to the social standards of the acquirer company. Therefore, their CSP score will most likely rise after the merger or takeover. The growth potential of this transaction therefore could positively boost abnormal returns around the announcement date.

**Table 9**

This table provides an overview of the hypotheses in this section. E.g. Hypothesis 1 proclaims that the CAARs of Acquirers with High CSP acquiring targets with High CSP are larger than the CAARs of Acquirers with Low CSP acquiring targets with High CSP.

<b>Number</b>	<b>CAAR (1)</b>	<b>&gt;</b>	<b>CAAR (2)</b>
H1	Acq. High acquires Tar. High	>	Acq. Low acquires Tar. High
H2	Acq. Low acquires Tar. High	>	Acq. High acquires Tar. High
H3	Acq. High acquires Tar. Low	>	Acq. Low acquires Tar. Low
H4	Acq. Low acquires Tar. Low	>	Acq. High acquires Tar. Low
H5	Acq. High acquires Tar. High	>	Acq. High acquires Tar. Low
H6	Acq. High acquires Tar. Low	>	Acq. High acquires Tar. High
H7	Acq. Low acquires Tar. High	>	Acq. Low acquires Tar. Low
H8	Tar. High acquired by Acq. High	>	Tar. High acquired by Acq. Low
H9	Tar. Low acquired by Acq. High	>	Tar. High acquired by Acq. High
H10	Tar. Low acquired by Acq. High	>	Tar. Low acquired by Acq. Low

<sup>17</sup> Discussed in hypothesis 8.

## 4. Data Description & Methodology

This Section explains and describes the data used for this research in Section 4.1, then the variables taken into account in Section 4.2, and last explains the methodology of this paper in Section 4.3.

### 4.1. Data Description

This section explains what datasets are used and why, and from which sources the data is retrieved. Also, descriptive statistics on the data are exhibited.

The sample used in this research consists of U.S. firms only. Due to the fact that the KLD database mainly rates U.S. firms, it is necessary to leave out non-U.S. firms in order to obtain a CSP score for each firm in the sample. The KLD database provides us primarily with data on recent years, but since the sample is expected to be small (Aktas et al., 2010) as the involved firms in M&A need to have both a KLD score as well as available data on stock prices, the sample period is set at January 1<sup>st</sup> 2003, until December 31<sup>st</sup> 2012. With all deals found, the sample size is set at 507 deals. Not every deal could be matched to the right data, some deals were corrupted or incomplete, and for some companies, data was not available (or not for the right period of time). The final sample size was therefore set at 442 deals.

Three databases are used to create the dataset for this research, as data is needed on 1) stock prices, 2) M&A, 3) CSP scores. The data of stock prices will be retrieved from the Thomson Reuters DataStream database<sup>18</sup>. It is important to make sure all prices will be included from the event window used in this research. This window is set at [-40,40]. Within this event window, multiple windows can be selected and reviewed. These event windows will be elaborated on in Section 4.3. The market index used is the S&P 500 Index, retrieved from CSRP. The estimation window used in this research is [-200,50]. The estimation window is used to predict the normal returns during the event window. This is explained further in Section 4.3.

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<sup>18</sup> DataStream is the largest financial statistics database, containing information on various asset classes, indices and other economical data.

The deals taken into account in this research are retrieved from the Thomson Reuters Securities Data Company<sup>19</sup> Mergers and Acquisitions Database<sup>20</sup>. Following Aktas et al. (2010) and Deng et al. (2013), the value of the deals taken into consideration has to exceed 1 million U.S. dollars, and the deal has to be completed. Deng et al. checked for robustness and included deals under 1 million U.S. dollars, finding no significant changes in general. Also, the company status has to be public and only mergers and acquisitions are accepted as deal forms.

The third database needed is the database that will be used to obtain the CSP scores for the firms. Multiple databases exist on social performance, amongst which the KLD database, which is used in this research, the Fortune ratings and Innovest<sup>21</sup> ratings. The latter are used in the 2010 paper of Aktas et al., it contains measures of 120 performance elements, combined into the Intangible Value Assessment (IVA). This consists of two major components: Environmental and Social ratings. The use of this rating system is backed by Becker & Gluck (2004), Derwall et al (2005) and Ringov & Zollo (2007). The Fortune rating is considered to be too general (Waddock & Graves, 1997) instead of clearly rating for CSP. Waddock & Graves (1997) prefer using the KLD database, which they regard as the best when it comes to social scores, this is also backed by Waddock (2003) and Schreck (2011), and Wood (1995, 1997) states that the KLD database is the best database on overall CSP. The KLD database covers more firms than the Fortune database (van der Laan et al., 2008), firms are rated on more than just one criterion relevant for CSP scores, and KLD uses more sources to establish the scores than the Fortune ratings do. Also, Griffin & Mahon (1997) state the Fortune database to be more ambiguous and very perceptual in its measurements. The downside of the KLD database is considered the absence of weights adjusted to each dimension (which could be done manually however).

The KLD database evaluates firms on a binary scale, considering thirteen categories, each containing several elements relevant to CSP. They can be either strengths or concerns; when cumulated they present a score which, if higher, represents higher CSP. The different dimensions of the KLD Database have been placed in Appendix II, showing all of the thirteen dimensions, with both strengths as well as concerns.

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<sup>19</sup> Hereafter: SDC

<sup>20</sup> Informatie neerzetten over deze database

<sup>21</sup> Innovest Strategic Value Advisors

The CSP score in this research has been calculated by adding up all strengths of the firm, and then subtracting all the concerns. This leads to a variable ranging from minus 10 to plus 8 throughout the entire sample. Tables 13 and 14 in Section 5 shows the distribution of the sample per social score.

## 4.2. Other Variables

In Section 2 of this paper, several variables with explanatory power on M&A were found in previous research in the M&A field. These variables are generally accepted to being able of creating shareholder value in M&A. Because of the fact that this research does not perform a regression on the CSP score, but compares means, one may assume that the following proxy variables will affect all firms evenly. To make sure that e.g. relative size does not affect acquirers with High social scores more than acquirers with Low social scores (or any other type of deal), a correlation matrix for both Target CSP as well as Acquirer CSP are attached in Appendix I.

The following variables are taken into account in this research and included in the analysis:

- **Relative Size:** This variable can be defined as the equity market value of the acquirer on the day before the event window, divided by the sum of the equity market values of the acquirer and the target on the day before the event window. The source used to retrieve this data is Datastream.
- **Tender Offer:** A dummy variable was constructed, being 1 if the offer was a tender offer and 0 if not. Tender offers are known to involve high premiums in the deals, which would increase target firm's shareholders wealth but decrease the shareholder wealth for acquirer firms.
- **Cash versus Stock:** The way that the bid is financed is also of importance for the data, so a dummy variable was constructed being 1 if the deal is fully cash-financed. Section 5 also contains descriptive statistics on the distribution of Cash-financed, Stock-financed

and Mixed-financed deals in this study. Cash offers provide higher returns than stock offers in general.

- **Number of Bidders:** Datta et al. (1992) show that when more than one bidder is involved, the competitiveness is bound to go up. Competitiveness is likely to lead to higher transaction values, which also improve abnormal returns for target firm shareholders but decrease them for acquirer firm shareholders.
- **Transaction Value:** The value of the transaction is also considered to be a variable of importance in the literature on M&A. Larger deals have more impact and could lead to more response by shareholders.
- **Friendly vs. Hostile offers:** A dummy variable is created here, being a 1 if the offer is a hostile bid. Hostile offers have turned out to lead to higher abnormal returns on average when compared to friendly offers (Martynova & Renneboog, 2008).
- **Industry/Diversification:** Much research on M&A has found that unrelated takeovers generate lower abnormal returns compared to a deal between two firms which are in the same industry. The dummy variable for this variable is a 1 if the SIC codes of the two companies are a match, and a zero if not.
- **Target RoE:** The target firm's Return on Equity can be considered as a measure of how well the target firm performs; when it performs better, the premiums invoked are supposed to be higher, leading to higher abnormal returns for shareholders of the target firm and lower abnormal returns for the acquirer firms' shareholders.

### 4.3. Methodology

This section contains two subsections which describe the different methodologies used in this research. The first subsection provides the methodology necessary for executing the event study; how to calculate the abnormal returns, leading to the shareholder wealth effects around announcement periods. The second subsection examines the test statistics used in this thesis

### 4.3.1. Event Study Methodology

The framework for the event study methodology used in this research is provided by Brown & Warner (1985). They present three types of measuring returns: Mean-adjusted returns, Market-adjusted returns and the Ordinary Least Squares<sup>22</sup> market model. The latter is used in this research, to provide the abnormal returns needed in order to successfully run the tests to compare CAARs. Also, MacKinlay (1997) further explained in detail the use of event studies within the field of Accounting and Finance. In order to establish whether there is value created or destroyed due in the transaction of interest, the abnormal returns<sup>23</sup> for both acquirer and target firm are needed.

In order to find the normal returns, the returns that are predicted to have occurred in absence of the M&A announcement, the following market model is used (Fama et al, 1969):

$$R_{jt} = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt} \quad (1)$$

Here,  $R_{jt}$  is the return for firm  $j$  on day  $t$ ;  $\alpha_j$  is the OLS intercept;  $\beta_j$  is the OLS slope;  $R_{Mt}$  is the market return on day  $t$ ;  $\varepsilon_{jt}$  is the regression residual. These normal returns are estimated over the estimation window [-200,-50]. The total event window lies in [-40,40]; the regressions will be run for all three event windows, so also the [-1,1] and the [-5,5] windows. The estimation window remains the same throughout the study.

First, the normal returns are calculated for the event window:

$$NR_{jt} = \widehat{\alpha}_j + \widehat{\beta}_j * R_{Mt} \quad (2)$$

Here,  $NR_{jt}$  is the normal return of a stock  $j$  on day  $t$ ; and  $\widehat{\alpha}_j$  and  $\widehat{\beta}_j$  are the firm-specific parameter estimates following the regression in (1). Next, the abnormal returns will have to be

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<sup>22</sup> Hereafter: OLS

<sup>23</sup>In an efficient market, abnormal returns around an announcement date measures the wealth creation for shareholders. (Aktas et al, 2010)

calculated. They can be defined as the actual return found through Datastream, minus the normal return as predicted by equation (2).

The corresponding abnormal returns can be calculated by using:

$$AR_{jt} = R_{jt} - (\alpha_j + \beta_j R_{Mt}) \quad (3)$$

In order to measure the short-term wealth effects for both the acquirer as well as the target firm, the cumulative average abnormal returns<sup>24</sup> are calculated.

First, the average abnormal returns<sup>25</sup> can be calculated as follows:

$$AAR_t = \frac{\sum_{j=1}^N AR_{jt}}{N} \quad (4)$$

Then, the CAARs can be calculated through equation (4):

$$CAAR_t = \sum AAR_t \quad (5)$$

In order to calculate the CAARs not only for acquirer and target firms, but also the combined CAARs, the following formula is used:

$$CAAR^C = \frac{(CAAR^T * MV^T) + (CAAR^A * MV^A)}{MV^T + MV^A} \quad (6)$$

Here, the  $CAAR^C$  is the CAAR of the combined firms in the deal;  $CAAR^T$  is the CAAR of the target firm;  $CAAR^A$  is the CAAR of the acquirer firm;  $MV^T$  is the market value of the target firm<sup>26</sup>;  $MV^A$  is the market value of the acquirer firm<sup>27</sup>.

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<sup>24</sup> Hereafter: CAARs

<sup>25</sup> Hereafter: AARs

<sup>26</sup> Taken from the day before the event window (Source: Datastream)

<sup>27</sup> Also taken from the day before the event window (Source: Datastream)



The event windows used in this research all lie in a total window of [-40, 40]. Table 10 depicts the event windows used.

**Table 10**

This table shows the selected event windows and their respective phases in the merger or acquisition process.

<b>Window</b>	<b>Phase</b>
[-40,40]	Run up, Announcement, Post-bid
[-5,5]	Announcement
[-1,1]	Announcement

Source: own paper

By combining these different event windows, most of the abnormal effects surrounding the announcement of the merger or acquisition should be captured. The pre-announcement period taken into account in the [-40,40] window can capture effects of rumors and/or insider trading (Goergen & Renneboog, 2003). Also, they state that evidence exists that bids follow rising stock prices, and when starting the measurement period too early, M&A returns may be overstated. Starting the event window 40 days prior to the announcement should capture a big part of the rumors and insider trading, excluding non-M&A related run-up.

#### 4.3.2. Test Statistics

This subsection will provide an overview of the test statistics and methodologies used to effectively provide an answer to all hypotheses in this thesis. Both parametric as well as non-parametric tests will be used. The proxies as stated in Section 4.2 are included to prevent biases from occurring and effects to be appointed to the influence of CSP whereas it might not be relevant.

##### 4.3.2.1 CAAR Test Statistic

First, the test statistic for the CAARs will be established.

The one-day test statistic is:

$$\frac{AR}{\sigma(AR)} \text{ where } \sigma(AR) = \sqrt{\frac{1}{151} \sum (AR_t - \overline{AR})^2} \quad (7)$$

The following test-statistic is used to test the significance of the CAARs:

$$\frac{CAAR}{\sigma(AR)\sqrt{T}} \quad (8)$$

The results of these calculated CAARs and their respective test statistics are shown in Section 5 of this paper. In this research, significance is marked by \*, \*\* and \*\*\* which denote the statistical significances at the 10%, 5% and 1% levels respectively.

#### 4.3.2.2 Tests for comparing CAARs

The ultimate goal of this paper however, is to compare the CAARs of different groups. This can be done by either parametric or non-parametric tests. This paper deals with independent samples. For each type of deal as displayed in Table 8 of Section 3, two tests will be conducted; one from the perspective of the acquirer firm; one from the perspective of the target firm. So, in total, eight groups of CAARs will be compared to eight other groups of CAARs.

The parametric test used in this thesis is a two-sample t-test, comparing the two groups (created by sorting on CSP score, explained in Section 3 and 4.1). The following test statistic is used:

$$t = \frac{\overline{CAAR_1} - \overline{CAAR_2}}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} \quad (9)$$

The non-parametric test used in this thesis, which does not assume normality, is the Wilcoxon Mann-Whitney<sup>28</sup> test. It compares two groups of independent data, testing whether the two groups have identical distribution functions or not. Barber & Lyon (1996) state that a Wilcoxon signed-rank test statistic is far more powerful than a parametric t-test. This test is performed in Stata by using the ranksum command.

The test places an element from a sample in a rank; based on the number of lower-valued observations in the other sample which it is compared to. It is denoted by U. The mean placement is an arithmetic mean of all these U's (Feltovich, 2002). The test statistic of the WMW test is:

$$Z = \frac{U(YX) - \frac{n}{2}}{\sqrt{\frac{n(m+n+1)}{12m}}} \quad (10)$$

Where Z is the statistic; U is the rank placement of the element from the sample; and Y and X are the two samples used in the research.

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<sup>28</sup> Hereafter: WMW test

## 5. Empirical Results

In this Section, the empirical results of the analyses made in this research are provided. This section is divided into multiple subsections: Section 5.1 shows summary statistics and descriptive statistics of the data used in this research; Section 5.2 shows the cumulative (average) abnormal returns for both the acquirer, target and combined firms in M&A; Section 5.3 provides an overview of the results of analyses supporting the tested hypotheses.

### 5.1 Summary & Descriptive Statistics

This subsection contains more information on the dataset and its descriptive statistics that are relevant to this paper. The 442 remaining deals used in this paper can be divided into different types of takeovers, financed in different ways and of various sizes. Table 11 shows some specifications on the deals used in this paper.

**Table 11**

This table shows the deals in the sample distributed along type of merger/acquisition; the dummy variables used in Section 4, and the Transaction and Enterprise values. Also, it shows the percentages of each distribution.

	M&As	
	Number	Percentage
Total Sample	442	100%
Mergers	404	91%
Hostile Acquisitions	13	3%
Friendly Acquisitions	6	1%
Multiple Bidders	19	4%
Tender Offer	69	16%
Same Industry	185	42%
Merger of Equals	8	2%
All-Cash Offers	180	41%
All-Equity Offers	85	19%
Mixed Offers	177	40%
Transaction Value (\$m)	2537,96	
Enterprise Value (\$m)	4400,73	

Source: own calculations

Out of the 442 M&As flowing from the selected sample, 404 were appointed as mergers by the SDC database. A portion of 38 deals is considered as an acquisition by SDC, of which 13 are indicated as being of a hostile nature, and 6 being a friendly acquisition. The remaining 19 deals, with multiple bidders, can also be classified as hostile (Goergen & Renneboog, 2003). Eight deals are considered as a merger of equals in this sample.

Furthermore, 69 of the 442 deals are considered as a tender offer, and 185 of the deals have been made between two firms who operate in the same industry<sup>29</sup>. When it comes to financing the deal, 180 offers are cash-only, and 85 are consisting only of equity. The rest of the offers is a mixture of cash and equity. Finally, the average transaction value involved in the deals is 2537,96 (in \$ millions) and the average enterprise value is 4400,73 (in \$ millions).

**Table 12**

This table shows the number of deals distributed per year, and the proportion of this distribution.

Year	Number of Deals	Proportion
2003	27	6,11%
2004	61	13,80%
2005	59	13,35%
2006	64	14,48%
2007	70	15,84%
2008	26	5,88%
2009	34	7,69%
2010	41	9,28%
2011	26	5,88%
2012	34	7,69%
Total	442	100%

Source: Own calculations

Table 12 shows the number of deals taken place per year of this dataset; in the period of 2003-2012. It shows that most deals took place before the emergence of the credit crisis; during the period of 2004-2007, which accounts for more than half of the deals in this sample. Tables 13 and 14 will show the distribution of the deals per CSP rating for acquirer firms and target firms, respectively.

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<sup>29</sup> Based on use of SIC Codes; a U.S. system for classifying industries by four-digit codes. SIC stands for Standard Industrial Classification.

**Table 13**

This table shows, for the acquirer firms in this sample, the distribution along the social scores.

<b>Acquirer Firms</b>		
CSP Score	Number of Deals	<i>Proportion</i>
-10	1	0,23%
-9	1	0,23%
-8	1	0,23%
-7	1	0,23%
-6	3	0,68%
-5	2	0,45%
-4	14	3,17%
-3	16	3,62%
-2	41	9,28%
-1	86	19,46%
0	123	27,83%
1	72	16,29%
2	21	4,75%
3	20	4,52%
4	18	4,07%
5	4	0,90%
6	10	2,26%
7	5	1,13%
8	3	0,68%
Total	442	100,00%

Source: Own calculations

This table pictures the distribution of the 442 deals made from the perspective of the acquirer firms' CSP scores, which vary from -10 being the most negative score to 8 being the most positive score. It clearly indicates that a very large part of over 50% of the total deals is clustered near zero, in a [-1,1] social performance window.

**Table 14**

This table shows, for the target firms in this sample, the distribution along the social scores.

<b>Target Firms</b>		
CSP Score	Number of Deals	<i>Proportion</i>
-10	1	<i>0,23%</i>
-6	2	<i>0,45%</i>
-5	1	<i>0,23%</i>
-4	7	<i>1,58%</i>
-3	14	<i>3,17%</i>
-2	47	<i>10,63%</i>
-1	101	<i>22,85%</i>
0	155	<i>35,07%</i>
1	80	<i>18,10%</i>
2	20	<i>4,52%</i>
3	9	<i>2,04%</i>
4	5	<i>1,13%</i>
Total	442	<i>100,00%</i>

Source: Own calculations

This table pictures the distribution of all 442 deals in the sample from the perspective of the target firms' CSP scores, varying from -10 to 4, with the exception of negative scores -9, -8 and -7. Much alike the distribution of deals from the acquirer firms' perspective as displayed in Table 13, most M&As reside in the [-1,1] social performance window. One noticeable point of interest flowing from these distributions in tables [4] and [5] is that target firms have only 4 deals outside the [-4,4] social performance window, whereas for acquirer firms this adds up to 31 deals.

## 5.2 Announcement Period Cumulative Abnormal Returns

This subsection contains the results of the event study performed in this paper. After having used the OLS regression to find the cumulative abnormal returns for each deal, the CAARs were calculated in order to provide a sound overview before analyzing and comparing them (of which the results are presented in Section 5.3). All three event windows mentioned in Section 4 are presented in the tables below. Table 15 displays the CAARs for the target and acquirer combined as well (in contrary to the other tables). As the analysis is purely based on acquirer and target

CAARs and combined CAARs do not play a role, they are left out in the remainder of the research.

**Table 15**

This table shows the CAARs for the acquirer firms in this total sample, the target firms, and the combined CAARs of each deal. T-values and p-values are listed next to them, for all three event windows.

<b>Acquirer Firms</b>			
Event Window	CAAR (%)	t-value	p-value
[-1,1]	-1,42%	-4,61***	0.000
[-5,5]	-2,04%	-4,55***	0.000
[-40,40]	-2,89%	-2,87***	0.004
<i>Observations</i>	442		
<b>Target Firms</b>			
Event Window	CAAR (%)	t-value	p-value
[-1,1]	20,72%	22,28***	0.000
[-5,5]	21,87%	21,36***	0.000
[-40,40]	26,54%	18,19***	0.000
<i>Observations</i>	442		
<b>Combined</b>			
Event Window	CAAR (%)	t-value	p-value
[-1,1]	1,59%	5,04***	0.000
[-5,5]	1,18%	2,81***	0.005
[-40,40]	1,61%	1,7*	0.090
<i>Observations</i>	442		

Source: Own calculations

As explained in Section 2, and was displayed in Table 7, normally target firms acquire high abnormal returns around the announcement date of a takeover, whereas acquirer firms obtain small negative (or insignificant) returns. Combined CAARs are usually small positive abnormal returns. Table 15 show that the results from the research in this paper are in line with the results in Section 2. As for the acquiring firms, the CAARs are slightly more negative than in most research on value creation in M&A, however they are all significant at the 1% level. As the event window extends, the CAARs decrease and show more negative results. On average, value is destroyed for acquirer firms in this sample. For target firms, CAARs are large and positive, increasing as the event window is extended. All results for target firms are also significant at the 1% level. When the CAARs of the firms combined are calculated, they are small but positive, and significant at the 1% level for the [-1,1] and [-5,5] event windows. The combined CAAR for the [-40,40] event window is significant only at the 10% level.



In general, this shows that the CAARs accompanying the deals in this sample are generally in line with other research in M&A and are all significant. Moreover, it confirms that value is on average destroyed for acquirer firms but target firms' shareholders are positively rewarded around the announcement dates of takeovers. Last, on average it shows that value is created through the M&As in this dataset, as the positive returns for target firms offset the slightly negative returns for the acquirer firms.

The next two tables show, per event window, the CAARs for both the acquirer and target firm and their respective t-statistics. First, Table 16 depicts these CAARs of the deals wherein the acquirer firm has a High CSP score, and for the deals wherein the acquirer firm has a Low CSP score. Table 17 presents the CAARs for the deals wherein the target firm has a High CSP score, and next the deals wherein the target firm has a Low CSP score.

**Table 16**

This table shows the CAARs for the deals in this sample, based on the acquirer firm's social score. First, the CAARs for both the target as well as the acquirer firm are displayed for the deals wherein the acquirer firm had a High CSP score.

The second box shows the CAARs for both firms for the deals wherein the acquirer had a Low CSP score.

<b>Acquirer Firms</b>				
<b>High CSP</b>				
Event Window	CAAR Acq. (%)	CAAR Tar. (%)	t-value	t-value
[-1,1]	-1,66%	20,79%	-4,47***	17,54***
[-5,5]	-2,51%	22,01%	-4,59***	18,26***
[-40,40]	-4,15%	28,24%	-3,65***	14,82***
<b>Low CSP</b>				
Event Window	CAAR Acq. (%)	CAAR Tar. (%)	t-value	t-value
[-1,1]	-1,02%	20,60%	-1,89*	13,69***
[-5,5]	-1,26%	21,63%	-1,63	11,67***
[-40,40]	-0,79%	26,76%	-0,42	10,93***

Note: \*, \*\*, \*\*\* denote the statistical significance at the 10%, 5%, and 1% level respectively.

This table shows that the CAARs of the target companies are all significant at the 1% level, as well as the acquirer firms' CAARs for the deals made by acquirer firms with high social scores. When acquirer firms with low social scores merge or take over firms, their CAARs are insignificant, except for the CAAR in the [-1,1] event window, which is significant only at the 10% level.

From this table, one may notice several (small) differences in CAARs. CAARs for target firms turn out higher, when the acquirer has High CSP, but CAARs for acquirer firms are lower when they have a high social score. All of the significant CAARs increase as the event window is extended.

**Table 17**

This table shows the CAARs for the deals in this sample, based on the target firm's social score. First, the CAARs for both the target as well as the acquirer firm are displayed for the deals wherein the target firm had a High CSP score. The second box shows the CAARs for both firms for the deals wherein the target had a Low CSP score.

<b>Target Firms</b>				
<b>High CSP</b>				
Event Window	CAAR Acq. (%)	CAAR Tar. (%)	t-value	t-value
[-1,1]	-1,72%	20,19%	-4,4***	16,61***
[-5,5]	-2,35%	21,26%	-3,86***	15,25***
[-40,40]	-3,40%	26,18%	-2,73***	13,94***
<b>Low CSP</b>				
Event Window	CAAR Acq. (%)	CAAR Tar. (%)	t-value	t-value
[-1,1]	-0,94%	21,54%	-1,89*	14,94***
[-5,5]	-1,55%	22,82%	-2,41**	15,56***
[-40,40]	-2,10%	30,01%	-1,24	12,06***

Note: \*, \*\*, \*\*\* denote the statistical significance at the 10%, 5%, and 1% level respectively.

When checking the CAARs for the deals from the perspective of target firms, which are divided on base of their social score (either High or Low), most CAARs are significant at the 1% level too. In case of the target firm having a Low social score, the acquirer firms' CAARs are

insignificant ([-40,40] event window), significant at the 10% level (for the [-1,1] event window) or at best significant at the 5% level (concerning the [-5,5] event window).

Noticeable about these results are the fact that, alike Table 17, CAARs increase as the event window grows larger. The target firms' CAARs turn out higher when they have a Low CSP score compared to target firms scoring High on CSP. As for acquirer firms, their CAARs are lower when the target firm's social score is High, compared to Low (however, CAARs for acquirers taking over firms with Low CSP are less significant).

Finally, before testing the hypotheses by comparing different CAARs to each other, Table 18 depicts the CAARs per situation as described in Section 3 of this paper. For each of the four situations, it shows the number of deals and their corresponding CAAR (for all three event windows) for both the acquirer firm as well as the target firm. Also, the t-statistic is shown for each CAAR.

**Table 18**

This table shows the CAARs per situation, as they will be compared for analysis in the next Subsection. It displays the number of deals present in each type of deal, with their respective CAARs and t-values.

		Acquirer CAAR					
		[-1,1]	[-5,5]	[-40,40]			
Situation	Number				t-value	t-value	t-value
AHTH	177	-2,02%	-2,91%	-3,76%	-4,3***	-4,09***	-2,92***
AHTL	99	-1,02%	-1,79%	-4,85%	-1,69*	-2,14**	-2,22**
ALTH	92	-1,17%	-1,27%	-2,70%	-1,65	-1,12	-1,01
ALTL	74	-0,82%	-1,23%	-1,58%	-0,99	-1,22	0,6

  

		Target CAAR					
		[-1,1]	[-5,5]	[-40,40]			
Situation	Number				t-value	t-value	t-value
AHTH	177	19,00%	19,92%	26,56%	12,85***	12,92***	11,48***
AHTL	99	24,01%	25,75%	31,22%	12,29***	13,74***	9,39***
ALTH	92	22,50%	23,84%	25,45%	10,59***	8,55***	7,88***
ALTL	74	18,24%	18,90%	28,40%	8,75***	8,31***	7,54***

Note: \*, \*\*, \*\*\* denote the statistical significance at the 10%, 5%, and 1% level respectively.

When taking a look at the t-statistics of this table, one can immediately notice the fact that all CAARs of target firms are significant at the 1% level. This does not hold for the significances of the acquirer CAARs, however. In the situation where an acquirer with a High social score acquires a target with a High social score, all CAARs are significant at the 1% level as well. When a firm with High CSP acquires a firm with Low CSP, things are different. The [-1,1] CAAR is only significant at the 10% level, and the [-5,5] and [-40,40] CAARs are significant at the 5% level. In both situations where the acquiring firm has a Low social score, the acquirer firms' CAARs are insignificant.

The absolute differences in CAARs are noticeable in this table. Despite the fact that the differences will be tested in the next subsection (5.3), to see whether they are statistically significantly different from one another, they will be examined here first. As for the target firms' CAARs; the CAARs tend to increase with the duration of the event window. This is in line with the results of the average research in M&A. When comparing between types of situations, CAARs are higher for situations wherein the firms do not have matching CSP scores; if both score Low, or if both score High, the abnormal returns are considerably lower for the [-1,1] and [-5,5] event windows. Still, all of the CAARs hover between 18% and 32% and thus are strong and positive.

As for the acquiring firms' CAARs, these decrease with the duration of the event window. All are negative and lie between 0 and minus 5%. Here, it seems that the CAARs are slightly more negative for acquirers with High CSP. This might be due to the fact that they might be paying higher premiums<sup>30</sup>. Also, when comparing, one may notice that CAARs are slightly more negative when they concern target firms with High CSP compared to their Low CSP equivalents (situation-wise). Whether these differences hold statistically, and thus influence the hypotheses stated in Section 3, will be tested in the next subsection.

### 5.3 Analysis

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<sup>30</sup> See Section 3 for more detailed explanation.

This subsection shows the results of the analyses performed in this research in order to test the hypotheses established in Section 3. As described in the methodology; eight different types of situations exist wherein two CAARs are compared, as shown in Table 8 in Section 3. Two of these situations do not have accompanying hypotheses, but will be tested in order to establish a sound and complete overview of the (potential) differences in CAARs between groups.

### 5.3.1 Analyses from the Acquirer Perspective

*Acquirer (High) acquiring Target (High) vs. Acquirer (High) acquiring Target (Low)*

<b>T-Test</b>	[-1,1]	[-5,5]	[-40,40]
T-value	-1,2005	-0,9199	0,4179
P-value	0,231	0,3854	0,6763
<b>WMW-Test</b>			
Z-score	-1,27	-1,151	0,828
P-value	0,2042	0,2497	0,4077

When conducting t-tests and WMW tests, it shows that for all three event windows, all tests lead to insignificant outcomes. The respective t-statistics are 0,4179, -0,9199 and -1,2005; none of them being significant. Therefore, no conclusions may be drawn regarding the question whether acquirers with high CSP have higher/lower abnormal returns when acquiring a target with a High social score compared to acquiring a target with a Low social score.

Hypotheses 5 and 6 are related to these tests, and are rejected due to the insignificance of the results. Hypothesis 5 checked whether a socially well-performing acquirer company could increase abnormal returns by sending out a (more) positive signal to shareholders by taking over a firm with High CSP compared to taking over a firm with Low CSP. This signal turns out to be either absent, too small, or not taken into account in the stock prices. Hypothesis 6 conjectured a result the other way around; stating that due to more growth potential in the target firm with respect to CSR, the abnormal returns could be higher. This hypothesis can be neglected as well due to the insignificance of the results.

*Acquirer (High) acquiring Target (High) vs. Acquirer (Low) acquiring Target (High)*

<b>T-Test</b>	[-1,1]	[-5,5]	[-40,40]
T-value	-1,0175	-1,2771	-0,4039
P-value	0,3098	0,2027	0,6866
<b>WMW-Test</b>			
Z-score	-0,642	-0,646	0,3
P-value	0,521	0,5183	0,7643

This situation's tests also lead to solely insignificant outcomes. Especially the WMW tests show insignificant outcomes for each event window. The t-statistics of the t-tests are projected as -0,4039 for the [-40,40] event window; -1,2771 for the [-5,5] window and -1,0175 for the [-1,1] window. Hence, for these tests, no conclusions can be drawn as well, when facing the question whether abnormal returns are higher/lower for acquirers with High CSP compared to acquirers with Low CSP, when taking over target firms with High social scores.

Both Hypotheses 1 and 2 were directly linked to these tests, and thus are both rejected. Hypothesis 1 conjectured synergies and an ease of integration to be of influence on the abnormal returns for acquirers. Either this impact was not large enough or present at all, or the market failed to incorporate these into the stock prices. Hypotheses 2 conjectured following Aktas et al (2010) that learning would take place, and acquirers with Low CSP could incorporate the target firm's CSR policies and hence CSP, in order to improve its own CSP. This theory does not hold as well, since no significant differences were found between the CAARs of both groups, despite the fact that the CAARs for acquirers with High CSP were lower by 1% on average compared to acquirers with Low CSP (when taking over a target with High CSP).

*Acquirer (High) acquiring Target (Low) vs. Acquirer (Low) acquiring Target (Low)*

<b>T-Test</b>	[-1,1]	[-5,5]	[-40,40]
T-value	-0,1948	-0,4257	-1,8887
P-value	0,8458	0,6709	0,0606
<b>WMW-Test</b>			

Z-score	0,146	0,437	-1,609
P-value	0,8841	0,662	0,1076

When comparing the CAARs of these two groups in this situation, one of the event windows, [-40,40] turns out to be significant at the 10% level, whereas the [-5,5] and [-1,1] event windows lead to insignificant results. The corresponding t-statistics are -1,887\*, -0,4257 and -0,1948. In all event windows, the abnormal returns are lower for acquirer firms with High CSP compared to acquirer firms with Low CSP. Only in the [-40,40] window they are found significantly lower, however the WMW test leads to a (slightly) insignificant result for this window. Due to the significant result in the t-test performed in the [-40,40] window; that will be the only window on which conclusions can be drawn.

Hypothesis 3 is related to this situation, stating that acquirer firms with High social scores acquiring targets with Low CSP will obtain higher abnormal returns than acquirer firms with Low social scores, when taking over targets with Low CSP. As the target company would be able to incorporate the acquirer firm’s CSR policies, it would have more growth potential. On the other hand, Hypothesis 4 predicts that an acquirer firm with High CSP will do worse compared to an acquirer firm with Low CSP, both in the situation of taking over a Low CSP-target. A lack of synergies might show and the integration process of the two firms might be slowed when CSR policies are not aligned. As the result of the t-test is significant on the latter, that might be considered as a potential explanation for the difference in CAARs.

*Acquirer (Low) acquiring Target (High) vs. Acquirer (Low) acquiring Target (Low)*

<b>T-Test</b>	[-1,1]	[-5,5]	[-40,40]
T-value	-0,3218	-0,0251	-1,1266
P-value	0,748	0,98	0,2616
<b>WMW-Test</b>			
Z-score	-0,349	-0,021	-1,176
P-value	0,7269	0,9832	0,2396

This situation, which tests for differences in CAARs when the acquirer firms’ social performance is negative, also leads to insignificant test results. The t-statistics for the three event windows are

-1,1266, -0,0251 and -0,3218. This indicates that this situation will not provide conclusions on this matter, as no clear difference can be established between the two types of takeovers.

Hypothesis 7 is based on this situation, and conjectured that acquiring firms with Low CSP would obtain higher abnormal returns when acquiring a target with positive social scores than when it would acquire a firm with negative social scores. The rationale behind the hypothesis was that the acquirer could adapt the CSR policies of the target firm, thereby increasing its own CSP in the future.

### 5.3.2 Analyses from the Target Perspective

*Acquirer (High) acquiring Target (High) vs. Acquirer (High) acquiring Target (Low)*

<b>T-Test</b>	[-1,1]	[-5,5]	[-40,40]
T-value	-1,3693	-1,3347	0,2811
P-value	0,1721	0,1831	0,7789
<b>WMW-Test</b>			
Z-score	-1,503	-1,617	-0,05
P-value	0,1327	0,1058	0,9598

Here, the target's social performance group was kept equal, and the target CARs when acquired by a firm with High CSP were compared to the target firm CARs when acquired by a firm with Low CSP. The t-statistics resulting from the tests are 0,2811, -1,3347 and -1,3693. No serious conclusions can therefore be drawn from these insignificant results.

Hypothesis 8 suggests that an acquirer firm with a High CSP rating is likely to have a better reputation compared to acquirer firms with Low CSP ratings. Theory suggests that there is a possibility that these types of firms are expected to pay higher premiums at takeovers. The higher premiums flow to the shareholders of the target firms, leaving them with higher expected abnormal returns around the announcement date of the takeover. Despite the fact that abnormal returns are indeed higher in the [-1,1] and [-5,5] event windows for target companies acquired by firms with High CSP, the results of the t-tests and MWM tests are insignificant, so the hypothesis does not hold.



*Acquirer (High) acquiring Target (High) vs. Acquirer (Low) acquiring Target (High)*

<b>T-Test</b>	[-1,1]	[-5,5]	[-40,40]
T-value	-2,0407	-2,339	-1,1752
P-value	0,0422	0,0201	0,2401
<b>WMW-Test</b>			
Z-score	-2,34	-2,862	-0,87
P-value	0,0193	0,0042	0,3846

This state in which target firms with High CSP are compared to target firms with Low CSP, when they are taken over by acquirers with High CSP, presents some significant results. The [-40,40] window remains slightly insignificant, with a t-statistic of -1,1752 and a z-score of -0,87 on the WMW test. The other two windows, [-5,5] and [-1,1], bring respective t-statistics of -2,339\*\* and -2,0407\*\* and z-scores of -2,862\*\*\* and -2,34\*\* to the table.

Hypothesis 9 was erected to conjecture that target companies with Low CSP ratings would benefit more from takeovers by socially well-performing acquirers compared to target companies with High CSP ratings. This hypothesis is based on the growth potential of the target company, as it is likely to adapt the acquirer's CSR practices and policies. It turns out that target firms with Low CSP do generate higher abnormal returns in the two shorter event windows of [-5,5] and [-1,1], which indicates that stock prices might efficiently incorporate this around the announcement date. Therefore, this hypothesis is accepted.

*Acquirer (High) acquiring Target (Low) vs. Acquirer (Low) acquiring Target (Low)*

<b>T-Test</b>	[-1,1]	[-5,5]	[-40,40]
T-value	1,4105	1,3281	-0,5973
P-value	0,1603	0,186	0,5511
<b>WMW-Test</b>			
Z-score	1,558	1,61	-0,33
P-value	0,1193	0,1074	0,7416

This situation considers the case wherein an acquiring firm with a Low social score acquires either a target with a High CSP or a Low CSP. When compared through the t-tests and WMW tests, no significant results are found. The accompanying t-statistics are -0,5973, 1,3281 and 1,4105. As for the WMW outcomes, all three are also insignificant, where the [-5,5] and [-1,1] event windows are close to significant, but remain just outside the 10% significance zone.

No supporting hypotheses were generated for this situation, as no clear reasons were found in order to provide a decent testable hypothesis.

*Acquirer (Low) acquiring Target (High) vs. Acquirer (Low) acquiring Target (Low)*

<b>T-Test</b>	[-1,1]	[-5,5]	[-40,40]
T-value	1,9955	2,3424	0,5618
P-value	0,0476	0,0203	0,575
<b>WMW-Test</b>			
Z-score	2,183	2,634	0,413
P-value	0,029	0,0084	0,6798

More significant results are found when comparing CAARs between targets with Low CSP acquired by a firm with High CSP and targets with Low CSP acquired by firms with Low CSP. The [-40,40] event window is insignificant for both the t-test as well as the WMW test, with a t-statistic of 0,5618 and a z-score of 0,413. However, for the [-5,5] and [-1,1] windows, the respective t-statistics are 2,3424\*\* and 1,9955\*\*. The z-scores corresponding with these windows are 2,634\*\*\* and 2,183\*\*. These results resemble the results in provided in this the second analysis in the Target Perspective part of this Section.

Hypothesis 10 was formulated to test this situation, suggesting that target firms with Low CSP scores could obtain higher abnormal returns when taken over by a socially well-performing acquirer compared to an acquirer firm with a negative social score. This hypothesis is supported for the [-5,5] and [-1,1] windows. Potential explanations could be the fact that a better performing acquirer might have a better reputation and better financial performance, which in turn could lead to them paying a higher premium. This would consequently lead to higher returns to shareholders surrounding the announcement of the takeover. Another potential explanation

might be the fact that the target company could learn from the CSR policies set by the acquiring firm, and thus grow.

Wrapping up, all outcomes of the ten different hypotheses are presented in Table 19 below.

**Table 19**

This table show the final outcomes of the hypotheses of this paper. It is the same table as Table 9 in Section 3, only this time, the final column states whether the result was significant or not, and if significant, whether it is accepted or rejected.

Number	CAAR (1)	>	CAAR (2)	Outcome
H1	Acq. High acquires Tar. High	>	Acq. Low acquires Tar. High	Rej. (Insignificant)
H2	Acq. Low acquires Tar. High	>	Acq. High acquires Tar. High	Rej. (Insignificant)
H3	Acq. High acquires Tar. Low	>	Acq. Low acquires Tar. Low	Rejected (Partially)
H4	Acq. Low acquires Tar. Low	>	Acq. High acquires Tar. Low	Partially Significant
H5	Acq. High acquires Tar. High	>	Acq. High acquires Tar. Low	Rej. (Insignificant)
H6	Acq. High acquires Tar. Low	>	Acq. High acquires Tar. High	Rej. (Insignificant)
H7	Acq. Low acquires Tar. High	>	Acq. Low acquires Tar. Low	Rej. (Insignificant)
H8	Tar. High acquired by Acq. High	>	Tar. High acquired by Acq. Low	Rej. (Insignificant)
H9	Tar. Low acquired by Acq. High	>	Tar. High acquired by Acq.High	Accepted
H10	Tar. Low acquired by Acq. High	>	Tar. Low acquired by Acq. Low	Accepted

When looking at this table, it clearly shows most hypotheses are rejected due to insignificance. Expectations were that quite some hypotheses would be insignificant, and this turns out to be true. Despite the fact that eight out of ten hypotheses indeed are insignificant, two of them are not and therefore are capable of inducing conclusions.

Unfortunately, due to the lot of the t-test and WMW test outcomes, not much can be linked to influences of CSP on shareholder wealth effects surrounding announcement dates of takeovers. Moreover, general statements cannot be made following the hypotheses and their outcomes. The differences between CAARs as mentioned in Section 5.2 of this paper can therefore not be supported by the tests in Section 5.3.

However, four hypotheses did result in (partially) significant differences. Hypothesis 3 and hypothesis 4 tested significant (at the 10% level) in the [-40,40] event window, but hypothesis 3 was rejected. Here, CAARs were higher (in case of acquiring a target firm with Low CSP) for acquirers with Low CSP than acquirers with High CSP, which is in line with hypothesis 4. In the smaller event windows surrounding the announcement date however, these differences were not found to be significant.

Another hypothesis that generated significant outcomes and therefore was accepted, is hypothesis 9. It tests whether target firms with Low social scores obtain higher CAARs than target firms with High social scores, both when acquired by a firm with a High social score. Within the [-1,1] and [-5,5] event windows, the hypothesis tested significant (at least at the 5% level).

The final hypothesis with a significant outcome is hypothesis 10. This hypothesis tested whether target firms with Low social performance obtained higher abnormal returns when acquired by a firm with High CSP compared to being acquired by a firm with Low CSP. Like hypothesis 9, only the [-1,1] and [-5,5] event windows tested significant.

## 6. Conclusions, Limitations and Recommendations

This section discusses in Section 6.1 the conclusions which can be drawn following the results of this paper; the limitations that accompanied the research in this paper will be looked into in Section 6.2; and Section 6.3 contains recommendations for future research following this paper.

### 6.1 Conclusions

After reviewing the existing literature in Section 2, multiple hypotheses were developed in order to check whether Corporate Social Performance does in fact impact the shareholder wealth effects in mergers and acquisitions. Through the event study methodology, CAARs were found and then compared through both parametric as well as non-parametric tests in order to sufficiently provide answers to the hypotheses in Section 3. The results were discussed in detail in Section 5 of this paper.

This paper split both acquirer firms as well as target firms into two categories; firms with positive (high) social performance and firms with negative (low) social performance. Four types of deals could be constructed by using these two categories to separate types of deals from one another. These four types of deals, when tested from both the acquirer firm's perspective and the target firm's perspective (with respective CAARs), led to eight tests in total to be performed in this paper. Unfortunately, most tests led to insignificant results, and therefore no conclusions can be drawn on five of the eight types of deals. All other hypotheses had to be rejected. The results that are significant did lead to three results, which will be discussed below.

**Result 1:** In a [-40,40] event window, when a target firm with Low CSP was acquired, abnormal returns are higher for acquirers with Low CSP than for acquirers with High CSP.

Hypotheses 3 & 4 are based on this type of deal; however they are formulated in opposite directions. This results in the fact that hypothesis 3 is rejected (within this specified event window) and hypothesis 4 is accepted. This could indicate that the hypothesis holds that acquirers with high social scores are generally performing better on a financial base as well, and pay a higher premium. As the acquirer with a lower social score would pay a smaller premium in

this example, its abnormal returns around the announcement date are potentially higher. If this is the case, then it is hard to link the higher abnormal returns directly to the social performance itself (instead of the firm's overall performance). Another explanation could be that when firms with High social performance acquire firms with Low social performance, the integration speed might be slowed. M&A failure is often attributed to a lack of aligning objectives and integration of policies such as CSR (Homburg & Bucerius, 2006).

**Result 2:** In [-1,1] and [-5,5] event windows, when acquired by a firm with High CSP, abnormal returns are higher for targets with Low CSP than for targets with High CSP.

Hypothesis 9 is based on this deal type, and is thus accepted for the specified event windows. The hypothesis conjectures that target firms' shareholders might be rewarded for the growth potential of their company. As the acquirer is probable to imply their CSR policy on the new firm, and has the means and knowledge to do so, it might be an efficient way for the target firm to improve its social performance. The fact that integration could be slower this way then seems to be neglected.

**Result 3:** In [-1,1] and [-5,5] event windows, for target firms with Low CSP, abnormal returns are higher when acquired by a firm with High CSP than when acquired by a firm with Low CSP.

Hypothesis 10 is based on this type of deal; hence it is accepted for the specified event windows. The hypothesis conjectures that the target firms' abnormal returns are higher because the premium paid by the acquiring company might be higher. Another explanation could be that the target firm could flourish when taken over and integrated with the acquirer firm, as it might profit from learning and adapting the CSP of the acquirer firm (Aktas et al, 2010).

## 6.2 Limitations

Alike most other research in CSR and M&A, this research contains a set of limitations. As this is, to the author's best knowledge, a paper with no identical previous research, some obstructions were discovered during this paper, which can be used in Section 6.3 to improve future research.

First, the KLD data used to measure CSP is a limitation to this research. Measuring CSP has always been a problem as it is very subjective and many different definitions and frameworks exist for it (Cochran & Wood, 1984; Waddock & Graves, 1994, 1997). Previous research in CSP has shown that generally, the most accepted and most appraised database on CSP is the KLD Database. McGuire et al. (2003) however indicate that despite its positive aspects, the lack of adjustable weights for each strength, concern or dimension as a whole is a major point of criticism. In this research, this could be even more problematic due to the fact that the firms are divided into two groups. Preferably, one would create two groups based on CSP, leaving out the middle area (for example, leaving out all firms scoring in the [-1,1] social performance window). Then, impact of CSP could become clearer, however, too few data is available on firms' CSP to generate a sample big enough to test this. This problem could be solved in a time frame of five years, as more data becomes available.

Another limitation is the fact that this research cannot separate CSP and CFP completely, so that the one might influence the other. As research on these two types of performance can be somewhat ambiguous, it is hard to establish a sound framework isolating the two.

A third limitation is the fact that the research can only be conducted on U.S. companies when using the KLD database. Whether these tests also hold (or would be significant) outside the U.S. is not clear. Also, the dataset can be expanded every year as the number of deals increases, as well as the number of companies rated by KLD. This would in time lead to a larger and more reliable dataset.

### **6.3 Recommendations for Future Research**

As stated in Section 6.2, few comparable papers exist to this paper. Even the most similar papers, the ones of Aktas et al. (2010) and Deng et al. (2013), are quite different in certain aspects. Several recommendations for future research can be made.

First, one could test whether differences would occur when applying this research to other markets, outside the U.S. However, a different CSP database would be needed, which could mix up results.

Second, one could perform this research later, in 5-10 years. Then, much more data would be available and the sample could be large enough to split the firms into more than a positive and a negative group (on CSP basis).

A third recommendation would be to increase the sample period, to see whether the results vary over time. CSP might be a fashion-like variable, of which the importance is perceived differently in different periods. For example, during a crisis, CSP might be considered less important compared to economically flourishing times.

Another recommendation would be to see what the impact of CSP on long-term wealth effects in M&A could be. CSP might not be incorporated in the share prices around the announcement date directly, but it could be beneficial in the long haul.

Finally, it could be recommended to see if firms change their CSR policies and thus CSP after the merger or acquisition. For example, if an acquiring firm with High CSP takes over a firm with Low CSP; does the target firm adapt and increase its CSP (for example a year later)? There is still room for a lot of research when combining the M&A and CSR areas.



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## 8. Appendices

### Appendix I: Correlation Matrices on CSP

This Appendix shows Correlation Matrices for (1) the Target firms' CSP scores and (2) the Acquirer firms' CSP scores.

**Table A-I**  
Correlation matrix on Target CSP

	Target~SP	Transa~l	Target~M	Indust~D	TenderD	Hostiled	MOED	NOBD	Size
TargetCSP	1.0000								
Transactio~l	-0.1037	1.0000							
TargetRetu~M	-0.1791	0.0810	1.0000						
IndustryD	-0.0802	0.0608	0.0260	1.0000					
TenderD	-0.0125	-0.0896	0.0313	-0.0048	1.0000				
Hostiled	-0.1010	-0.0079	-0.0084	0.0750	0.2281	1.0000			
MOED	-0.0051	0.2219	-0.0014	-0.1143	-0.0556	-0.0302	1.0000		
NOBD	-0.1592	0.0916	0.1657	0.1886	0.1497	0.3424	0.0878	1.0000	
Size	0.0304	-0.1394	-0.0043	-0.1930	0.2094	-0.0537	-0.2505	-0.0935	1.0000

And for the Target firms' CSP scores:

**Table A-II**  
Correlation matrix on Acquirer CSP

	Acqui~SP	Transa~l	Target~M	Indust~D	TenderD	Hostiled	MOED	NOBD	Size
AcquirorCSP	1.0000								
Transactio~l	-0.0658	1.0000							
TargetRetu~M	-0.1169	0.0810	1.0000						
IndustryD	-0.0716	0.0608	0.0260	1.0000					
TenderD	0.0772	-0.0896	0.0313	-0.0048	1.0000				
Hostiled	-0.0822	-0.0079	-0.0084	0.0750	0.2281	1.0000			
MOED	-0.0518	0.2219	-0.0014	-0.1143	-0.0556	-0.0302	1.0000		
NOBD	-0.0719	0.0916	0.1657	0.1886	0.1497	0.3424	0.0878	1.0000	
Size	0.1935	-0.1394	-0.0043	-0.1930	0.2094	-0.0537	-0.2505	-0.0935	1.0000

Transactio~l = Transaction value  
 TargetRetu~M = Target Return on Equity  
 IndustryD = Same Industry Dummy  
 TenderD = Tender Offer Dummy  
 Hostiled = Hostile Offer Dummy  
 MOED = Merger of Equals Dummy  
 NOBD = Number of Bidders Dummy  
 Size = Relative Size

## Appendix II: KLD Database Dimensions

### **Community (12)**

*Strengths (8):* Charitable Giving, Innovative Giving, Support for Housing, Support for Education, Non-US Charitable Giving, Volunteer Programs, Community Engagement, Other Strengths

*Concerns (4):* Investment Controversies, Community Impact, Tax Disputes, Other Concerns

### **Corp.Gov. (18)**

*Strengths (8):* Limited Compensation, Ownership Strength, Reporting Quality, Political Accountability Strength, Public Policy Strength, Corruption & Political Instability, Financial System Instability, Other Strengths

*Concerns (10):* High Compensation, Ownership Concern, Accounting Concern, Reporting Quality, Political Accountability Concern, Public Policy Concern, Governance Structures, Controversial Investments, Business Ethics, Other Concerns

### **Diversity (14)**

*Strengths (9):* CEO, Promotion, Board of Directors-Gender, Work-Life Benefits, Women and Minority Contracting, Employment of the Disabled, Gay and Lesbian Policies, Employment of Underrepresented Groups, Other Strengths

*Concerns (5):* Workforce Diversity, Non-Representation, Board of Directors-Gender, Board of Directors-Minorities, Other Concerns

### **Employee Relations (19)**

*Strengths (12):* Union Relations, No-Layoff Policy, Cash Profit Sharing, Employee Involvement, Retirement Benefits Strength, Employee Health and Safety, Supply Chain Labor Standards, Compensation & Benefits, Employee Relations, Professional Development, Human Capital Management, Employee Relations Other Strength

*Concerns (7):* Union Relations, Employee Health and Safety, Workforce Reductions, Retirement Benefits Concern, Supply Chain, Child Labor, Labor-Management Relations

### **Environment (22)**

*Strengths (10):* Environmental Opportunities, Waste Management, Packaging Materials & Waste, Climate Change, Property & Plant & Equipment, Environmental Management Systems, Water Stress, Biodiversity & Land Use, Raw Material Sourcing, Other Strengths

*Concerns (12):* Hazardous Waste, Regulatory Compliance, Ozone Depleting Chemicals, Toxic Spills & Releases, Agriculture Chemicals, Climate Change, Impact of Products & Services, Biodiversity & Land Use, Operational Waste, Supply Chain Management, Water Management, Other Concerns

**Human Rights (14)**

*Strengths (4):* Positive Record in South Africa, Indigenous Peoples Relations Strength, Labor Rights Strength, Human Rights Policies & Initiatives

*Concerns (10):* South Africa, Northern Ireland, Support for Controversial Regimes, Mexico, Labor Rights Concern, Indigenous Peoples Relations Concerns, Operations in Sudan, Freedom of Expression & Censorship, Human Rights Violations, Other Concerns

**Product (10)**

*Strengths (5):* Quality, R&D & Innovation, Social Opportunities, Access to Finance, Other Strengths

*Concerns (5):* Product Quality & Safety, Marketing & Advertising, Anticompetitive Practices, Customer Relations, Other Concerns

*Alcohol (2)*

*Firearms (1)*

*Gambling (2)*

*Military (4)*

*Nuclear Power (4)*

*Tobacco (2)*