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SCANDALS AND MISCONDUCTS: DOES CSR PRODIVE BENEFITS DURING CRIES?

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ABSTRACT

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Corporate social responsibility (CSR) has been a growing topic in business in the last decades. There is pressure from the stakeholders for companies to adopt more responsible and sustainable practices. However, there is also pressure from the market for a company to stay competitive and survive in the market. Balancing these two things can be difficult, and sometimes the second kind of pressure leads companies to act in an irresponsible way. When the market discovers this misconduct, a scandal is created. How can companies protect themselves from these scandals? Recent research in CSR has begun to focus on the insurance-like qualities CSR can provide, to help protect the loss of value in the stock market associated with scandals. The aim of this study is to test how the Finnish market reacts to scandals, and to see if this insurance-like quality of CSR exists. In addition, since the chosen method is the event study, the efficient market hypothesis is tested. The results indicate that the Finnish market does react to scandals, but in a delayed way. In addition, the results on the tests of CSR-insurance are mixed, and dependent on the choice of proxy for CSR reputation. There seems to be some protection from scandals if CSR reputation is good. However, the results also indicate that if there are past scandals or negativities associated with the company, the CSR-insurance does not apply. Therefore, CSR can provide insurance in scandals, but the effect is limited. If the scandalous behaviour turns from a one-off mistake to a pattern of repeat offences, the market will not care about the CSR reputation of the company, as its CSR initiatives may be dismissed as hypocrisy or greenwashing.

TIIVISTELMÄ

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| Viimeisten vuosikymmenten ajan yritysten yhteiskuntavastuu on noussut tärkeäksi aiheeksi yritysmaailmassa. Sidosryhmät painostavat yrityksiä toimimaan vastuullisemmin ja omaksumaan kestävämpää käytäntöjä. Toisenlaista painetta menestyä luo myös markkinoiden kasvava kilpailu. Näiden kahden asian tasapainottaminen voi olla hankalaa, ja joskus yritykset toimivat vastuuttomasti kilpailun luoman paineen vuoksi. Kun markkinat havaitsevat tämän kaltaista vastuutonta toimintaa, syntyy skandaali. Kysymys kuuluu, miten yritykset voisivat suojauduttaa skandaaleja vastaan? Viimeaikaiset yhteiskuntavastuulliset tutkimukset ovat keskittyneet yhteiskuntavastuuun vakuutuksen kaltaisiin ominaisuuksiin, jonka avulla yritys voi skandaalin sattuessa suojauduttaa arvon alentumiselta osakemarkkinoilla. Tämän tutkimuksen tavoitteena on selvittää, miten suomalaiset markkinat reagoivat skandaaleihin, ja onko kyseistä "yhteiskuntavastuvakuutusta" olemassa. Lisäksi, tutkimuksen toisena tavoitteena on selvittää tehokkaiden markkinoiden hypoteesia, sillä tutkimuksen menetelmäksi on valittu tapahtumatutkimus. Tulokset osoittavat, että Suomen markkinat reagoivat skandaaleihin viiveellä. Lisäksi yhteiskuntavastuvakuutusten tutkimuksen tulokset ovat erilaisia, riippuen siitä, minkä muuttujan valitsee kuvaamaan yrityksen yhteiskuntavastuumainetta. Tutkimuksen tulokset osoittavat, että yrityksen yhteiskuntavastuullisuus voi skandaalin sattuessa tarjota vakuutuksen, mutta se kattaa arvonalenemisen vain rajoitetusti. Jos yritys siirtyy kohusta toiseen, yhteiskuntavastuumainesta ei ole apua, sillä sidosryhmät näkevät sen tekopyhytenä tai viherpesuna. | |

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In Helsinki 26.5.2019,

Elina Ramula

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LIST OF ABBREVIATIONS

| Abbreviation | Explanation |
|---------------------|---|
| AR | Abnormal return |
| CAPM | Capital asset pricing model |
| CAR | Cumulative abnormal return |
| CSR | Corporate social responsibility |
| EMH | Efficient market hypothesis |
| ESG | Environmental, social and governance |
| FFSA | Finnish Financial Supervisory Authority |
| OLS | Ordinary least squares |

1 INTRODUCTION

Throughout our business school studies, we are told that as managers, our goal should be to maximize shareholder wealth by increasing the value of the company. History has shown that some people will do anything to seemingly achieve this goal, using this aim as an excuse to sometimes further personal interests. However, this does not always work out well for the company, as can be seen from the various scandals and economic downturns of the past. Examples of such behaviour from recent years include test manipulations (e.g. Volkswagen's defeat devices and tyre test manipulations of Nokian Renkaat), employee working conditions in developing countries (suppliers of e.g. H&M and Apple), and bank scandals (Panama papers of Nordea, money laundering in Danske Bank).

In today's world this is particularly dangerous, as every small decision that is seen as somehow negative or unethical can be blown up very quickly, especially through the internet and social media. Generally, when misconduct is discovered, the trustworthiness and value of the company reduces dramatically. The public is outraged and demands transparency and accountability from businesses they deal with. It seems that pure value maximization without other considerations is not acceptable anymore.

This is where corporate social responsibility (CSR) comes in. What is the responsibility of the company when they conduct business? Who are they accountable for, just the shareholders or also other stakeholders the company interacts with? It seems that especially multinational companies have embraced CSR and considering their other stakeholders, in addition to the shareholders. This is evident from the fact that reporting CSR data alongside with financials has become more widespread (Arvidsson 2010; Bonsón & Bednárová 2015).

Despite the growing popularity CSR, company fraud and misconduct still occurs. Why? Is there some benefit? The logical answer would seem to be no, based on how the public reacts to scandals, but there must be a reason why companies continue to take part in such behaviours. One reason could be the competitive environment for businesses today, and the pressure to meet short-term goals. Ahen and Zettinig (2015) discusses the most pressing issues in CSR right now. They suggest that some of the overlooked issues (issues that have been downplayed to make them seem less pressing) are the presence of scandals and unethical behaviours in the marketplace. This thesis aims to look at some of those issues, and the aim is to find out how companies are affected by these scandals (more specifically the stock price), and how their CSR reputations can affect the outcome of the scandals. Recent research suggests that a good CSR reputation can work as insurance

during scandals (Godfrey, Merrill & Hansen 2009; Janney & Gove 2011), and this phenomenon will also be investigated.

The focus will be on the Finnish market. This market was chosen as the Nordic countries are usually seen as front-runners in CSR and sustainability (Beal, Lind, Young, Pollman-Larsen, Alagiah-Glomseth & Lunestedad 2019). This would imply that the companies in the Finnish market would have strong CSR reputations, and CSR related scandals should be rare. Yet, as mentioned earlier, this is not necessarily the case, and misconduct has happened recently in Finland. This then allows for research into the possible insurance-like effects of CSR. As the aim is to study the stock price impact, the focus will be especially on companies listed on the Helsinki Stock Exchange (OMX Nasdaq Helsinki).

1.1 Background

There is a demand from the public, especially consumers, for businesses to act ethically and improve society. Companies have started reporting CSR information along with financial data in annual reports. CSR has also become part of their business strategies and corporate values. Managers also feel that CSR indicators are one of the most important things to report along with the financial data (Arvidsson 2010). Yet there is still debate on the definition of CSR, although CSR has been discussed since the 1950s (Carroll 1999). Recently, it has been suggested that CSR is dependent on the culture and context of where it takes place (Dahlsrud 2008; Ahen & Zettig 2015). CSR is therefore a phenomenon that involves the company and its stakeholders and their interactions.

The next question managers have, is why take part in CSR. Previous research has tried to answer this question and focused on finding out if companies can do well by doing good. The results from various studies have been mixed (McWilliams & Siegel 2001), but Orlitzky, Schmidt & Rynes (2003) tried to answer this by doing a meta-analysis of the previous 30 years of research in the field. They discovered a positive relationship between corporate financial and social performance, especially when accounting-based indicators were used as a proxy for financial performance. This implies that at least the company bottom line is improved, but do the shareholders, whose wealth maximization managers are responsible for, value the CSR efforts of their companies? Studies have been done on how inclusion/exclusion from socially responsible stock indices affect the stock price (Cheung 2011; Becchetti, Ciciretti, Hasan & Kobeissi 2012; Lourenço, Branco, Curto & Eugénio 2012), and if investing in socially responsible stocks could give investors better returns (Brammer, Brooks & Pavelin 2009; Becchetti & Ciciretti 2009). The results seem to indicate that

performance is at least no worse than in those companies that do not participate in CSR activities.

Recently, there has been a shift from looking at the benefits of CSR on the bottom line to the realization that CSR could be used as a reputation building tool, and as insurance against negative events or in cases of company misconduct (Godfrey, Merrill & Hansen 2009; Janney & Gove 2011; Minor & Morgan 2011). However, CSR does not provide total insurance for the company in case of scandals. The insurance-like qualities are dependent on the type and severity of the crisis, as well as stakeholder identification with the company (Janssen, Sen & Bhattacharya 2015). Especially in cases where the trust of the stakeholders is broken, during a scandal that is clearly opposite to the values of the company, the insurance effects diminish (Janney & Gove 2011; Minor & Morgan 2011).

This is an interesting avenue for research, as it can give insights on the benefits on adopting CSR from the corporate and financial perspectives. Also, it can help understand what the most important considerations are when adopting CSR and what are the issues to focus on. If CSR does in fact have insurance-like qualities on the firm during scandals, it is an important asset in a competitive market, where seemingly small mistakes can incur large costs for the company.

As scandals are usually a shock and surprise to the market in general, meaning they are unexpected events. Here, the event study method is useful. This method is a test for the Efficient Market Hypothesis (EMH) (Fama 1970). According to the EMH, the security price of the company should reflect all available information in an efficient market. The model assumes that there are no transaction costs, all information is available to all participants in the market, and that the participants agree on the impact the information has on the price of the security. There are three levels to the EMH. The first is the weak form, in which it is assumed that the price today reflects the historical prices. The second is the semi-strong form, which implies that the market reacts instantly to any publicly available information. Strong form efficient is the final level. It assumes that the market adjusts the price to all public and private information. (Fama 1970).

If the market is efficient, the price adjusts to the new information almost immediately, usually within the day of the event (Fama 1991). This implies that the expected change related to the news event or scandal should happen on the day of the event, and that there should not be any abnormal returns before or after the event day. If there are abnormal returns before the event date, the EMH would suggest that there is information leakage to which the market price is adjusting to.

Contradictorily to the EMH, there may also be over- or underreaction to the news in the market (Barberis, Shleifer & Vishny 1998), which means that there may be some abnormal returns before or after the event. In their model of investor sentiment, Barberis et al. (1998) describe two main behaviours of investors (expectations): conservatism and representativeness. Conservatism implies an underreaction to the new news meaning that is incorporated into the price slowly over time to correct it. Representativeness means that the market overreacts to the news. In this case, previous good (bad) news, the effect is extremely positive (negative) on the price, but after time the returns revert to the mean returns. These reactions are based on the expectation the investors have about the company's asset.

Fama (1998) explains that although these results seem contradictory to the EMH, they are not, as overreaction and underreaction are almost as common and that they are chance results or anomalies, and possibly even due to methodology choices. Therefore, the EMH is still applicable. Due to these behavioural biases, the pre- and post-event effects need to be studied in addition to just the event date. The choice of event windows for this study will be discussed in more detail in the methodology section.

1.2 Research problem, objectives and delimitation

The aims of this study are to understand if negative CSR news, misconducts and scandals have an impact on company value in the Finnish stock market, as well as to see if a previous positive CSR image of the company provides insurance against the negative impact. Hence, the research questions are:

1. Do scandals have an impact on the share prices of Finnish publicly listed companies?
2. Do different kinds of scandals (related to CSR aspects) have different impacts?
3. Can CSR image/reputation reduce the impact of scandals on the share price?

One major limitation in this study is the availability of data. The focus on the Finnish stock market means that the sample of firms will not be too large, and there may be issues with generalizability of results. Also, CSR data is not available for all Finnish firms, reducing the sample even more. Even with finding data on events, it is impossible to review all sources. Some companies are also large multinationals, but the focus of event gathering will be from the Finnish news outlets. This can mean that some important outside market events are not considered.

The events themselves might also be of different magnitudes, which may have an impact on the results. Small events might not have a great impact on stock price, whereas bigger scandals may have a much greater impact. The chosen events will be discussed in more detail in the methodology and results sections.

1.3 Research methodology

As mentioned earlier, the main methodology for this study is the event study, which will be discussed in more depth in section three of this thesis. This method was chosen, as the event study aims to measure the effect an event has on the value of the company (MacKinlay 1997). The events in this study included negative CSR news, misconducts and scandals in the Finnish market. The sample of events will be drawn from Finnish news outlets and OMX Nasdaq Helsinki stock exchange. The requirement for the events to be accepted is that the event is related to a CSR area and that is from a company that is listed on the OMX Nasdaq Helsinki stock exchange.

The market model will be used to estimate abnormal returns, as it is one of the most suitable modelling methods when studying companies from different industries (Binder 1997). The market proxy will be OMX Helsinki 25. The CSR data will be collected from Thomson Reuters Eikon. The CSR data is called ESG score (environmental, social and governance), and the scores will be used to categorize the events/companies into high and low CSR groups to test the third research question.

1.4 Organization of the study

There are five main sections to this thesis. Following this introduction, the background of this research will be discussed in more detail in the second part (literature review). The literature review consists of information about CSR, its history, as well as discussion on scandals and misconducts in the past, and their influence on company reputation and trust. Research on how CSR can also be used as insurance against misconducts will also be covered. The third section will focus on the event study methodology and data collection for this study. This will be followed by the results, and their discussion. Finally, the last section will conclude the thesis, with final comments, limitations, and recommendations for future research.

2 LITERATURE REVIEW

The literature review will go over past research around the topics of CSR, scandals, and the insurance effects CSR can have for companies during scandals. First, the brief history of the development of the CSR concept and definition will be discussed. This will be followed by discussion on scandals and why they happen. Next the CSR events and scandals impact the stock price will be considered. Finally, the insurance effects of CSR during scandals will be discussed.

2.1 Corporate social responsibility

Corporate social responsibility encompasses the responsibilities the corporation of business has towards the community and society at large. The concept has developed throughout the decades, since the 1950's when Howard Bowen published a book called "Social Responsibilities of the Businessman" (as cited in Carroll 1999, 269). Then, there was disagreement amongst scholars on what CSR included, and what the responsibilities of firms are. Carroll (1979) provided a conceptual model for understanding what the responsibilities are. The definition includes four main types of responsibilities. These are the economic, legal, ethical and discretionary responsibilities of the corporation. The economic responsibility could be considered the main purpose of the business, i.e. providing goods or services to customers at a profit. Legal responsibilities are to follow the laws of the places the business operates. Ethical and discretionary responsibilities are more ambiguous, they are not coded by law, but guided more by morals and the company's own values/choices. Carroll (1979) implies that the degree to which the companies adopt these responsibilities is up to the judgement of the company on what it thinks society expects of it.

McWilliams and Siegel (2001) define CSR as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law" (177). This definition seems to only consider the ethical and discretionary responsibilities discussed by Carroll (1979) and focuses on the voluntary actions the company takes. There is still argument on what the exact definition of CSR is, and it affects research done in the field, as results can be very contradictory (McWilliams & Siegel 2006). Dahlsrud (2008) reviewed definitions of CSR from 1980s to early 2000s. They found that CRS seems to be more a social construct than just one concept on its own. The definition may depend on cultural background and context, but that CSR has five main dimensions: environmental, social, economic,

stakeholder and voluntariness. They argue that more important than defining CSR is understanding the context and background that it is being used in.

Interviews with managers have been conducted to try find out what CSR means in the business world (Isa 2012; Gee & Norton 2013). The results from these studies agree with Dahlsrud (2008), that the definition depends on the context of where the CSR is applied. Although CSR may not mean the same thing to everyone, the consensus seems to be that CSR includes stakeholders, as well as environmental and governance issues.

Sachs and Maurer (2009) go a step further. They suggest that CSR is not one single same thing for everyone, but instead propose a Dynamic Corporate Stakeholder Responsibility framework, in which the company interacts with its stakeholders through its value creation processes. This interaction is the basis on forming the responsibilities of the firm. They are different for every firm and constantly evolve to adapt to the social environment.

As Caroll (2000) suggests, and as can be seen from the framework proposed by Sachs and Maurer (2009), the definition of CSR has developed from something the company does in addition to normal day-to-day business to a part of its strategy (McWilliams & Siegel 2006; Cochran 2007; Falck & Hebllich 2007; Gee & Norton 2013). McWilliams and Siegel (2001) propose that CSR should be viewed as an investment decision. CSR is then a resource the company has with inputs and outputs. CSR can then be used as a strategic investment, by including CSR aspects in production processes or the product itself (McWilliams & Siegel 2006). Theoretically, other ways CSR initiatives can be used, are to fulfil employee needs (Bauman & Skitka 2012) and engage customers as well as improve their purchase intentions (Sen and Bhattacharya 2001). CSR could therefore be used also has a reputation and image building tool (McWilliams & Siegel 2006), especially in a globalizing world (Forte 2013).

There has been debate weather CSR has an impact on the bottom line of a company. McWilliams and Siegel (2001) outline their theory of CSR as investment (theory if firm) and propose that the reason for this is that since CSR is like any investment decision, corporate social performance and financial performance do not have a relationship, when supply and demand are in equilibrium. Orlitzky et al. (2003) did a meta-analysis of studies from the previous 30 years to find out if corporate social performance and corporate financial performance have a relationship. They find that the relationship is generally positive, and that especially societal actions are more beneficial for the bottom line of the company. They do, however, mention that the chosen proxies for CSR can affect the results. Also, the

reputation of the firm is an important factor in the corporate social and financial performance relationship.

CSR can therefore be viewed as a long-term investment opportunity that has a win-win situation, as the company does good for society and increases profit for itself (Falck & Heblisch 2007). However, Halme and Laurila (2009) suggest that what CSR actions are implemented affect the outcome. They suggest an action oriented corporate responsibility (CR) typology (Halme & Laurila 2009, 329). The three actions are philanthropy (focus on charity and sponsorships), CR integration (focus on changing existing practices to more responsible manner) and CR innovation (focus on creating new business/practices to solve societal and environmental problems). They theorize that the innovation and then integration actions are most beneficial to the company's financial outcomes.

Similarly, van Rekom, Berens and van Halderen (2013) suggest that there are two types of CSR activities. The first is cost-based which aims to lessen the costs for society from business activities. The second is benefit-based, for which the goal is to improve society. Typically, the cost-based activities are expected of the company, i.e. they are punished if they do not do it but are not rewarded for doing them. This has been found to be true in empirical studies (Gupta & Goldar 2005; Lourenço, Branco, Curto & Eugénio 2012). Hence, companies need to create new CSR initiatives if they want to stand out and benefit from it.

There seems to be a need from the public for companies to be more open and transparent about their practices, especially in the wake of the dot com bubble burst in the early 2000s and the financial crises of 2008. As can be seen from this short historical review, the definition of CSR has developed as a response to this. Carroll's (1979) described corporate responsibilities still apply today, but the focus has shifted from just the company's separate consideration to a key strategic consideration. Indeed, there has been a shift towards triple-bottom line reporting (including financial, social and environmental data) in recent years, and mostly this is voluntary (Arvidsson 2010; Bonsón & Bednárová 2015). Companies also actively advertise their efforts and report CSR data (Arvidsson 2010). However, not all companies act as they advertise. This leads us to the next topic of discussion, on how and why scandals or crises happen in companies.

2.2 Scandals

Scandals are actions or events that are ethically, morally or legally wrong in the eyes of the public. In a business environment, they are unethical or unlawful conduct of a company. Scandals and financial bubble bursts are not novel, and have happened throughout history

(Gary, Frieder & Clark Jr. 2007). There are many categories of scandals, and they usually stem from management actions. Categories of scandals, according to Tanimura and Okamoto (2013) are frauds of stakeholders, frauds of government, financial reporting frauds, regulatory violations, and individual frauds. The main point in the first four are that the company or its representative acts in a way that is deceptive towards others for some gain. The last type involves an employee or other related individual acting deceptively towards the company.

Dobson (1993) argues that in finance, ethics is seen as a constraint on behaviour (i.e. wealth maximization) instead of a motivation. Shareholder wealth maximization is often used as an excuse for questionable behaviour. The goal of shareholder wealth maximization is not amoral, but not strictly immoral either (Dobson 1999). Managers are responsible to their shareholders, but they should have some moral common sense in making decisions on behalf of the company (*ibid*). In fact, bad individuals are often cited as a reason for why scandals happen in companies (Kuhn & Ashcraft 2003; Jennings 2004). The type of individuals within the company is then an important consideration. Carroll (2000) discusses a model of management morality. There are three types of managers: immoral (motives are selfish), moral (motives are to adhere to highest ethical standards), and amoral (motives to follow laws and regulations but nothing more). Amoral managers are also split into two groups, intentional and unintentional. Intentional amoral managers feel that ethical considerations have no place in business decisions. Unintentional amoral managers are unaware of ethics in decision making, the focus is on making profits lawfully. The managers are guided by their morality in making decisions on behalf of the company.

In the real world, managers are also oftentimes rewarded if the company performs well (Lomax 2003). This can especially be a motivation for the immoral and amoral managers to act in unethical ways to achieve goals. The manager is under pressure to meet earnings targets and investor expectations can lead to managers taking actions that can be questionable (Carson 2003; Lomax 2003). The setting of rapid expansion and competition can be a catalyst for such behaviour (Jennings 2004; Grant & Visconti 2006; Crutchley, Jensen & Marshall 2007; Gary et al. 2007, Sorensen & Miller 2017).

The culture and environment of the company can also be an influence (Kuhn & Ashcraft 2003; Taylor 2006) on manager behaviour. The focus on the short-term goals can cloud judgement and lead companies to manipulate financial results to keep up appearances of growth and profitability (Kuhn & Ashcraft 2003; Jennings 2004; Grant & Visconti 2006).

There needs to be shift from focusing on the short-term growth to looking at the long- term goals and sustainability.

The lack of outside monitoring can also allow for scandals to occur. Crutchley et al. (2006) suggest that fewer outsiders on the audit committee and overcommitted outside directors can foster an environment of fraud. Sorensen and Miller (2017) also conclude from the comparison of US and Italian financial reporting frauds, that in both countries there was failure of the “gatekeepers” (regulatory agencies, banks and external auditors) to monitor the company. The lack of outside control and monitoring over the management can lead to individuals taking advantage of the situation.

From this discussion on managers morality, it is easy to see that individuals can cause companies to become part of scandals for whatever reason. Jennings (2004) suggest that the problem is in the education of managers in business schools. The focus is on CSR, not ethical virtues and how to cope with the pressures of the goal of wealth maximization in an ethical way. Managers should learn how to evaluate their actions from several viewpoints to be able to make the right decisions and avoid scandals.

The business environment and culture also need to be modified to avoid scandals. For example, the compensation schemes need to be adjusted (Carson 2003; Lomax 2003). Kuhn & Ashcraft (2003) propose the communicative theory of a firm, in which communication is the key process by which companies form and operate. The communication process within the company and outside it creates and maintains the firm, forming its identity. In this way the firm is linked to the context it is in. This links back to CSR, where it was defined as something the company does to interact with the society and context it operates in. The next section will look at the combination of CRS and scandals, and especially how scandals and CSR news affect the financial performance of the firm.

2.3 CSR, scandals and stock prices

Evidently CSR issues are linked to scandals, as usually the focus of a scandals is on the ethics of the company. Ethics and morals are a part of CSR based on the definitions discussed previously. In both, the public perceptions are important consideration. In this section, the effects of scandals and CSR related news on stock performance will be discussed in more detail.

The meta-analysis done by Orlitzky et al. (2003) looked at how both market- and accounting based measures of financial performance are affected by corporate social performance.

They found that generally the relationship is positive, but especially when using accounting-based measures. The bottom line seems to be improved, but do investors value CSR?

Brammer et al. (2009) studied how inclusion in the “Best 100 Corporate Citizens” list (published by Business Ethics) impacts the stock price. They found that in the short-run inclusion creates a small positive effect on price (not statistically significant), but in the long-run the positive effect wears off and a portfolio of these stocks perform lower than a portfolio of S&P 500. They explain this as investor overreaction to the news. The positive hype around the stock increases its price, but a year later, it is not viewed with as high importance. Becchetti and Ciciretti (2009) conducted portfolio analysis, where they created a socially responsible stock portfolio and compared its performance to a control portfolio of stocks with similar characteristics as the socially responsible stock. They found similarly to Brammer et al. (2009) that the daily mean returns of the socially responsible stocks were lower than the control portfolio, but that the socially responsible stock seemed less risky. Sabbaghi and Xu (2013) find similar results. This implies that although the returns of socially responsible are not significantly better than a general market portfolio, the CSR focus could have some risk reducing effects on the returns providing in some senses a safer investment.

Studies have also been done using inclusion in (or exclusion from) sustainability stock indices as a proxy for CSR. Just being included in a sustainable stock index does not seem to have an impact on stock price (Cheung 2011) but being removed from it can have a negative impact (Becchetti, Ciciretti, Hasan & Kobeissi 2012). Non-inclusion can also be viewed as a negative signal in the market, especially if the company is large and profitable (Lourenço, Branco, Curto & Eugénio 2012). This implies that investors require at least some level of CSR to find the stock valuable, and they punish companies for being perceived as having low CSR. Oberndorfer, Schmidt, Wagner and Ziegler (2013) find opposing results in the German context and conclude that investor’s view the inclusion/exclusion from a sustainability index as a symbolic gesture. However, they do question the reliability of the use of inclusion/exclusion in stock index as a reflection of the CSR and say that there may also be cultural effects in play.

Jizi, Nehme and Salama (2016) use a slightly different approach and study the disclosures of CSR from US national banks and their impact on stock price. They find a positive relationship between disclosure content and the stock price of the company. The appearance of sustainability then seems to have an influence, but what happens when the news relating to the CSR actions of the company are revealed?

Generally, negative news means that the company stock price will suffer (Jory, Ngo, Wang & Saha 2015; Krüger 2015; Chen 2016). This seems like an obvious reaction to when the company has done something that is not seen as good CSR. Krüger (2015) studies the impact of both negative and positive CSR news on the stock price of a company through an event study. He finds that negative events have a strong negative impact on stock price. Interestingly, positive news also seems to have a negative impact, although it is weak.

To understand if there is a long-term price impact, Tibbs, Harrell and Shrieves (2011) tested if shareholders benefit from misconduct of the company in the long run. They found that before discovery, the company was doing well and had positive returns (5 years prior to event), but after the discovery, the returns turned negative (5 years post-event). The net effect, however, was positive, so negative impact does not cancel out the positive returns in the pre-discovery phase. Hence it seems as though there is some benefit to misconduct in the long-term, and it could explain why some individuals engage in it.

Long, Wann and Brockman (2016) find opposing results in their portfolio analysis, where they compare sample firms to an industry portfolio. They found that pre-event, the performance is not significantly different from the industry portfolio. Hence the misconduct does not at least improve shareholder wealth. In the five years after the event, the company underperforms respective to the industry. However, in later years, the underperformance disappears. This leads Long et al. (2016) to conclude that misconduct does not align with the shareholder wealth maximization goal, but that in the long-run companies can recover from the scandal. Jory et al. (2015) also find that companies with CEO related scandals have usually recovered a year later, when proper corrective actions have been taken.

Even when the company itself has not done anything wrong, but someone it is associated with, such as a celebrity endorser (Knittel & Stango 2014) or another company same industry (Chen 2016), acts in a “wrong” way, the company will suffer. Accidents are also often studied, and even though these are sometimes out of the control of companies, the effects are negative and can be long-lasting (Capelle-Blancard & Laguna 2010; Carpentier & Suret 2015; Makino 2016). Of course, the severity of the accident has an impact as well on how long the effects continue (Carpentier & Suret 2015; Makino 2016).

Another influence on the severity of the market reaction could be the media (Krüger 2015; Strauss, Vliegenthart & Verhoeven 2016; Carberry, Engelen & Van Essen 2018). Strauss et al. (2016) study the effects of emotions (based on the wording of news) on the stock’s opening price (vs. last night’s closing). They do not find that media attention significantly affects the prices of stocks in the Dutch market, but that if there is an effect, it is mostly

negative, even with positive news. Carberry et al. (2018) focus their media attention study on misconducts of firms in several European countries. The stage at which misconduct is discovered has a big impact, and the most negative reaction is when the company has been rumoured to have done something wrong. This suggests that investors are quick to react to the news, even before getting the full story. They also found that the locus of blame is an important factor. If the media emphasises that the company has acted in a wrong way, the effects are more negative than if a specific individual within the company is blamed. It is much harder to change the whole company culture, than remove the single individual that is to blame. The company reputation is then an important factor in scandals, therefore reputation is a significant asset for a firm and needs to be protected. Usually assets can be protected with insurance, and next research on CSR as insurance during a scandal is discussed.

2.4 CSR as reputation insurance

When a scandal occurs, the main losses in value are due to legal sanctions and reputation (Rao & Hamilton 1996; Karpoff, Lee & Martin 2008; Murphy, Shrieves & Tibbs 2009; Tanimura & Okamoto 2013; Chen 2016). The reputational losses from scandals can account for over 60% of the value loss of the company (Karpoff et al. 2008, 600). There is also a loss of trust towards the company from the stakeholders (Lomax 2003; Gillespie & Dietz 2009; Tanimura & Okamoto 2013). What can companies do to reduce the impact of scandals on their stock prices? This section will focus on reputation and how CSR can be used as reputational insurance in the event of a scandal.

Reputation is an important intangible asset for a company, that also impacts its value (Weng & Chen 2017). It can be the basis for stakeholders to invest, seek employment and purchase products or services from the company (Fombrun & Shanley 1990). A company with a good reputation could be able to endure crises better (Schnietz & Epstein 2005), but reputation takes time to be built (Schwartz 2000).

Today, CSR is linked to the reputation of a firm (Schwartz 2000). Usually reacting to a negative event is not enough, but companies need to be proactive in their CSR efforts (Werther & Chandler 2005). CSR can be a way to engage the stakeholders, and this engagement can lead to giving the company brand a competitive advantage (*ibid*).

Companies need to be careful with their CSR activities though, as sometimes the CSR activities can have a reputation decreasing effect. Especially the perceived motives of CSR are important (Yoon, Gürhan-Canli & Schwarz 2006). The CSR activities need to align with

the company business, in order to improve reputation. If they do not, consumers may see them as window-dressing or greenwashing and evaluate the company more negatively than if it had no CSR (Yoon et al. 2006). Husted and de Jesus Salazar (2006) suggest that there are three main motivations for companies to undertake CSR activities. These are altruistic, egoistic and strategic. Altruistic motives aim to create social profits and better the society. Egoistic motivations aim to improve profits through using CSR measures when they lower costs. Strategic motives are used to gain a competitive advantage.

The public also needs to be aware of the CSR efforts to be able to evaluate the company reputation (Werther & Chandler 2005; Sen, Bhattacharya & Korschun 2006; Yoon et al. 2006; Minor & Morgan 2011; Isaksson, Kiessling & Harvey 2014). Usually when a person is aware of the CSR actions, they evaluate the company more favourably and have a higher intent to commit their time and money to the company (Sen et al. 2006). However, the source of the information is important, and should be from a neutral source to lower scepticism (Yoon et al. 2006).

Studying CSR as a reputational insurance is relatively new, although Williams & Barrett (2000) studied the link between reputation charitable giving and criminal activity already at the beginning of the century. They found that charitable giving can, to some extent, repair damage to reputation after scandals. This implies that the company can improve and regain some of their reputation through CSR activities. Schnietz and Epstein (2005) found previous CSR reputation to a market-wide scandal can help reduce the negative stock market reactions and make them insignificant. On the other hand, Linthicum, Reitenga and Sanchez (2010) found that the clients of a scandal firm also suffer, and their CSR reputations had no effect on the losses. Janney and Gove (2011) find that CSR has some insurance like effect, but protection is not absolute. As can be seen, the results are mixed.

Godfrey et al. (2009) research suggests that the type of CSR action is important in the insurance effect. CSR actions especially focused on secondary stakeholders have more insurance-like effects, as they produce moral capital. This may be because these types of activities are more altruistically motivated than those aimed at primary stakeholders. Godfrey et al (2009) argue that in CSR activities aimed at primary stakeholders can be viewed as exchange capital as the activities are motivated by profit making incentives. The motives are hence important.

Consistency is also important. Minor and Morgan (2011) find that the losses in value are greatest during a scandal when the company has a reputation for both good and bad CSR. The losses were even greater than for companies with just bad reputations. The insurance

only works if the CSR reputation of the company is good enough (focus on doing good and not doing harm). Janney and Gove (2011) find similar results, when a company with good reputation in governance indicators finds itself in an option backdating scandal. They also find that past scandals reduce the insurance effects of the company. This suggest that when the company has promoted certain values, they need to make sure they follow the set values. If the CSR is seen as hypocrisy, it does not protect the company. Especially in these cases, trust is broken as the values the company presents are not the values they operate by.

Based on the studies in the field, Janssen, Sen & Bhattacharya (2015) propose a framework to evaluate whether CSR is useful as insulation (or insurance) or creates an amplification of the issue. The three main considerations are the type of crisis, the severity of the crisis and the stakeholders' identification with the company. They theorize that if the crisis is low in severity and responsibility of the company, and the stakeholder identifies strongly with the company, then insurance effects can be achieved. The framework emphasises though, that CSR is not a total cover for scandals, but it can help guide management in CSR strategy decisions, and how they manage crisis situations regarding this strategy.

Communication is a key component of crisis management. The fact that rumours and chatter can increase the negative impact of scandal means that companies need to be quick in reacting. Self-disclosure of the scandal as soon as possible is preferable (Janney & Gove 2011; Carberry et al. 2018), and the company needs to admit to its mistakes and focus on corrective actions (Gillespie & Dietz 2009; Painter & Martins 2017) Organizational representatives also need to express the correct emotions post-crisis. Deviant emotions can create negative impacts on the stock price (ten Brinke & Adams 2015).

In the long- run, however, it seems if companies take corrective actions, they can recover from scandals (Jory et al. 2015; Long et al. 2016) and repair trust with stakeholders (Gillespie & Dietz 2009). This thesis aims to test if these insurance qualities of CSR are present in the Finnish market. Next, the method used in this study is discussed.

3 METHODOLOGY

The method used in this research is the event study. The data collection process, as well as the event study method is covered in this section of the report.

3.1 Event study

In order to study the impact of an event on the market value of the firm, the event study method is used (MacKinlay 1997). This involves defining specific events that affect companies (and their values), as well as analysing whether the event caused an abnormal return in the stock price or not. Therefore, step one is to define the events. The aim of this study is to investigate the impact CSR scandals, misconducts or ethical violations have on the stock price. Hence the news events collected had to involve negative news relating to CSR aspects of the company. This includes news relating to treatment of employees, animals (e.g. livestock), and the environment, as well as if there are any misconducts, lawsuits or other ethically questionable actions taken by the company or its representatives. The collection procedure of the events is described in more detail in the next section (see 3.2 Data collection).

The next step is to define the event and estimation windows. The event window is the period over which the abnormal returns are investigated (pre- and post-event), and the estimation window is the period used to estimate the normal returns for the event window (pre-event). The estimation period is usually before the event window, so that calculation of the expected returns is not affected by the event (Peterson 1989; MacKinlay 1997). One consideration here, is whether to use monthly, weekly or daily data. Armitage (1995) says that the shorter observation interval makes it easier to observe abnormal returns and suggest the use of daily returns. This is supported by Peterson (1989) and MacKinlay (1997), who state that the power of the test is better with daily data than weekly or monthly data. This study will use daily data, as the short- term effects will be studied. Recent research has also used daily data over monthly data (for example Sabbaghi & Xu 2013, Krüger 2015; Makino 2016; Carberry et al. 2018).

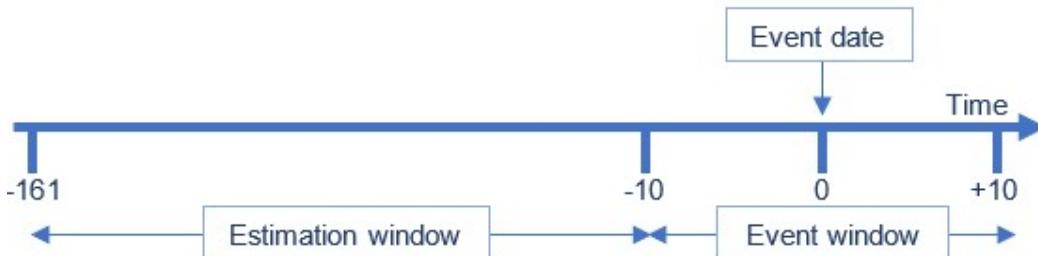
With daily data, the typical estimation period is between 100-300 days and event window from 21- 121 days (Peterson 1989, 38). Armitage (1995) implies that even approximately 100 days is enough for the estimation window, as a longer period may give more accurate estimators for the expected normal return, but the older data may become outdated in relation to the share price during the event window. With regards to the event window McWilliams et al. (1999) suggest that three trading days is enough as the event study

method assumes the market is efficient, adjusting immediately to news. This window includes the event date, one day before and one day after. Longer time periods may have issues with other events affecting the results (McWilliams et al. 1999).

Recent event studies in relation to CSR topics have used estimation window of approximately 120 to 250 days (Janney & Gove 2011, 1573; Sabbaghi & Xu 2013, 87; Krüger 2015, 312-313; Makino 2016, 454; Carberry et al. 2018, 131). Based on these previous studies, the chosen estimation window for this study is 150 trading days, with the estimation window ending 10 days before the event (-161 to -11). This value is slightly over half a year in trading days.

McWilliams et al. (1999) suggest that the event window does not need to be more than 3 days (-1 to +1), to reduce the effect of other overlapping events on the cumulative abnormal return. However, typically longer event windows are used, and event windows of recent studies have been from 3 to 41 days (Janney & Gove 2011, 1573; Sabbaghi & Xu 2013, 86; Krüger 2015, 312-313; Carberry et al. 2018, 131). In this study, the event window will be 21 days (from -10 days to +10 days). The estimation and event windows for this study are presented graphically in figure 1.

Figure 1. Estimation and event windows for study (not to scale)



The third step is to calculate the expected returns of the shares. To do this, there are several possible models to use, and these can be grouped broadly into two categories, statistical models and economic models (MacKinlay 1997). Possible models to use include:

1. Index model (statistical)
2. Average/constant mean return model (statistical)
3. Market model (statistical)
4. Capital asset pricing model (economic)

The index model assumes the expected return at time t , $E(R_{it})$, of the shares is the market rate of return at time t , denoted by R_{mt} (Armitage 1995). The equation for the model is

$$E(R_{it}) = R_{mt} \quad (1)$$

The average/constant mean return model presumes the company shares will earn the same returns as on average during the estimation window (Armitage 1995; MacKinlay 1997). So, the expected return is estimated to be the total average returns over the estimation window, \bar{R}_i , as follows

$$E(R_{it}) = \bar{R}_i \quad (2)$$

The index and average return models are the two simplest models to use, but they do not reflect both firm specific and market factors that may affect the share price (Corrado 2011). Hence these methods do not give very accurate estimations for the expected returns for the event window.

The third model is the market model, which combines both the company's returns (R_{it}) as well as the market returns (R_{mt}) and tries to find the relationship between them. The relationship is assumed to be linear and the regression coefficients of α_i and β_i are calculated using the ordinary least squares method (OLS) using the returns during the estimation period. The error term is denoted as e_{it} . Hence, the equation used is as follows

$$R_{it} = \alpha_i + \beta_i R_{mt} + e_{it} \quad (3)$$

The market model assumes the error term to be 0 (MacKinlay 1997; Corrado 2011), so the expected return $E(R_{it})$ calculated for the event is as follows

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} \quad (4)$$

When the market model is used with daily data, there are some issues that may cause biases in beta estimates and affect the power of the test statistic (Brown & Warner 1985). The bias can arise from thin trading, which may lead to non-synchronous share return data. Thin trading means that the shares are traded infrequently. Typically closing prices are collected for the event study. However, the closing price reflect the last transaction, which may have happened much earlier than during the day than market closing time, causing the data to be non-synchronous. This can cause autocorrelation problems in the returns (Henderson Jr. 1990; Kallunki 1997). The Sholes and Williams method could also be used to calculate the alpha and beta, to correct for the non-synchronous trading. Corrections for the thin trading problem, however, generally do not make a difference. (Brown & Warner 1985; Peterson 1989; Armitage 1995; MacKinlay 1997).

The fourth model is the Capital Asset Pricing Model (CAPM) and, unlike the previous statistical models, it is based on economic theory (Armitage 1995). The equation is similar

to the market model, but α_i is replaced by the risk-free rate, R_{ft} , and market return, R_{mt} , is replaced by the difference between the expected market return, $E(R_{mt})$, and the risk-free rate, also known as the market risk premium. The beta, β_i , represents the risk of the investment, measured by the covariance of return of the stock with the return on the market, divided by the variance of the return of the market. Thus, the equation is

$$E(R_{it}) = R_{ft} + \beta_i [E(R_{mt}) - R_{ft}] \quad (5)$$

The assumptions of the CAPM rarely hold, and consequently this model is typically no longer used in event studies (MacKinlay 1997). These are just a few of the possible methods for modelling expected returns, and many more exist. Though there are several ways to approximate the expected returns, the market model is most typically used (Armitage 1995; MacKinlay 1997). Binder (1997) also states that the market model is most suitable when the sample is chosen from unrelated industries. Since the focus is on all publicly listed Finnish companies, the sample companies are from various industries. In addition, recent research has used the market model (Janney & Gove 2011; Krüger 2015; Carberry et al. 2018). Therefore, the market model will also be used in this study. All data collection and processing will be done in Microsoft Excel, using the available functions. Alpha will be calculated using the intercept function, and beta with the slope function, where the known x's will be the market proxy and the y's the return on the stock.

The method of calculating the returns from raw stock prices is the next consideration, after choosing the method for estimating the normal returns. There are two methods for this, either arithmetic or logarithmic returns (Vaihekoski 2004, 194; Wells 2004, 62). The arithmetic mean is the difference between todays price, P_{it} , (plus possible dividends, D_{it}) and yesterday's price, P_{it-1} , divided by yesterday's price. In equation format this is,

$$R_{it} = \frac{P_{it} + D_{it} - P_{it-1}}{P_{it-1}} \quad (6)$$

The logarithmic (or continuously compounded) returns, however, are often used by researchers as they are more symmetrical (Vaihekoski 2004, 194; Wells 2004, 62) and the returns are then more normally distributed, which is important when using the market model and regression to estimate the alphas and betas (Henderson Jr. 1990, 287). The logarithmic returns are calculated as follows (\ln means the natural logarithm):

$$R_{it} = \ln \left(\frac{P_{it}}{P_{it-1}} \right) \quad (7)$$

Studies on the event study method have found that the choice of method in calculating the returns from price data does not seem to make a difference in the event study results

(Hendersson Jr. 1990, 287). However, most studies use logarithmic returns (*ibid*), and there is some evidence to suggest that using logarithmic returns are better for the test specifications than arithmetic returns (Corrado 2011, 216). Hence in this study, the logarithmic returns will be calculated from the raw prices.

After the market model estimates of normal returns have been calculated for the event window, the abnormal returns need to be calculated for each event and each event period day. The abnormal return (AR_{it}) is the difference between the actual observed return (R_{it}) and the estimated expected return. The equation is:

$$AR_{it} = R_{it} - E(R_{it}) \quad (8)$$

The results then need to be aggregated over the events. The time will be transformed for each event from calendar time to time relative to event (so -10 to +10 days from event), to be able to do so. Then the average of the abnormal returns, \bar{AR}_t , can be calculated over all the events (MacKinlay 1997, 24). The equation is as follows, where N represents the total number of events:

$$\bar{AR}_t = \frac{1}{N} \sum_{i=1}^N AR_{it} \quad (9)$$

The cumulative abnormal returns (CAR) will also be calculated to see what the overall effects of the events are in the days before and following the event. The CAR is the sum of the abnormal returns in the event window (MacKinlay 1997, 21). The CARs will be calculated for each event separately. The CAR for security/event i, CAR_i , between time t_1 and t_2 is calculated as follows:

$$CAR_i(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{it} \quad (10)$$

After each events' abnormal return is calculated, the average of all the event CAR's is calculated to get the overall CARs, $\bar{CAR}_t(t_1, t_2)$, for all the events, N (MacKinlay 1997, 24). In equation format:

$$\bar{CAR}_t(t_1, t_2) = \frac{1}{N} \sum_{i=1}^N CAR_i(t_1, t_2) \quad (11)$$

The event study method, however, does have some issues. If the events have clustering, meaning that the event windows overlap in calendar time, there may be problems with covariance and cross-correlation (Armitage 1995; MacKinlay 1997). Since the previously described aggregation method assumes the covariances to be zero, the abnormal returns may need to be analysed differently if clustering is present. One method is aggregating the results with by using a portfolio method, and another is analysing the individual abnormal

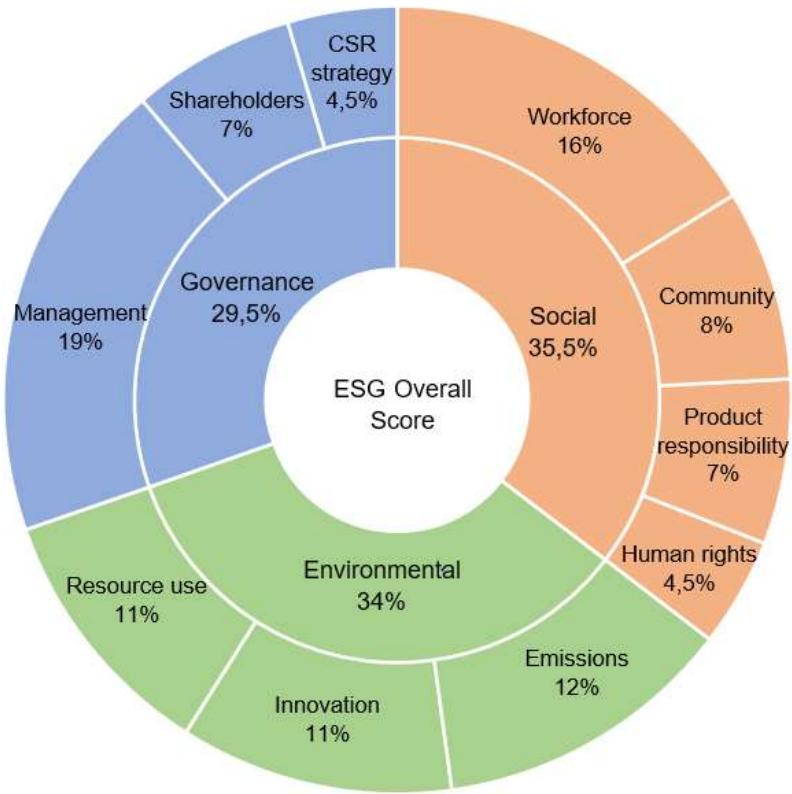
returns without aggregation (MacKinlay 1997). It will also affect the significance test method (Armitage 1995). Therefore, this needs to be checked for when the data on events has been collected. With this study, however, the focus is not on one single event, but various events from various companies and from different industries. Since the companies are from different industries, this should not be a big problem (Armitage 1995).

To test for the research questions, and compare results, the abnormal returns will also be grouped by CSR score and CSR news type. The aggregation will hence be also done based on these criteria.

The second research question is concerned with the types of CSR news, and if they have an impact on the stock price. To test the question, the news will be divided into different categories based on what the news concerns. The exact categories will depend upon what kinds of news events will be found. Typical themes in CSR definitions, however, include customers, community, environment, employees, ethics and the law (Rao & Hamilton 1996; Gee & Norton 2013; Jizi et al. 2016). These will be used as the basis for the categories. The categories will be discussed further in section 3.2.

The third research question asks if CSR reputation has an impact on how severe the event is. To test this, CSR reputation needs to be measured. Typically, Kinder, Lydenberg, and Domini Research and Analytics CSR data (KLD data) is used to quantify the CSR reputation of the firm (Janney & Gove 2011; Krüger 2015). In this study, Thomson Reuters ESG scores will be used. They include three main criteria for scores, or pillars as the database calls them. These pillars are environmental, social and governance aspects of the companies. The overall assessment of the company considers 178 indicators that are grouped into 10 categories. These 10 categories are placed into one of the three pillars, and the number of indicators affects the overall score weights. Figure 2 on the next page shows the categories, how they are organized into pillars and their weights in the overall score. The pieces represent the proportion of the weight in the overall score.

Figure 2. ESG overall score composition (adapted from Thomson Reuters 2019, 6)



The companies are scored based on publicly reported information, and numerically are from 0 to 100. The higher the numerical score the better the CSR practices. Although the score is calculated numerically, the score is reported as a letter grade in the database, with A+ being the best and D- the worst. For the testing of the research questions, the numerical scores will be used. In addition, the Eikon database reports an ESG controversies score. This score reflects on how exposed the company is to negative environmental, social and governance events in the global media. The logic for the controversies is opposite to the normal ESG score (i.e. a low numerical score is better than a high numerical score). It contains 27 indicators on ESG controversy topics recorded in latest closed period for the company, and then the company is ranked within its industry. The score is derived with the percentile rank formula.

There is also an ESG combined score, which combines the overall ESG score and the ESG controversies score. Here again a high combined score means a high CSR reputation. It is the average of the overall and combined score, if the controversies score is less than 50 and less than the overall score. However, even if the controversies score is less than 50, but it is greater than the overall score, then the combined score will be the same as the overall score. In the case that controversies score is greater than or equal to 50 the

combined score is equal to the overall score. For example, Nokia Oyj (year 2010) the overall ESG score was 79,43, and the controversies score was 2,17 (less than 50 and the overall score). The combined score is the average of these two, which is 40,8. Another example, for Outokumpu Oyj (year 2007), the overall score was 72,81 and the controversies score was 58,25 (greater than 50) the combined score was equal to the overall score, so 72,81. More detailed explanations are available from Thomson Reuters (2019).

After the abnormal returns and CARS have been calculated within the CSR groups, the significance of the results needs to be tested in order to interpret the results. With the market model, there are certain aspects that need to be considered when choosing the significance test. The market model errors need to be checked for cross-correlation, and if there is an event period error variance increase. If there is no cross correlation, and there is little increase in event period error variance, the time series method can be used with the t-test or Corrado's rank test. If the event period error variance increase is over 1,5, the cross-sectional method or the rank test should be used. If cross-correlation is present, the portfolio time series method should be used, but this is only typical if the event date is shared and the firms studied are from the same industry. (Armitage 1995, 47).

Brown and Warner (1985) and Berry, Gallinger & Henderson Jr. (1990) imply that the Student-t test is the best test statistic to use when conducting an event study with daily data. Berry et al. (1990) even caution against using non-parametric alternative tests, as they are not as well specified. The t-test aims to test if the null hypothesis is true, that the result is not statistically different from zero. In other words, that the event does not have an impact on the stock price (Brown & Warner 1985, 7; MacKinlay 1997; Vaihekoski 2004; Corrado 2011). The test statistic is calculated by dividing the abnormal return by its' standard deviation during the estimation period (Vaihekoski 2004, 233). The test statistic at time t , T_t , for the average abnormal return is then given by,

$$\frac{\overline{AR}_t}{\sqrt{\sigma^2(\overline{AR}_t)}} \sim T_t(N) \quad (12)$$

where the variance of the average abnormal return, $\sigma^2(\overline{AR}_t)$, is given by the sum of the individual variances of the events during the estimation period (MacKinlay 1997, 24; Vaihekoski 2004, 233). In equation format,

$$\sigma^2(\overline{AR}_t) = \frac{1}{N^2} \sum_{i=1}^N \sigma_{it}^2 \quad (13)$$

The test statistic then needs to be compared to the Student's t-distribution to determine the significance of the result. To do this, the p-value of the ARs will be calculated in Excel

(TDIST-function) using the absolute value of test statistic, and the number of events as the degrees of freedom (2-tailed) (Vaihekoski 2004, 235).

The t-test also needs to be calculated for the CARs. Again, the test statistic is calculated by dividing the average CAR for all events divided by the standard deviation of the CAR between the two days (t_1 and t_2) with the assumption that the events are not cross-correlated (Vaihekoski 2004, 233). This test statistic is then compared to the normal distribution, with a mean of zero and a standard deviation of one (MacKinlay 1997, 24; Vaihekoski 2004, 233). The test statistic, J_1 is as follows,

$$J_1 = \frac{\overline{CAR}_t(t_1, t_2)}{\sqrt{\sigma^2(t_1, t_2)}} \sim N(0, 1) \quad (14)$$

Where the variance, $\sigma^2(t_1, t_2)$, is calculated like so,

$$\sigma^2(t_1, t_2) = (t_2 - t_1 + 1)\sigma_t^2(t_1, t_2)$$

The p-value will also be calculated here. This is done in Excel with the NORMSDIST function, using the negative of the absolute value of the test-statistic, J_1 (Vaihekoski 2004, 236). The lower the p-value, the more significant the result is. In the next section, the data collection and processing will be discussed in more detail.

3.2 Data collection

For the event study to be used, the first requirements are that there is an event to be studied and it needs to relate to a publicly listed company, so that the stock price change can be observed. Since the focus of this study was to investigate companies in Finland, the first step was to collect the names of the companies listed on the Helsinki Stock Exchange main market. This list was collected in February 2018 from the Nasdaq Nordic website and consisted of 128 companies.

After this list was comprised, news items were searched for. The chosen time range was news events reported between 01.01.2008 - 22.10.2018. The main search was done on the MTV website, as this is one of the biggest online media outlets in Finland (Finnish Internet Audience Measurement 2018). Other reasons for choosing this news service were that their news information is available free of charge for everyone, and their search function was well suited to this task. The company name was placed into the search function on the website and articles relating to negative CSR news, scandals or misconducts were recorded with the date the news was published. Also, if there was reference to the original article from

another news provider or source, this article was looked for. Previous names of the companies were also considered.

Complementary news items were also searched for via Google by placing the name of the company with the word scandal in Finnish ("kohu"). This was done to search for articles not on the MTV website, as well as check for articles that have the same news to verify the reporting from MTV as well as double-check the event date. The Nasdaq Nordic website news section was also checked for any extra events, as well as to check that there was no market news during the event window.

The criteria for choosing the events to be part of the study was that it had to be a scandal or negative news relating to the company, that was not normal to the business. It also had to be related to some aspect of CSR. These aspects were animals, consumers, employees, the environment, ethics and law. Events could be, for example, discovered ill treatment of animals, harmful environmental leaks, discrimination against a certain consumer or employees' group, employee conditions in developing countries, management misconduct, bribery, and manipulation of product tests.

The total number of events found for the time period of 01.01.2008- 22.10.2018 was 123 events, but three events had undeterminable event dates, and were dropped, leaving 120 events. When checking for other news on the event day, 11 events had to be removed. The reasons for removal were that for one event, the company also had positive CSR news on the same day; for two events, the stock was not listed on the stock exchange at the time; and for eight events there was news relating to financial reports and general meetings released on the same day. For one company, the trading of their stock was stopped in November 2014 (stock delisted in March 2018), the events after this date had to be removed as well (4 events). The other events for this company were kept. The sample was left with 105 events from 30 companies. The event dates, news headlines and company names are listed in appendix 1. Some event dates had to be modified, as the event happened on a non-trading day, in these cases, the event date was moved to the next trading day.

Events with news that could influence the stock price in the event window of 3 days (-1 to +1 days) were also dropped. These included announcements of annual or interim financials, new deals or expansion and bond issues. In two cases, there was a similar event for the company on consecutive days, where the first event was kept and the second dropped. The number of events then dropped by 16, to 89 events. The industry breakdown can be seen from table 1 below. Industry data was collected from the Nasdaq Nordic website. Most

companies are in the consumer goods industry (8), but the consumer services industry had the most events (23).

Table 1. Industry breakdown of companies for events and number of events per industry

| Industry | Number of companies | Number of events |
|--------------------|---------------------|------------------|
| Basic materials | 4 | 12 |
| Consumer goods | 8 | 20 |
| Consumer services | 5 | 23 |
| Financials | 2 | 7 |
| Health care | 1 | 1 |
| Industrials | 6 | 10 |
| Oil & gas | 1 | 9 |
| Technology | 1 | 4 |
| Telecommunications | 2 | 3 |
| Total | 30 | 89 |

Table 2 presents descriptive statistics on general information about the size of the companies in the data sample. The data are for each event from the previous accounting year and collected from Thomson Reuters' Eikon. Also, for four events/company's employee data was not available from Eikon. As can be seen from the table 2, the sample companies are very different in size. The means and medians are far from each other (except for the natural logarithm of market capitalization), and the standard deviations are large. The descriptive statistics seem to suggest that most companies are smaller than the average of the sample.

Table 2. Descriptive statistics of sample firms

| Values | Mean | Median | Minimum | Maximum | Standard deviation |
|------------------------------------|--------|--------|---------|---------|--------------------|
| Market capitalization (millions €) | 31,94 | 1,28 | 0,01 | 408,91 | 101,43 |
| LN (Market capitalization) | 14,16 | 14,06 | 9,15 | 19,83 | 2,32 |
| Total assets (millions €) | 396,68 | 2,22 | 0,02 | 5932,87 | 1456,54 |
| Employees | 15232 | 6323 | 197 | 132427 | 26044 |

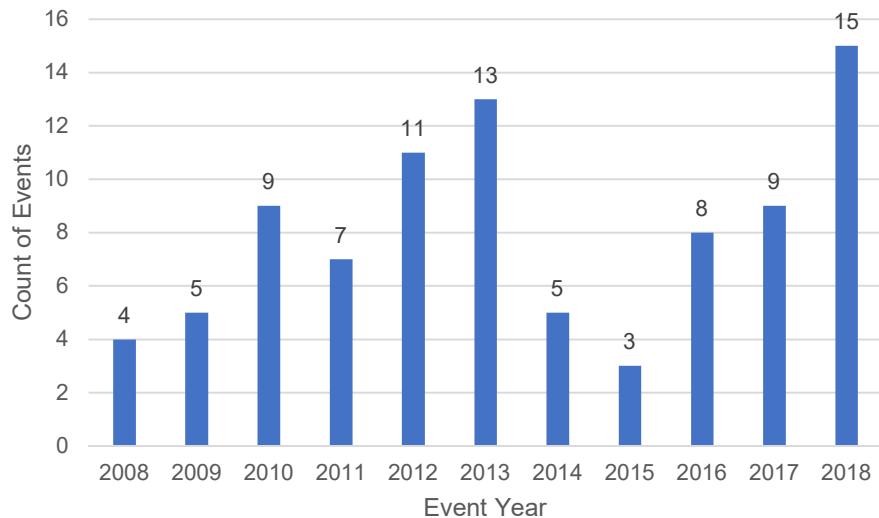
The next step was to collect the stock price data for the companies, as well as the market return proxy index to be used in calculating the market model returns. The OMX Helsinki 25 was used as the proxy for the market returns. The OMX 25 Helsinki is a capitalization weighted price index that includes the 25 most traded stocks in the Helsinki Stock Exchange. Although an equal weighted stock is slightly better than value weighted (Peterson 1989; Armitage 1995), this was chosen as a proxy as there was no readily available equal weighted price index of the Helsinki Stock Exchange on Thomson Reuters Eikon, where the data was collected.

The adjusted closing prices were chosen for the stock and index prices. The selected timeframe was from 01.01.2007- 31.10.2018. This time frame was chosen since the event date was from 01.01.2008 onwards, one year of extra data was collected to use for the possible estimation window (-161 days to -11 from event). Also, since the last event happened on the 16.10.2018 (see appendix 1), there needed to be at least 10 days post-event to calculate the abnormal returns for the event.

The logarithmic returns for each company were calculated and used in the analysis. Nonsynchronous and thin trading problems can cause problems with the alpha and beta estimations, as discussed previously, due to autocorrelation (Henderson Jr. 1990; Kallunki 1997). The returns were checked for 0% results each events' event window. Only 8 events had this problem. On average for these events, there were 0% returns 3,06% of the time (the maximum was 6,62%). The problem does not seem to be too big here, so this issue was ignored. In addition, generally correcting for the problem does not make a difference when OLS and the market model are used (Brown & Warner 1985; MacKinlay 1997).

There were also some clustering issues with the events, as can be seen in figure 3 below. Over the ten-year period, there are very different amounts of events per year. There are a few years, such as 2012, 2013 and 2018, with several events (over 10), and then some years, with very few events, such as 2008 and 2015. For six events, the event dates also overlap exactly. Event clustering can cause issues with cross-correlation (Armitage 1995; MacKinlay 1997), but since the market model is used and the market returns are considered in the model, this is not a large issue here (Brown & Warner 1985; Peterson 1989).

Figure 3. Count of events by year



To answer the second research question, the events were also categorized into types of CSR news. The divisions into news types were based on the contents of the articles and on previous studies on categorizations and definitions of CSR. As mentioned earlier, these previous studies include aspects such as customers, community, environment, employees, ethics and the law (Rao & Hamilton 1996; Gee & Norton 2013; Jizi et al. 2016) in definitions or categorizations of CSR. Based on the articles found, six categories were used. These were animals, customers, employees, environment, ethics and law. Table 3 presents number of events in each category for the 89 events used in the study. Appendix 2 contains the details on what category each event was placed in.

Table 3. Count of events in each CSR news category

| | Number of events |
|--------------|-------------------------|
| Animals | 3 |
| Customers | 14 |
| Employees | 21 |
| Environment | 15 |
| Ethics | 13 |
| Law | 23 |
| Total | 89 |

The “animals”-category included any news items relating to treatment of animals. These were mostly events related to food producing companies. The “customers”-category included any news items that related to treatment of customers, for example deceiving or discriminating against customers, unthoughtful advertising campaigns, and surveys of customer perceptions of the company. News of treatment of employees was included in the “employees” category, including working conditions, uses of child labour, salary payment, and discrimination against a certain group. The “environment”-category included events related to pollution and waste management, such as leaks or, as well as events involving treatment of natural resources (not including animals), such as logging or deforestation. Events relating to questionable, but not illegal, actions were placed into the “ethics” category. These included events such as plagiarism allegations, adjusting product test results, and questionable supplier choices. The “law” category included news event on any illegal or suspicions of illegal events or misconduct, such as bribery, tax fraud, and warnings or fines from the Finnish Financial Supervisory Authority (FFSA). Some events could have been included in more than one, but the most appropriate category was chosen based on the focus of the news article.

To test the third research question, CSR data was also collected from the Thomson Reuters Eikon database. The overall, controversies and combined ESG were collected. The score from the previous year to the event was chosen, as the aim is to study if previous reputation

can provide insurance in a negative event. Unfortunately, this data was not available for all companies, therefore in the results section, before using the ESG scores as a proxy for reputation, all events were examined, and they were grouped based on whether an ESG score was available or not. For analysis on the high and low CSR reputation, the overall and combined scores were used as a proxy for CSR reputation. The number of events with CSR scores for the previous year was 45 (from 11 companies). As can be seen in table 4, there are various industries represented, with a maximum of 2 companies for any given industry. The basic materials industry has the most events (10), whilst consumer goods the least (2).

Table 4. Industry breakdown of events with ESG scores

| | Number of companies | Number of events |
|--------------------|---------------------|------------------|
| Basic materials | 2 | 10 |
| Consumer goods | 1 | 2 |
| Consumer services | 1 | 6 |
| Financials | 1 | 6 |
| Industrials | 2 | 5 |
| Oil & gas | 1 | 9 |
| Technology | 1 | 4 |
| Telecommunications | 2 | 3 |
| Total | 11 | 45 |

Table 5 has the same descriptive statistics as earlier for all the events (not employees), except that this includes only those with CSR scores (data from previous accounting year to event). The mean and median have increased in all variables, suggesting that these companies are larger than the overall sample. Indeed, when looking at the list of companies, these 10 out of 11 are currently included in the OMX Helsinki 25 index. This means that they are in the top traded companies on the Helsinki Stock Exchange. The company that is not included in the index has been delisted.

Table 5. Descriptive statistics of sample firms with ESG scores

| Values | Mean | Median | Minimum | Maximum | Standard deviation |
|------------------------------------|--------|--------|---------|---------|--------------------|
| Market capitalization (millions €) | 62,92 | 4,14 | 0,34 | 408,91 | 136,36 |
| LN (Market capitalization) | 15,82 | 15,24 | 12,73 | 19,83 | 1,94 |
| Total assets (millions €) | 783,47 | 5,69 | 0,86 | 5932,87 | 1983,31 |

Table 6 shows the descriptive statistics for the previous year ESG scores for the 45 events. The means and medians are quite close to each other, meaning that the events' scores are distributed in a symmetrical manner around the mean. This makes it easy to decide where to split the events into high CSR and low CSR groups. The overall and combined scores will be analysed separately. For the overall score, the cut-off point will be at 65,5 and for

the combined score it will be 59,5 to get almost equal samples. These values are based on the median scores (rounded to the next 0,5). In both cases this gives 23 events for low CSR and 22 events for the high CSR group. Interestingly though, 29 events switch groups in the process. The scores for each event, that data was available for, are listed in appendix 2.

Table 6. ESG scores descriptive statistics

| Values | Mean | Median | Minimum | Maximum | Standard deviation |
|-------------------------|-------------|---------------|----------------|----------------|---------------------------|
| ESG overall score | 67,49 | 65,30 | 44,97 | 91,21 | 9,38 |
| ESG controversies score | 43,78 | 58,25 | 2,17 | 70,50 | 25,54 |
| ESG combined score | 56,27 | 59,46 | 35,33 | 80,76 | 11,66 |

The next section will discuss the results of the event study. First the overall results will be looked at, and then the comparison between the low and high CSR groups.

4 RESULTS AND DISCUSSION

In this section, the results of the event study analysis will be discussed. The questions will be answered one by one, with each of them having their own subsection in this chapter. As a reminder, the research questions were:

1. Do scandals have an impact on the share prices of Finnish publicly listed companies?
2. Do different kinds of scandals (related to CSR aspects) have different impacts?
3. Can CSR image/reputation reduce the impact of scandals on the share price?

4.1 Overall event study

Table 7 presents the average abnormal returns (AAR) for all 89 events used in the study. Overall there seems to be very slightly negative return on event date and day after, which is expected after a negative event, but the results are not statistically significant. The abnormal returns are hence not statistically different from zero. The only statistically significant returns occur 2 days before the event (-0,4877% at the 0,05 level) and 7 days after the event (0,3460% at 0,1 level). According to the EHM, pre-event there should not be any abnormal returns, unless there is information leakage, and for example, insiders are selling stock in advance of the event being exposed (Rao & Hamilton 1996).

Table 7. Average abnormal returns for all events (89 events) for the event window from day -10 to day 10.

| Day | AAR | t-ratio | p-value |
|-----|------------|---------|---------|
| -10 | 0,1945% | 0,9816 | 0,3289 |
| -9 | 0,0462% | 0,2333 | 0,8161 |
| -8 | -0,0589% | -0,2970 | 0,7672 |
| -7 | -0,2600% | -1,3118 | 0,1929 |
| -6 | -0,1041% | -0,5253 | 0,6007 |
| -5 | -0,0204% | -0,1028 | 0,9183 |
| -4 | -0,2878% | -1,4524 | 0,1499 |
| -3 | 0,0066% | 0,0335 | 0,9734 |
| -2 | -0,4877%** | -2,4606 | 0,0158 |
| -1 | 0,2574% | 1,2990 | 0,1973 |
| 0 | -0,1842% | -0,9296 | 0,3551 |
| 1 | -0,0445% | -0,2244 | 0,8230 |
| 2 | -0,0491% | -0,2480 | 0,8047 |
| 3 | 0,1661% | 0,8381 | 0,4042 |
| 4 | -0,2847% | -1,4363 | 0,1544 |
| 5 | -0,1867% | -0,9418 | 0,3489 |
| 6 | -0,2364% | -1,1927 | 0,2362 |
| 7 | 0,3460%* | 1,7458 | 0,0843 |
| 8 | 0,0198% | 0,0997 | 0,9208 |
| 9 | -0,0823% | -0,4152 | 0,6790 |
| 10 | -0,0329% | -0,1660 | 0,8685 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test.

Also, the positive return on day 7 is unexpected, as after a negative event the returns would be expected to be negative for some time, even months and years after the event (Rao & Hamilton 1996; Long et al. 2016). This result could be caused due to an earlier overreaction in the market to the news, and it corrects the price afterwards.

Table 8 presents the cumulative average abnormal returns (CAAR) for different event windows for all 89 events (J1 is the test statistic). The pre-event windows and post- event (including the event date) windows separately are no not have significant results, but the overall event periods from -5 to +5 days and -10 to +10 days do have some significant CAARs. The CAAR in the period from -5 to +5 is -1,1149% (at the 0,05 level) and in the -10 to +10 period it is -1,2829% (at the 0,1 level). This seems to support the results of Krüger (2015).

The losses, however, do not seem to happen solely based on the event, as the cumulative average abnormal returns are negative already before the event. In fact, for the -10 to +10 event period, it seems as though the larger part of the abnormal negative return comes pre-event than post-event. The pre-event news items were examined carefully, but no significant parallel events were discovered, so other events should not be the cause for the negative pre-event CAAR. This would then suggest that there was either information leakage pre-event, or market-level sentiment causing the negative CAAR pre-event.

Table 8. Cumulative abnormal returns for all events (89 events)

| Period | CAAR | Variance | J1 | p-value |
|-------------------|--------------------|------------------|----------------|---------------|
| [-10, -1] | -0,7140% | 3,928E-05 | -1,1392 | 0,1273 |
| [-5, -1] | -0,5318% | 1,964E-05 | -1,2000 | 0,1151 |
| [-1, 0] | 0,0732% | 7,856E-06 | 0,26119 | 0,3970 |
| [0, 0] | -0,1842% | 3,928E-06 | -0,9296 | 0,1763 |
| [0, +1] | -0,2287% | 7,856E-06 | -0,8160 | 0,2073 |
| [0, +5] | -0,5831% | 2,357E-05 | -1,2010 | 0,1149 |
| [0, +10] | -0,5689% | 3,928E-05 | -0,6137 | 0,2697 |
| [-1, +1] | 0,0287% | 2,357E-05 | -1,2010 | 0,1149 |
| [-5, +5] | -1,1149% ** | 4,321E-05 | -1,6961 | 0,0449 |
| [-10, +10] | -1,2829% * | 8,249E-05 | -1,4125 | 0,0789 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test. (J1 is the test statistic).

The negative reaction to scandals is expected, as previous research has shown (Murphy et al. 2009, Jory et al. 2015, Krüger 2015; Chen 2016), but the lack of significance on the event day and in the period-1 to +1-days is unexpected, as it would be expected that the market reacts very negatively immediately to the news. This result then does not seem to fully follow the EMH, and the market seems to react slowly and if at all the event. It could also imply that not all the market participants receive the news immediately or that the market participants do not agree on the impact the news has on the value of the stock. In the next

section, the events will be split into more detailed categories, as Krüger (2015) suggests that the focus of the news can have a different impact.

4.2. CSR event category

To look at the results in more detail and to answer the second research question, the events were categorized into CSR event types. The AARS for each event type are presented in table 9.

Table 9. Average abnormal returns grouped by CSR event category (89 events) for event window -10 to +10

| Day | Animals (3 observations) | | | Customers (14 observations) | | | Employees (21 observations) | | |
|-----|-------------------------------|---------|---------|-----------------------------|---------|---------|-----------------------------|---------|---------|
| | AAR | t-ratio | p-value | AAR | t-ratio | p-value | AAR | t-ratio | p-value |
| -10 | 0,4141% | 0,4031 | 0,7139 | 1,1100%** | 2,4534 | 0,0279 | 0,3636% | 1,0047 | 0,3265 |
| -9 | -0,8874% | -0,8639 | 0,4512 | 0,1405% | 0,3105 | 0,7608 | -0,5002% | -1,3823 | 0,1814 |
| -8 | 0,1869% | 0,1819 | 0,8672 | 0,1921% | 0,4246 | 0,6776 | 0,1611% | 0,4452 | 0,6607 |
| -7 | 0,1655% | 0,1611 | 0,8823 | -0,4522% | -0,9996 | 0,3345 | 0,1064% | 0,2939 | 0,7717 |
| -6 | 0,4121% | 0,4012 | 0,7151 | -0,0241% | -0,0533 | 0,9582 | -0,0101% | -0,0280 | 0,9779 |
| -5 | -0,6557% | -0,6383 | 0,5687 | -0,3879% | -0,8574 | 0,4057 | -0,2321% | -0,6415 | 0,5282 |
| -4 | -1,2830% | -1,2490 | 0,3002 | -0,5621% | -1,2424 | 0,2345 | -0,2279% | -0,6298 | 0,5356 |
| -3 | 0,4498% | 0,4379 | 0,6911 | -0,3420% | -0,7559 | 0,4622 | 0,1700% | 0,4699 | 0,6433 |
| -2 | -2,9668%* | -2,8882 | 0,0631 | 0,4203% | 0,9289 | 0,3687 | 0,0528% | 0,1459 | 0,8854 |
| -1 | -0,7699% | -0,7495 | 0,5080 | 0,3420% | 0,7560 | 0,4622 | -0,2113% | -0,5839 | 0,5655 |
| 0 | 0,5901% | 0,5744 | 0,6059 | 0,7116% | 1,5730 | 0,1380 | -0,1216% | -0,3361 | 0,7402 |
| 1 | 1,5853% | 1,5433 | 0,2205 | 0,0942% | 0,2083 | 0,8380 | -0,2372% | -0,6554 | 0,5193 |
| 2 | -0,6325% | -0,6157 | 0,5816 | 0,2749% | 0,6076 | 0,5532 | -0,1987% | -0,5491 | 0,5887 |
| 3 | -0,4995% | -0,4862 | 0,6601 | 0,1605% | 0,3547 | 0,7281 | -0,1140% | -0,3151 | 0,7558 |
| 4 | -0,5228% | -0,5089 | 0,6459 | 0,0765% | 0,1691 | 0,8681 | 0,1276% | 0,3527 | 0,7278 |
| 5 | -0,1298% | -0,1264 | 0,9074 | -0,3709% | -0,8199 | 0,4260 | 0,1906% | 0,5267 | 0,6039 |
| 6 | 1,6924% | 1,6475 | 0,1980 | -0,1616% | -0,3571 | 0,7263 | -0,1907% | -0,5269 | 0,6038 |
| 7 | 0,7212% | 0,7021 | 0,5332 | 1,4732%*** | 3,2562 | 0,0057 | 0,2708% | 0,7484 | 0,4625 |
| 8 | -0,4266% | -0,4153 | 0,7058 | 0,0556% | 0,1229 | 0,9040 | 0,2581% | 0,7132 | 0,4836 |
| 9 | -0,3480% | -0,3388 | 0,7571 | -0,3500% | -0,7736 | 0,4520 | -0,1069% | -0,2955 | 0,7705 |
| 10 | 0,8057% | 0,7844 | 0,4900 | 0,0893% | 0,1973 | 0,8464 | -0,2832% | -0,7826 | 0,4426 |
| Day | Environment (15 observations) | | | Ethics (13 observations) | | | Law (23 observations) | | |
| | AAR | t-ratio | p-value | AAR | t-ratio | p-value | AAR | t-ratio | p-value |
| -10 | 1,3600%** | 2,2754 | 0,0380 | -1,3549%** | -2,8024 | 0,0150 | -0,4299% | -1,0797 | 0,2915 |
| -9 | 0,0373% | 0,0624 | 0,9511 | 1,7552%*** | 3,6305 | 0,0030 | -0,3505% | -0,8801 | 0,3879 |
| -8 | -0,7961% | -1,3319 | 0,2028 | 0,4707% | 0,9736 | 0,3480 | -0,2630% | -0,6605 | 0,5155 |
| -7 | -1,3390%** | -2,2403 | 0,0406 | 0,6654% | 1,3556 | 0,1983 | -0,3467% | -0,8705 | 0,3930 |
| -6 | 0,2700% | 0,4517 | 0,6579 | -0,2115% | -0,4375 | 0,6689 | -0,4892% | -1,2284 | 0,2317 |
| -5 | -0,1306% | -0,2185 | 0,8300 | 0,8858%* | 1,8321 | 0,0899 | 0,0392% | 0,0985 | 0,9224 |
| -4 | -0,5032% | -0,8419 | 0,4131 | -0,1844% | -0,3814 | 0,7091 | 0,0361% | 0,0907 | 0,9285 |
| -3 | -0,2826% | -0,4729 | 0,6431 | 0,6547% | 1,3542 | 0,1988 | -0,1658% | -0,4163 | 0,6810 |
| -2 | -0,7500% | -1,2548 | 0,2287 | -0,5299% | -1,0961 | 0,2929 | -1,0154% ** | -2,5499 | 0,0179 |
| -1 | 0,7748% | 1,2963 | 0,2145 | 0,2288% | 0,4733 | 0,6439 | 0,4467% | 1,1218 | 0,2735 |
| 0 | 0,1296% | 0,2168 | 0,8313 | -1,5762%*** | -3,2602 | 0,0062 | -0,3056% | -0,7675 | 0,4506 |
| 1 | -0,2526% | -0,4226 | 0,6786 | 0,1708% | 0,3534 | 0,7295 | -0,1515% | -0,3805 | 0,7071 |
| 2 | -0,3556% | -0,5949 | 0,5608 | 0,2993% | 0,6190 | 0,5466 | -0,0308% | -0,0774 | 0,9390 |
| 3 | 0,2553% | 0,4272 | 0,6753 | 0,6470% | 1,3382 | 0,2038 | 0,1821% | 0,4573 | 0,6517 |
| 4 | -1,0924%* | -1,8276 | 0,0876 | -0,0755% | -0,1561 | 0,8784 | -0,4413% | -1,1083 | 0,2792 |
| 5 | -1,8907%*** | -3,1633 | 0,0064 | 0,0117% | 0,0242 | 0,9810 | 0,5729% | 1,4386 | 0,1637 |
| 6 | -0,6679% | -1,1175 | 0,2814 | -0,5656% | -1,1699 | 0,2631 | -0,1077% | -0,2705 | 0,7892 |
| 7 | 0,9957% | 1,6658 | 0,1165 | -0,1361% | -0,2816 | 0,7827 | -0,4716% | -1,1843 | 0,2484 |
| 8 | 0,4710% | 0,7881 | 0,4429 | 0,0119% | 0,0246 | 0,9808 | -0,4513% | -1,1333 | 0,2688 |
| 9 | 0,0380% | 0,0637 | 0,9501 | 0,4241% | 0,8772 | 0,3963 | -0,2268% | -0,5696 | 0,5745 |
| 10 | 0,1309% | 0,2190 | 0,8296 | 0,1619% | 0,3349 | 0,7431 | -0,2051% | -0,5149 | 0,6115 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test.

As can be seen from table 9 on the previous page, there are not many significant AARs in the event windows for the separate categories. On the event day, for five out of six categories, the impact of the events is not statistically different from zero. In fact, only the ethics category has a statistically significant negative abnormal return on the event date (-1,5762%, significant at 0,01 level). It appears ethical violations have the most impact on the stock price in the case of these events on the event date, and the market seems to be very efficient with regards to reacting to this type of news. This supports previous research (Rao & Hamilton 1996).

In the days after the event, the only significant results are in the environment- and customer-categories. For the environment-category, the significant impacts happen on day 4 (-1,0924%, significant at 0,1 level) and day 5 (-1,8907, significant at 0,01 level) after the event. It seems as there is a delayed reaction to the news, but it is very negative. A negative reaction is expected from environment-related news (Carpentier & Suret 2015; Makino 2016), but the delayed reaction is surprising. This could possibly due to investors waiting to learn more about the accident and what kinds of damage it has caused. At least Makino (2016) found that the severity of the accident has an impact on the severity of the market reaction.

The customers category has a significant positive return on day 7 after the event (1,4732%, significant at 0,01 level). This is an unexpected result, as negative events would be expected to have a negative abnormal return (Krüger 2015). One would also think that scandals affecting the customers of the company would be viewed negatively, as customers are essential for a business to be in business. One explanation could be that the events themselves were not that impactful. Many of the events in this category were one's that were briefly reported, and mostly caused some chatter in social media. Maybe investors viewed them as one-time events, that do not have much of an impact on the business.

Both the animal and law categories had only one significant AAR in the -10 to +10 event window. In both cases it was day -2, and the returns were negative for both. This could mean that there was some other event in the pre-event window causing the abnormal returns. However, as mentioned in the previous section, parallel events were checked for and events that had other significant events in the event window were excluded. The other options are that there was information leakage pre-event, or that there was some other market level sentiment before the event impacting the returns. The employees-category had no significant AARs.

Next the CAAR's were calculated for the CSR event categories. They are presented in table 10 below.

Table 10. Cumulative average abnormal returns grouped by CSR event category (89 events)

| Period | Animals (3 events) | | | | Customers (14 events) | | | |
|------------------------------|--------------------|-----------|---------|--------------------------------|-----------------------|-----------|---------|---------|
| | CAAR | Variance | J1 | p-value | CAAR | Variance | J1 | p-value |
| [-10, -1] | -4,9344%* | 1,055E-03 | -1,5191 | 0,0644 | 0,4365% | 2,047E-04 | 0,3051 | 0,3801 |
| [-5, -1] | -5,2256%** | 5,276E-04 | -2,2751 | 0,0115 | -0,5297% | 1,023E-04 | -0,5236 | 0,3003 |
| [-1, 0] | -0,1799% | 2,110E-04 | -0,1238 | 0,4507 | 1,0537%** | 4,094E-05 | 1,6468 | 0,0498 |
| [0, 0] | 0,5901% | 1,055E-04 | 0,5744 | 0,2828 | 0,7116%* | 2,047E-05 | 1,5730 | 0,0579 |
| [0, +1] | 2,1753%* | 2,110E-04 | 1,4974 | 0,0671 | 0,8059% | 4,094E-05 | 1,2595 | 0,1039 |
| [0, +5] | 0,3908% | 6,331E-04 | 0,1553 | 0,4383 | 0,9468% | 1,228E-04 | 0,8544 | 0,1965 |
| [0, +10] | 2,8355% | 1,161E-03 | 0,8323 | 0,2026 | 2,0532%* | 2,251E-04 | 1,3684 | 0,0856 |
| [-1, +1] | 1,4054%* | 1,055E-04 | 1,3682 | 0,0856 | 1,1479%*** | 2,047E-05 | 2,5372 | 0,0056 |
| [-5, +5] | -4,8348%* | 1,161E-03 | -1,4191 | 0,0779 | 0,4171% | 2,251E-04 | 0,2780 | 0,3905 |
| [-10, +10] | -2,0990% | 2,216E-03 | -0,4459 | 0,3278 | 2,4897% | 4,298E-04 | 1,2009 | 0,1149 |
| Employees (21 events) | | | | Environment (15 events) | | | | |
| Period | CAAR | Variance | J1 | p-value | CAAR | Variance | J1 | p-value |
| [-10, -1] | -0,3278% | 1,309E-04 | -0,2865 | 0,3873 | -1,3594% | 3,573E-04 | -0,7192 | 0,2360 |
| [-5, -1] | -0,4485% | 6,547E-05 | -0,5543 | 0,2897 | -0,8916% | 1,786E-04 | -0,6671 | 0,2523 |
| [-1, 0] | -0,3329% | 2,619E-05 | -0,6505 | 0,2577 | 0,9044% | 7,145E-05 | 1,0700 | 0,1423 |
| [0, 0] | -0,1216% | 1,309E-05 | -0,3361 | 0,3684 | 0,1296% | 3,573E-05 | 0,2168 | 0,4142 |
| [0, +1] | -0,3588% | 2,619E-05 | -0,7011 | 0,2416 | -0,1230% | 7,145E-05 | -0,1455 | 0,4422 |
| [0, +5] | -0,3533% | 7,857E-05 | -0,3986 | 0,3451 | -3,2063%** | 2,144E-04 | -2,1900 | 0,0143 |
| [0, +10] | -0,4052% | 1,440E-04 | -0,3376 | 0,3678 | -2,2386% | 3,930E-04 | -1,1292 | 0,1294 |
| [-1, +1] | -0,5701%* | 1,309E-05 | -1,5754 | 0,0576 | 0,6519% | 3,573E-05 | 1,0906 | 0,1377 |
| [-5, +5] | -0,8018% | 1,440E-04 | -0,6681 | 0,2520 | -4,0980%** | 3,930E-04 | -2,0672 | 0,0194 |
| [-10, +10] | -0,7330% | 2,750E-04 | -0,4420 | 0,3292 | -3,5980%* | 7,502E-04 | -1,3136 | 0,0945 |
| Ethics (13 events) | | | | Law (23 events) | | | | |
| Period | CAAR | Variance | J1 | p-value | CAAR | Variance | J1 | p-value |
| [-10, -1] | 2,3699%* | 2,337E-04 | 1,5501 | 0,0606 | -2,5385%** | 1,586E-04 | -2,0158 | 0,0219 |
| [-5, -1] | 1,0550% | 1,169E-04 | 0,9759 | 0,1646 | -0,6592% | 7,929E-05 | -0,7403 | 0,2296 |
| [-1, 0] | -1,3474%** | 4,675E-05 | -1,9706 | 0,0244 | 0,1411% | 3,172E-05 | 0,2505 | 0,4011 |
| [0, 0] | -1,5762%*** | 2,337E-05 | -3,2602 | 0,0006 | -0,3056% | 1,586E-05 | -0,7675 | 0,2214 |
| [0, +1] | -1,4054%** | 4,675E-05 | -2,0555 | 0,0199 | -0,4572% | 3,172E-05 | -0,8117 | 0,2085 |
| [0, +5] | -0,5228% | 1,402E-04 | -0,4415 | 0,3294 | -0,1743% | 9,515E-05 | -0,1787 | 0,4291 |
| [0, +10] | -0,6267% | 2,571E-04 | -0,3908 | 0,3480 | -1,6369% | 1,744E-04 | -1,2393 | 0,1076 |
| [-1, +1] | -1,1765%*** | 2,337E-05 | -2,4336 | 0,0075 | -0,0104% | 1,586E-05 | -0,0262 | 0,4895 |
| [-5, +5] | 0,5321% | 2,571E-04 | 0,3319 | 0,3700 | -0,8335% | 1,744E-04 | -0,6311 | 0,2640 |
| [-10, +10] | 1,7431% | 4,908E-04 | 0,7868 | 0,2157 | -4,1754%** | 3,330E-04 | -2,2880 | 0,0111 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test (J1 is the test statistic).

As can be seen from the table above, similarly to the AARs, there are mostly no significant CAARs. The most significant negative effects in the post-event windows are in the ethics and environmental categories. In the ethics category the CAAR for period [0,0] is -1,5762% (significant at 0,01 level) and for [0,1] is -1,4054% (significant at 0,05 level). Especially violations of ethics and values of the company affect the trust the market and investors have towards the company (Janney & Gove 2011; Tanimura & Okamoto 2013). Thus, it is understandable that ethical violations have the greatest negative impacts on the event day. The impact seems to wear off quite quickly though, as the 0 to +5-day period and 0 to 10-day period do not have significant negative CAARs. It appears there may have been some

overreaction in the initial negative return, and the market corrects for this error in the following days, maybe as new information about the event emerges or the company presents corrective actions and remorse.

For the environment category, the reaction on the event day and the period from 0 to 1-day does not provide a significant CAAR. However, the 0 to +5-day period does have a significant CAAR of -3,2063% (at 0,05 level) and for the 0 to +10-day period the CAARs are also negative (although not significant). This is in support of previous research (Capelle-Blancard & Laguna 2010; Krüger 2015; Makino 2016). Makino (2016) found that in the Japanese market, negative environmental events cause the abnormal returns to be negative for an extended period. He did find, that when the events are split into severe and non-severe, the non-severe group did not have a significant or long-lasting negative impact on the abnormal returns. Since the major impact happens later than on the event date, it seems there is a delayed reaction from the investors. This is also in support of Capelle-Blancard & Laguna (2010), who concluded that investors may react slowly to the news, especially after a polluting accident, as they are unsure of the economic impacts it will have on the company initially. Many of the events in this category were related to minor leaks and waste management issues. It could mean that investors wait to find out what the details are, and how big the impact is, before reacting to the news in the Finnish market as well

Oddly, the animal- and customer-related events seem to have slightly positive abnormal returns on the event day. For the animal category, the CAAR is not significant, but for the customers category it is (0,7119%, significant at 0,1 level). For the animal category, the most significant CAAR is in the period from 0 to day 1 (2,1753%, significant at 0,1 level). For both theses categories, the CAARs are positive overall in the post-event windows (although the only significant results are the ones mentioned). The animals-category does have only 3 events, they are also all from the same company and about a similar topic, so the results are not very representative. The positive results in the CAAR's for of the customer-category also very unexpected. As mentioned earlier, it may be due to the chosen events, as they were not huge impactful events.

The law and employees-categories events both have results that are not statistically significant for the CAARs in the post-event windows. For the employee category, many of the events in the sample involved supplier's employee conditions abroad, which could be linked to human rights issues. Krüger (2015) found that human rights issues did not seem to have a significant negative impact on the abnormal returns of negative events. This result could mean that the supplier work conditions are not of much importance to investors. The

suppliers cannot be fully controlled, except by choosing another supplier. Although the human rights issues seemed not to be important in the study by Krüger (2015), employee relations and diversity issues were. Hence in this category, maybe the events should be divided even further into direct employee-related events and third-party employee-related events. In this study this is unfortunately possible, as the sample sizes would become too small.

Similarly, to Krüger (2015), this study finds that the type of news or CSR relation the event has impacts the abnormal returns of the stock. Although any scandal creates a loss of trust towards the company (Janney & Gove 2011; Tanimura & Okamoto 2013), it seems as though the ethical violations cause the largest losses, as it had the greatest impact of the categories instantly. Environmental news seemed to have a delayed reaction, whereas employee and law-related scandals had virtually no impact in the post-event windows. The animal and customer-related news had unexpected positive impacts on the returns. In the next section, the results for the test of CSR as an insurance-like tool are explained.

4.3. CSR Scores

The third research question asks, “can CSR image/reputation reduce the impact of scandals on the share price?”. To answer this question, all the 89 events were grouped by whether they had a Thomson Reuters ESG score or not (tables 11 and 12). Then the companies with ESG scores were divided further into high and low CSR scores (tables 13 to 16). First, the yes/no ESG score results are discussed. The AARs are presented in table 11.

Table 11. Average abnormal returns grouped by yes or no ESG score (89 events) for the -10 to +10 event window

| Day | No ESG score (44 events) | | | Yes ESG Score (45 events) | | |
|-----|--------------------------|---------|---------|---------------------------|---------|---------|
| | Average | t-ratio | p-value | Average | t-ratio | p-value |
| -10 | -0,4335% | -1,4347 | 0,1584 | 0,8086% *** | 3,1385 | 0,0030 |
| -9 | -0,0091% | -0,0301 | 0,9761 | 0,1003% | 0,3895 | 0,6988 |
| -8 | -0,0391% | -0,1294 | 0,8976 | -0,0782% | -0,3035 | 0,7629 |
| -7 | 0,3470% | 1,1487 | 0,2569 | -0,8535% *** | -3,3129 | 0,0018 |
| -6 | -0,3044% | -1,0074 | 0,3193 | 0,0917% | 0,3559 | 0,7236 |
| -5 | -0,0910% | -0,3012 | 0,7647 | 0,0487% | 0,1889 | 0,8510 |
| -4 | -0,2479% | -0,8205 | 0,4163 | -0,3269% | -1,2689 | 0,2110 |
| -3 | -0,0030% | -0,0098 | 0,9922 | 0,0160% | 0,0622 | 0,9507 |
| -2 | -0,4297% | -1,4224 | 0,1620 | -0,5443% ** | -2,1127 | 0,0402 |
| -1 | 0,0506% | 0,1676 | 0,8677 | 0,4597% * | 1,7841 | 0,0812 |
| 0 | -0,0770% | -0,2549 | 0,8000 | -0,2891% | -1,1220 | 0,2678 |
| 1 | 0,0548% | 0,1814 | 0,8569 | -0,1415% | -0,5493 | 0,5855 |
| 2 | -0,1562% | -0,5171 | 0,6077 | 0,0555% | 0,2156 | 0,8303 |
| 3 | 0,1018% | 0,3370 | 0,7377 | 0,2290% | 0,8887 | 0,3789 |
| 4 | -0,2476% | -0,8194 | 0,4170 | -0,3209% | -1,2457 | 0,2193 |
| 5 | 0,1092% | 0,3614 | 0,7195 | -0,4759% * | -1,8472 | 0,0713 |
| 6 | 0,2004% | 0,6635 | 0,5105 | -0,6635% ** | -2,5753 | 0,0134 |
| 7 | 0,3905% | 1,2927 | 0,2029 | 0,3024% | 1,1739 | 0,2466 |
| 8 | 0,3298% | 1,0916 | 0,2809 | -0,2834% | -1,1001 | 0,2772 |
| 9 | -0,0021% | -0,0068 | 0,9946 | -0,1607% | -0,6238 | 0,5359 |
| 10 | 0,0391% | 0,1295 | 0,8975 | -0,1033% | -0,4011 | 0,6903 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test.

As can be seen from table 11, the group without ESG scores did not have any statistically significant AARs during the event window. The group with ESG scores also did not have a significant AAR on the event day or immediately after, but on days +5 and +6 there were some significant losses, -0,4759% (significant at 0,1 level) and -0,6635% (significant at 0,05 level) respectively. It seems as those companies that have CSR are expected to act in the way they say. If they do not, the market penalizes them. This is a similar result to what Minor & Morgan (2011) found, as according to them companies that do good and harm had the greatest losses. The CSR can be viewed as hypocrisy during a scandal. However, the reaction seems to be delayed, so maybe the companies are given a chance to explain before the market fully reacts to the event. Next the results for the CAARs are presented in table 12 and discussed.

Table 12. Cumulative average abnormal returns grouped by yes or no ESG score (89 events)

| Period | No ESG score (44 events) | | | | Yes ESG Score (45 events) | | | | |
|-----------|--------------------------|-----------|---------|---------|---------------------------|----------|-----------|---------|--------|
| | CAAR | Variance | J1 | p-value | CAAR | Variance | J1 | p-value | |
| [−10, −1] | -1,1599% | 9,128E-05 | -1,2141 | 0,1124 | -0,2780% | * | 6,638E-05 | -1,4237 | 0,0773 |
| [−5, −1] | -0,7210% | 4,564E-05 | -1,0672 | 0,1429 | -0,3469% | | 3,319E-05 | -1,2514 | 0,1054 |
| [−1, 0] | -0,0264% | 1,826E-05 | -0,0618 | 0,4754 | 0,1706% | | 1,328E-05 | -0,0724 | 0,4711 |
| [0, 0] | -0,0770% | 9,128E-06 | -0,2549 | 0,3994 | -0,2891% | | 6,638E-06 | -0,2990 | 0,3825 |
| [0, +1] | -0,0222% | 1,826E-05 | -0,0520 | 0,4793 | -0,4306% | | 1,328E-05 | -0,0610 | 0,4757 |
| [0, +5] | -0,2150% | 5,477E-05 | -0,2905 | 0,3857 | -0,9429% | | 3,983E-05 | -0,3407 | 0,3667 |
| [0, +10] | 0,7429% | 1,004E-04 | 0,7414 | 0,2292 | -1,8515% | | 7,302E-05 | 0,8694 | 0,1923 |
| [−1, +1] | 0,0284% | 9,128E-06 | 0,0941 | 0,4625 | 0,0291% | | 6,638E-06 | 0,1103 | 0,4561 |
| [−5, +5] | -0,9360% | 1,004E-04 | -0,9341 | 0,1751 | -1,2898% | | 7,302E-05 | -1,0953 | 0,1367 |
| [10, +10] | -0,4171% | 1,917E-04 | -0,3012 | 0,3816 | -2,1295% | | 1,394E-04 | -0,3532 | 0,3620 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test (J1 is the test statistic).

As can be seen from the table, there were no significant CAARs for either group in the post-event windows (days after the event). It appears just being evaluated with regards to CSR does not have an impact on the stock price, which is contradictory to Schnietz & Epstein (2005), who found that companies without a reputation for CSR suffered a greater loss than those with a CSR reputation. Of course, not being rated on the Thomson Reuters Eikon database for ESG is not proof that the company does not have a CSR reputation. Hence, to test the events in more detail, the events with ESG scores were grouped into high and low CSR groups. The CSR scores were based on the Thomson Reuters ESG overall and combined scores. Table 13 shows the AARs for the ESG overall score analysis.

Table 13. Average abnormal returns grouped by CSR score (ESG overall, 45 events) for the -10 to +10 event window

| Day | Low CSR (ESG overall under 65,5; 23 events) | | | High CSR (ESG overall over 65,5; 22 events) | | |
|-----|---|---------|---------|---|---------|---------|
| | AAR | t-ratio | p-value | AAR | t-ratio | p-value |
| -10 | 0,8626%* | 1,9912 | 0,0585 | 1,2023%*** | 3,6311 | 0,0015 |
| -9 | 0,0192% | 0,0444 | 0,9650 | 0,0854% | 0,2578 | 0,7990 |
| -8 | 0,2758% | 0,6366 | 0,5306 | -0,5986%* | -1,8078 | 0,0843 |
| -7 | -0,5398% | -1,2461 | 0,2253 | -0,9290%** | -2,8058 | 0,0103 |
| -6 | 0,2493% | 0,5755 | 0,5706 | 0,0402% | 0,1213 | 0,9046 |
| -5 | 0,4384% | 1,0121 | 0,3220 | -0,3023% | -0,9129 | 0,3712 |
| -4 | -0,6159% | -1,4216 | 0,1685 | -0,0921% | -0,2782 | 0,7835 |
| -3 | 0,1098% | 0,2535 | 0,8022 | -0,2817% | -0,8508 | 0,4040 |
| -2 | -0,3348% | -0,7729 | 0,4474 | -0,3103% | -0,9371 | 0,3589 |
| -1 | 0,5795% | 1,3378 | 0,1941 | 0,2539% | 0,7667 | 0,4514 |
| 0 | -0,1701% | -0,3926 | 0,6983 | -0,4871% | -1,4709 | 0,1555 |
| 1 | 0,0537% | 0,1239 | 0,9025 | -0,2837% | -0,8568 | 0,4008 |
| 2 | -0,0506% | -0,1169 | 0,9080 | 0,0442% | 0,1334 | 0,8951 |
| 3 | 0,1186% | 0,2737 | 0,7867 | 0,3150% | 0,9514 | 0,3517 |
| 4 | -0,5326% | -1,2294 | 0,2314 | 0,0120% | 0,0364 | 0,9713 |
| 5 | -1,5310%*** | -3,5342 | 0,0018 | 0,6112%* | 1,8459 | 0,0784 |
| 6 | -0,5244% | -1,2106 | 0,2383 | -0,5646% | -1,7052 | 0,1022 |
| 7 | 0,7719%* | 1,7819 | 0,0880 | -0,2314% | -0,6988 | 0,4920 |
| 8 | 0,1092% | 0,2520 | 0,8033 | -0,5057% | -1,5271 | 0,1410 |
| 9 | -0,1647% | -0,3802 | 0,7073 | -0,1036% | -0,3128 | 0,7574 |
| 10 | 0,3091% | 0,7134 | 0,4828 | -0,3618% | -1,0926 | 0,2864 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test.

In the ESG overall score, the event day negative returns slightly larger in the high CSR score category (-0,4871%) than the low CSR score (-0,1701%), but neither is statistically significant. It appears there is some underreaction in both categories, as the significant abnormal returns occur on day +5 after the event for both. For the low CSR score, the loss is -1,5310% (significant at 0,01 level), and for the high CSR score, there is a positive return of 0,6112% (significant at 0,1 level). This could indicate that the low CSR score companies are initially judged less harshly than the high CSR score group, and after a few days the market adjusts, possibly to new information about the event, to correct for the underreaction, so the insurance effect Janney & Gove (2011) find in their study, seems to be delayed here.

Next, table 14 presents the CAARs for the ESG overall score analysis.

Table 14. Cumulative average abnormal returns grouped by CSR score (ESG overall, 45 events)

| Period | Low CSR (ESG overall under 65,5; 23 events) | | | | High CSR (ESG overall over 65,5; 22 events) | | | |
|------------|---|-----------|---------|---------|---|-----------|---------|---------|
| | CAAR | Variance | J1 | p-value | CAAR | Variance | J1 | p-value |
| [-10, -1] | 1,0442% | 1,877E-04 | 0,7622 | 0,2230 | -0,9323% | 1,096E-04 | -0,8904 | 0,1866 |
| [-5, -1] | 0,1771% | 9,383E-05 | 0,1828 | 0,4275 | -0,7326% | 5,482E-05 | -0,9894 | 0,1612 |
| [-1, 0] | 0,4095% | 3,753E-05 | 0,6684 | 0,2520 | -0,2332% | 2,193E-05 | -0,4980 | 0,3093 |
| [0, 0] | -0,1701% | 1,877E-05 | -0,3926 | 0,3473 | -0,4871% | 1,096E-05 | -1,4709 | 0,0707 |
| [0, +1] | -0,1164% | 3,753E-05 | -0,1900 | 0,4247 | -0,7708%** | 2,193E-05 | -1,6459 | 0,0499 |
| [0, +5] | -2,1120%** | 1,126E-04 | -1,9904 | 0,0233 | 0,2117% | 6,579E-05 | 0,2610 | 0,3970 |
| [0, +10] | -1,6110% | 2,064E-04 | -1,1213 | 0,1311 | -1,5554%* | 1,206E-04 | -1,4163 | 0,0783 |
| [-1, +1] | 0,4631% | 1,877E-05 | 1,0691 | 0,1425 | -0,5169%* | 1,096E-05 | -1,5610 | 0,0593 |
| [-5, +5] | -1,9350%* | 2,064E-04 | -1,3468 | 0,0890 | -0,5209% | 1,206E-04 | -0,4743 | 0,3176 |
| [-10, +10] | -0,5669% | 3,941E-04 | -0,2855 | 0,3876 | -2,4877%* | 2,302E-04 | -1,6395 | 0,0506 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test (J1 is the test statistic).

For the CAARs, again the event day period did not find any significant results for either group. In the 0 to +1-day period, the high CSR group has a significant loss of -0,7708% (significant at 0,05 level), whilst the low CSR group did not have a significant loss. This implies that initially after the event, the high CSR scoring companies suffered more from the scandal. Even the CAARS in the -1 to +1 window were negative for the high CSR group, -0,5169% (significant at 0,1 level), and for the low CSR group slightly positive (0,4631%), although not significant. This result is contradictory to Janney & Gove (2011), who find that companies with positive overall CSR scores incur a lower loss in the -1 to +1 event window, than those with no positive CSR scores.

However, the situation changed in the 0 to +5-day period, as the low CSR group has a loss of -2,1120% (significant at 0,05 level), and the high CSR group has a positive, but statistically insignificant, CAAR of 0,2117%. As mentioned in the AAR analysis for this grouping, there seemed to be a delayed reaction to the news for the low CSR group.

In the final post-event window of 0 to +10 days, both groups have similar negative CAARS. For the low CSR group, the CAAR was -1,6110 % (not statistically significant) and for the high CSR group, it was -1,5554% (significant at 0,1 level). It seems the high CSR group then suffers more in the long-term, as the low CSR groups' CAAR is not significantly different from zero. This could support Minor & Morgan (2011), who find that companies that do both good and harm seem to have the largest losses after an adverse event.

To test this further, the ESG combined score is used as the proxy for CSR reputation. The ESG combined score added a controversy overlay to the overall score, meaning that the negative events in the company's past are included in the score. The AARs are presented in table 15.

Table 15. Average abnormal returns grouped by CSR score (ESG combined, 45 events) for the -10 to +10 event window

| Day | Low CSR (ESG combined under 59,5; 23 events) | | | High CSR (ESG combined over 59,5; 22 events) | | |
|-----|--|---------|---------|--|---------|---------|
| | AAR | t-ratio | p-value | AAR | t-ratio | p-value |
| -10 | 1,8349% *** | 4,4328 | 0,0002 | 0,1859% | 0,5206 | 0,6078 |
| -9 | 0,3811% | 0,9206 | 0,3668 | -0,2929% | -0,8205 | 0,4207 |
| -8 | 0,0023% | 0,0057 | 0,9955 | -0,3127% | -0,8759 | 0,3906 |
| -7 | -0,4085% | -0,9868 | 0,3340 | -1,0664% *** | -2,9867 | 0,0068 |
| -6 | -0,0400% | -0,0966 | 0,9239 | 0,3426% | 0,9595 | 0,3477 |
| -5 | -0,1528% | -0,3692 | 0,7154 | 0,3158% | 0,8846 | 0,3859 |
| -4 | -0,3650% | -0,8819 | 0,3870 | -0,3543% | -0,9924 | 0,3318 |
| -3 | -0,0516% | -0,1246 | 0,9020 | -0,1130% | -0,3166 | 0,7545 |
| -2 | -0,2573% | -0,6216 | 0,5403 | -0,3913% | -1,0961 | 0,2849 |
| -1 | 0,1157% | 0,2795 | 0,7824 | 0,7388% * | 2,0692 | 0,0505 |
| 0 | -0,6470% | -1,5631 | 0,1317 | 0,0116% | 0,0325 | 0,9744 |
| 1 | -0,4565% | -1,1029 | 0,2815 | 0,2496% | 0,6992 | 0,4918 |
| 2 | -0,3634% | -0,8779 | 0,3891 | 0,3711% | 1,0395 | 0,3099 |
| 3 | 0,1264% | 0,3054 | 0,7628 | 0,3068% | 0,8594 | 0,3994 |
| 4 | -0,5106% | -1,2335 | 0,2299 | -0,0109% | -0,0306 | 0,9758 |
| 5 | -0,6394% | -1,5447 | 0,1361 | -0,3209% | -0,8989 | 0,3785 |
| 6 | -0,3588% | -0,8668 | 0,3950 | -0,7378% * | -2,0664 | 0,0508 |
| 7 | 0,2377% | 0,5742 | 0,5714 | 0,3271% | 0,9163 | 0,3695 |
| 8 | 0,3228% | 0,7797 | 0,4435 | -0,7290% * | -2,0417 | 0,0534 |
| 9 | -0,3441% | -0,8313 | 0,4143 | 0,0840% | 0,2352 | 0,8162 |
| 10 | -0,1482% | -0,3580 | 0,7236 | 0,1162% | 0,3255 | 0,7479 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test.

In this case, the results were interestingly opposite to the results discussed with regards to the ESG overall scores. On the event day, the AAR was -0,6470% (not significant) for the low CSR category and 0,0116% (not significant) for the high CSR group. So, it seems that high CSR could have some insurance-like effects, although the non-significance means that this conclusion still needs to be tested further. In the low CSR group, there were no significant AARs post-event, but they seem mostly negative. For the high CSR scores, there are significant negative returns on days +6 (-0,7378%, significant at 0,1 level) and +8 (-0,72920%, significant at 0,1 level) after the event. This supports what was found in the overall score analysis, where it also seemed as though investors react in a delayed fashion to the event. Next, the CAARs for the combined ESG scores analysis are presented in table 16 and discussed.

Table 16. Cumulative average abnormal returns grouped by CSR score (ESG combined, 45 events)

| Period | Low CSR (ESG combined under 59,5; 23 observations) | | | | High CSR (ESG combined over 59,5; 22 observations) | | | |
|--------------|--|-----------|---------|---------|--|-----------|---------|---------|
| | CAAR | Variance | J1 | p-value | CAAR | Variance | J1 | p-value |
| [-10, -1] | 1,0588% | 1,713E-04 | 0,8089 | 0,2093 | -0,9476% | 1,275E-04 | -0,8393 | 0,2006 |
| [-5, -1] | -0,7110% | 8,567E-05 | -0,7682 | 0,2212 | 0,1959% | 6,374E-05 | 0,2454 | 0,4031 |
| [-1, 0] | -0,5314% | 3,427E-05 | -0,9077 | 0,1820 | 0,7504%* | 2,550E-05 | 1,4861 | 0,0686 |
| [0, 0] | -0,6470%* | 1,713E-05 | -1,5631 | 0,0590 | 0,0116% | 1,275E-05 | 0,0325 | 0,4870 |
| [0, +1] | -1,1035%** | 3,427E-05 | -1,8851 | 0,0297 | 0,2613% | 2,550E-05 | 0,5174 | 0,3024 |
| [0, +5] | -2,4905%*** | 1,028E-04 | -2,4563 | 0,0070 | 0,6073% | 7,649E-05 | 0,6945 | 0,2437 |
| [0, +10] | -2,7812%** | 1,885E-04 | -2,0258 | 0,0214 | -0,3320% | 1,402E-04 | -0,2804 | 0,3896 |
| [-1, +1] | -0,9879%*** | 1,713E-05 | -2,3865 | 0,0085 | 1,0000%*** | 1,275E-05 | 2,8009 | 0,0025 |
| [-5, +5] | -3,2015%*** | 1,885E-04 | -2,3320 | 0,0098 | 0,8033% | 1,402E-04 | 0,6783 | 0,2488 |
| [-10, +10] | -1,7224% | 3,598E-04 | -0,9080 | 0,1819 | -1,2797% | 2,677E-04 | -0,7821 | 0,2171 |

Note: ***, ** and * represent the statistical significance of the AAR at the 0,01, 0,05 and 0,1 levels (two-tailed) respectively, using the t-test (J1 is the test statistic).

In the CAARs, the results were clearer than in the AAR analysis. The low CSG group had a negative CAAR on the event day (-0,6470%, significant at 0,1 level), whilst the high CSR group seemed not to have any impact from the event (0,0116%, not significant). For the 0 to +1 period, again the low CSR group had a CAAR of -1,1035% (significant at 0,05 level), and the high CSR group had a non-significant return of 0,2613%. The -1 to +1 period returns are also negative for the low CSR group (-0,9879%. Significant at 0,01 level) and positive for the high CSR group (+1,0000%, significant at 0,01 level). These results support research done by Janney & Gove (2011).

The cumulative losses also increase for the low CSR group over time, whilst for the high CSR group the results stay statistically insignificant. For the low CSR group, in the 0 to +5-day period the loss was -2,4905% (significant at 0,01 level) and in the 0 to +10- day period loss was -2,7812% (significant at 0,05 level), whilst for the high group the results for the respective periods were 0,6073% (not significant) and -0,3320% (not significant). Therefore, for all the post- event windows, the low CSR score group had a negative and significant CAARs, whilst for the high CSR group the returns were mostly positive, but not significantly different from zero. It seems for the low CSR group the losses are long-lasting, whilst for the high CSR group there is not much of an impact. This supports the theory that CSR reputation does have an insurance-like effect on abnormal returns (Godfrey et al. 2009, Janney & Gove 2011), as the companies with higher ESG combined scores do not seem to be affected by the scandals as much as the low CSR group.

Considering all three proxies for CSR reputation, the results were mixed. When looking at if the company has a rating or not, the results seemed to indicate that there was not much of a difference. With the overall ESG score, the low CSR score companies seem to do

slightly better immediately on the event day, but in the ESG combined score the high CSR score companies do better post-event. One reason for this could be that the combined score has a controversies-overlay (Thomson Reuters 2018), which considers the negative news that impacts the company. As mentioned in the methodology section, the majority of the companies moved from the low to high CSR score group when the proxy changed from ESG overall to ESG combined. This could imply support for the theory that consistency in CSR actions is important for the insurance effect (Minor & Morgan 2011), and that if there is previous evidence of misconduct, the CSR insurance does not apply (Janney & Gove 2011).

The results can also be inconclusive, as ESG score data was not available for all the 30 companies and all years. This meant that not all the original 89 events could be used for the study. So, the sample is not representative enough to fully test the third research question. More tests are therefore needed.

5 CONCLUSIONS

As the results implied, there seems to be a negative reaction to the news, but it is not immediate. The 11-day (-5 to +5 event days) and 21-day (-10 to +10 event days) CAARS are however, negative overall for all the events, supporting Krüger's (2015) findings. The answer to the first research question is that scandals do have a negative impact on the stock prices, but it takes some time for the market to adjust the price. This could mean that all the participants do not receive the news immediately.

The second question looked at the events in more detail, to see if the news events CSR relation had a different impact. These results indicate that different types of news do have a different type of impact. Especially ethics-related scandals had an instant negative impact on the abnormal returns. Environmental and legal scandals also have an impact, but the reaction seemed to be delayed. Employee-related scandals had almost no impact, whilst animal- and customer-related scandals seemed to have a positive impact on the abnormal returns.

Finally, the third question asked if the CSR reputation of the company can shield the company from negative impacts. The answers to this question were mixed, and highly depended on the proxy for the CSR reputation. Initially, when all the events were tested using just having an ESG score as a proxy for CSR reputation, there seemed to be no effect or difference between the groups. When just the events with ESG scores were analysed further, and the overall ESG score was considered, it seemed as though a high CSR reputation does not help in crises, as immediately in response to the event (0 to +1-day period) the high CSR group had a larger CAAR. When the proxy was changed to the ESG combined score, where the CSR controversies around the company were included, the results changed. Here it seemed like the high CSR score group did have some insurance-like benefits, and even had a positive CAAR in the -1 to +1 window. The samples for both groups were small though, so this may have impacted the results.

5.1 Theoretical implications

The event study is mainly a test for the semi-strong form of market efficiency (Fama 1991). The results from this study seem to indicate that markets are not totally efficient, and that there may be some under- and overreaction in the markets, as there seemed to be abnormal returns outside of the event date.

5.2 Managerial implications

For managers, the implications are that scandals are not a good thing for the value of the firm. They do have a negative impact on the stock price. Since the reaction is not immediate, maybe the company can do something to mitigate the losses post-scandal. Scandal communication could be an important consideration. Kuhn & Ashcraft (2003) discuss scandals and emphasise that communication is the most important consideration of a company, and that the way they communicate to their stakeholders' forms opinions about the company and its identity. This is supported by ten Brinck & Adams (2015), who find in their study that if company representatives have deviant emotions in apologies after scandals, that the market reaction is more severe. This means that the communication strategies are important, and the company need to be sincere in order to repair the loss of trust after a scandal.

Although the results of this study are mixed, there is some indication that CSR can provide some benefit during a scandal. Managers should therefore take part in CSR activities and ensure that the actions the company takes are in line with ethical standards in society. However, previous research suggests that the CSR activities need to be linked somehow to what the company does, and not just separate actions the company takes to offset the "bad" things they do (Minor & Morgan 2011). The initiatives need to also be conveyed to the public, for them to be beneficial as insurance to the company (Minor & Morgan 2011; Isaksson et al. 2014). Also, the company needs to try keep their CSR reputation intact. If the company is constantly moving from one scandal to the next, then the CSR actions may be seen as "greenwashing". In this case, the insurance-benefits of CSR diminish, and the reputation of the company is destroyed.

5.3 Limitations and suggestions for future research

As in any research, there are limitations to this study. One major limitation is the amount of data. The sample was quite small, especially in the CSR score analysis. This affects the generalizability of the results. Another issue that can cause generalizability issues, is the focus on the Finnish market. There may be cultural differences in how the market reacts to the news, and if this is the case, this study is not representative enough to generalize the results internationally. One suggestion for future research could hence be to compare the reactions in different markets to scandals. It would also be interesting to see, if different markets have a clearer insurance-like effects from CSR during scandals.

The event study method itself also has some problems. As Fama (1991) says, the event study method is also a test for the choice of model used to estimate the expected returns. If a wrong model is used, the results can be greatly affected. It could have been beneficial to verify the results using another model to estimate the expected returns, in order to test the sensitivity. Choosing the events and defining the event dates is also key. The events in the study were reported in the Finnish media, but the magnitudes of the events varied. Some were reported with one single article, whilst others were covered in more detail. This could have an impact on the significance of the results.

As can be seen from even this study, the choice of proxy for CSR reputation greatly affected the results. In the future, it could be beneficial to compare the CSR scores from different sources to see how much they differ, and possibly combine them to form a more reliable view of the CSR reputation of the firm. Also, past actions were not considered in this study. However, previous research (Minor & Morgan 2011; Janney & Gove 2011) suggests that consistency in CSR actions is important. If there has been scandals before, the insurance-like quality of CSR could diminish. Hence the companies could be studied in more detail, and their pasts also taken into account. Also, it could be interesting to see if the CSR-insurance changes as more information about the scandal, its reasons and motives, emerge in the market. Another interesting area to look at would be to link research questions two and three, and find out if some certain CSR areas help insure against some certain types of scandals

5.4 Concluding remarks

Scandals are never a good thing for companies, and they should be avoided. However, in business and in life in general, there are many different types of people, who act in their own ways and sometimes focus on their own motivations and interests. These types of people are described by Caroll (2000) as immoral managers. Carroll (2000) also wrote that as long as immoral managers exist, CSR will be an important issue. Hence, research in the area is vital. Although the results of this study are mixed, mostly due to sample size issues, the benefits seem evident from previous research. Nonetheless, they need to be studied further to convince businesses to adopt CSR practices and produce products and services responsibly. Today, it is especially important that businesses consider the impact they leave on society and the environment, as without a healthy planet, and without future customers and employees, the business would not exist.

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APPENDICES

Appendix 1. List of events

| Date | Company | News headline | Translation of headline | Notes |
|------------|-------------------|--|--|--|
| 04/02/2008 | Outokumpu Oyj | Tulli epäilee Outokumpua talousrikoksista | Customs suspects Outokumpu of financial crimes | Original event date 02/02/2008 which is not a trading day, date moved to next trading day. |
| 20/03/2008 | Neste Oyj | Neste Oil puolen miljoonan yhteisönsäkkeitin öljyvahingoista | Neste Oil fined half a million due to oil spill | |
| 22/04/2008 | Stockmann Oyj Abp | Stockmann pääväsi lihapullille päivän lisää käyttööikää | Stockmann extended meatball use by date by a day | |
| 05/05/2008 | Stockmann Oyj Abp | Stockmann myi taas yläkaista lihaa | Stockmann sold meat that had gone past its use by date again | Event removed from study (similar to event 22/04/2018); Original event date 03/05/2008 which is not a trading day, date moved to next trading day. |
| 17/07/2008 | Neste Oyj | Naantalin öljynjalostamolla vuoto | Spill at Naantali oil refinery | |
| 30/10/2008 | Finnair Oyj | Kinna raskausajan palasta - Helsingin Kärjätöikeus pyysi apua EY-tuomiointiunelmalla | Argument over salary during pregnancy | Event removed from study (Interim report published on following day from event) |
| 26/02/2009 | Finnair Oyj | Finnairin väitetty lahjusupakka silirettiin keskusrikospoliisille | Finnair's alleged bribery scandal investigated by police | |
| 17/08/2009 | Stora Enso Oyj | Stora Enson selluyhtiötä syytetään lahionnasta Brasiliassa | Storan Enso's pulp company accused of bribery in Brazil | Original event date 15/08/2008 which is not a trading day, date moved to next trading day. |
| 19/08/2009 | Kemira Oyj | Kemira Oyj: Korvausvaatimus kilpailulainsäädännön | Kemira Oyj: Compensation claim for violations of competition law | |
| 16/10/2009 | Atria Oyj | Atria pahittelee "Vanhempi nainen - nuorempi mies" - mainostaan | Atria apologizes for "Older woman, younger man" advertisement | |

| Date | Company | News headline | Translation of headline | Notes |
|------------|------------------|--|---|---|
| 28/10/2009 | Raisio Oyj | Palmöljytesti: Raisio pääjäsi surkeasti | Palm oil test: Raisio did not perform well | |
| 18/03/2010 | Ahtium Oyj** | Talvivaarassa vuoto kipsisakka-altaassa | Leak in Talvivaara's gypsum pond | |
| 24/03/2010 | Neste Oyj | Neste Oil tutkii syytöksistä palmöljyhakkueista | Neste Oil investigates allegations of palm oil logging | |
| 15/04/2010 | Finnair Oyj | Valtion omistamat yrityöt salaavat bonuksiaan | State owned companies hide bonuses | Event removed from study (news of stands till next day, estimated loss of 2 million euro per day) |
| 15/04/2010 | Outokumpu Oyj | Valtion omistamat yrityöt salaavat bonuksiaan | State owned companies hide bonuses | |
| 23/07/2010 | Atria Oyj | Venäjä: Kolmen suomalaisyrityksen lihasta löydetty kiellettyä antibiootia | Russia: Forbidden antibiotic found in meat from three Finnish companies | |
| 17/08/2010 | Nokia Oyj | Nokia Siemens haastettiin oikeuteen Iran-laitteista | Nokia Siemens sued for Iran-devices | |
| 01/09/2010 | Honkarakenne Oyj | Honkarakenne has been issued a public reprimand under section 40 of the act on the Financial Supervisory Authority | | |
| 01/09/2010 | Neste Oyj | Greenpeace iski aamuruuhkaan palmöljyn vuoksi | Greenpeace hit the morning rush due to palm oil | |
| 08/10/2010 | Stora Enso Oyj | Tutkimus vahvisti Stora Enson laittomuuDET Kiinassa | Investigation confirmed Stora Enso's illegal actions in China | |

| Date | Company | News headline | Translation of headline | Notes |
|------------|---------------|---|---|--|
| 10/12/2010 | Neste Oyj | Öljyä mereen Porvoon Neste Oilin jalostamota | Oil leaked into the sea from Neste Oil refinery in Porvoo | |
| 12/01/2011 | Neste Oyj | Palmuöljy vei Neste Oilin maailman ilkeimpien yhtiöiden listalle | Palm oil leads Neste Oil to the list of the world's worst companies | |
| 28/01/2011 | Neste Oyj | Neste Oil ääestettiin maailman vastuuttomimmaksi yhtiöksi | Neste oil voted most irresponsible company in the world | |
| 02/03/2011 | Elisa Oyj | Elisalle ja Nokia Siemens Networksille moitteita työntekijöiltä | Elisa and Nokia Siemens Networks receive complaints from employees | Event removed from study (annual reports and summary published day before and after) |
| 02/03/2011 | Nokia Oyj | Elisalle ja Nokia Siemens Networksille moitteita työntekijöiltä | Elisa and Nokia Siemens Networks receive complaints from employees | |
| 11/05/2011 | Nokia Oyj | Salon Seudun Sanomat: Nokia-pomo huijas yhtiötä yli 600 000 rahaan raiuin | Nokia boss embezzled over 600 000 euros from company | |
| 01/09/2011 | Ahtium Oyj** | Poliisi aloitti tutkinnan kaivosyhtiö Talvivaaran jäteidenkäsittelystä | Police started ad investigation into Talvivaara's waste treatment | |
| 13/09/2011 | Outokumpu Oyj | Lehti: Outokummun päästötistä epämuidostumia lapsille | Outokumpu's emissions cause deformities in children | |
| 19/09/2011 | Ahtium Oyj** | Talvivaara: Lasten iho-oireet selvitetään | Talvivaara: Children's skin problems will be investigated | |
| 25/10/2011 | Neste Oyj | Greenpeace aktivistit sulkivat Neste Oilin sisankäynnin | Greenpeace activists close Neste Oil's entrance | Event removed from study (interim report published on following day from event) |

| Date | Company | News headline | Translation of headline | Notes |
|------------|------------------------|--|--|--|
| 13/02/2012 | YIT Oyj | Lahjusvyhti rakentamisessa | Bribes in construction | Event removed from study (decision to issue bond 10/02/2012); Original event date 12/02/2012 which is not a trading day. |
| 14/02/2012 | Finnair Oyj | Finnair-pomo ministerille: Ei kai omista asuntokaupoistaan tarvitse tiedottaa | Finnair boss asks ministers: do you need to inform about your own home sales | |
| 30/04/2012 | Ahtium Oyj** | HS: Talviyaarassa paljastui lintujen joukkokouolema | HS revealed the death of birds in Talviyaara | Original event date 28/04/2012 which is not a trading day, date moved to next trading day. |
| 10/05/2012 | HKScan Oyj | HKScan tarkastaa kohukuvien sikitilan farm | HKScan to investigate scandal photo pig farm | |
| 14/06/2012 | Finnair Oyj | Finnairille ja Outokummulle varoitus pörssin sääntöjen rikkomisesta | A warning issued to Finnair and Outokumpu about violating the rules of the stock exchange | |
| 14/06/2012 | Outokumpu Oyj | Finnairille ja Outokummulle varoitus pörssin sääntöjen rikkomisesta | A warning issued to Finnair and Outokumpu about violating the rules of the stock exchange | |
| 26/06/2012 | Fiskars Oyj Abp | Tiedätkö mitä ostit? Suomalaisien suosikkitootteiden takaa löydetty laittomia ylitöitä ja vaarallisia työolojuhteita | Do you know what you bought? Illegal overtime and dangerous working conditions have been found behind Finnish favourite products | |
| 27/06/2012 | Pöry Oyj | Taloussanomat: Pörry Maailmankrankin mustalle listalle | Taloussanomat: Pörry on the World Bank's black list | |
| 08/08/2012 | Lassila & Tikanoja Oyj | Yle: Lassila & Tikanojan ylittöistä rikostutkinta | Yle: Lassila & Tikanoja overtime investigated by police | |
| 18/09/2012 | Telia Company | TeliaSonera i miljardaffär med diktatur | TeliaSonera in billionaire business with dictatorship | |

| Date | Company | News headline | Translation of headline | Notes |
|------------|-----------------|---|--|--|
| 03/10/2012 | Saga Furs Oyj* | HS: Turkistuotajista on tehty tutkintapyyntö | HS: Request of investigation made against Turkistuotajat | |
| 29/10/2012 | Finnair Oyj | IL: Finnairin johtaja epäillään työsuojelurikoksista – yhtiö paheksuu lehden toimintatapaan | IL: Finnair managers suspected of labour protection crimes | Event removed from study (Interim report published day before); Original event date 27/10/2012 which is not a trading day, date moved to next trading day. |
| 05/11/2012 | Ahtium Oyj** | Talvivaaran kaivoksen kipsisakka-altaassa vuoto | Talvivaara mine gypsum pond leak | Original event date 04/11/2012 which is not a trading day, date moved to next trading day. |
| 21/01/2013 | Kesko Oyj | Finnwatch: Halpamehet tehdään pak-kotyönä | Finnwatch: Low cost juices are made with forced labour | |
| 22/03/2013 | HKScan Oyj | HKScan myi kanadalaisista hevoselihää suomalaisena | HKScan sold Canadian horsemeat as Finnish | |
| 25/03/2013 | Viking Line Abp | DN: Myös Viking Linen matkustajia jaetteli etnisen taustan perusteella | DN: Viking Line's passengers also divided based on ethnic background | Original event date 24/03/2013 which is not a trading day, date moved to next trading day. |
| 08/04/2013 | Ahtium Oyj** | Talvivaaran jätevesiallas vuotaa jälleen | Talvivaara's gypsum pond is leaking again | |
| 08/04/2013 | Pöyry Oyj | Yle: Itellan lisäksi myös Pöyryllä veroparatiisiköksiä | Yle: Pöyry also has tax haven connections in addition to Itella | Event removed from study (news of share subscription from CEO day before) |
| 21/05/2013 | Ahtium Oyj** | Talvivaarassa valui rautapitoista vettä - värjäsi joen oranssiksi | Iron-rich water leaked in Talvivaara - coloured the river orange | |
| 29/05/2013 | Marimekko Oyj | HS: Marimekko suosikkikuosi paljastui kopioksi | HS: Marimekko favourite pattern is a copy | |

| Date | Company | News headline | Translation of headline | Notes |
|------------|-------------------|--|--|---|
| 15/07/2013 | Finnair Oyj | Finnairilla ongelmia palkanmaksussa – liian vähän, liian paljon, osalle ei ollenkaan | Finnair has problems with salary payment- some got too little, some didn't get any | |
| 31/07/2013 | Marimekko Oyj | Yle: Marimekon kuosi muistuttaa brittikirjan kuvitusta | Yle: Marimekko's pattern similar to British book illustrations | |
| 03/09/2013 | Stora Enso Oyj | Stora Enso myöntää riskit lapsityövoiman käytöstä Pakistanissa | Stora Enso admits risks in using child labour in Pakistan | |
| 24/09/2013 | Marimekko Oyj | Marimekko vastassa jo kolmas plagioitinkohu | Third plagiarizing scandal in Marimekko | |
| 25/09/2013 | Marimekko Oyj | Taas uusi Marimekko-yhdennäköisyys? Katso kuvat ja päättele itse | Another Marimekko pattern copy? Check out the photo and decide for yourself | Event removed from study (similar to event 25/09/2013) |
| 11/10/2013 | Stockmann Oyj Abp | Vartija vei lapsen ilmapallon- Stockmann pahoittelee | Security guard took a balloon from a child - Stockmann apologizes | Event removed from study (financial news announced following day) |
| 22/10/2013 | Neste Oyj | Neste Oil hankkii palmuöljyä sademetsää kaavalta Wilmarilta | Neste Oil procures palm oil from Wilmar, a company destroying rainforests | |
| 06/11/2013 | Finnair Oyj | Finnairin kiinalainen ex-työntekijä teki palkastaan tutkintapyyynnön | Finnair's former Chinese employee made an investigation request regarding salary | |
| 10/12/2013 | Fiskars Oyj Abp | Finnwatch: Iittalan ja Marimekon tuotteita tehдääн vaarallissaoloissa Thaimaassa | Finnwatch: Iittala and Marimekko products are made in dangerous conditions in Thailand | Event removed from study (plans of expansion announced following day) |
| 10/12/2013 | Marimekko Oyj | Finnwatch: Iittalan ja Marimekon tuotteita tehдääн vaarallissaoloissa Thaimaassa | Finnwatch: Iittala and Marimekko products are made in dangerous conditions in Thailand | |

| Date | Company | News headline | Translation of headline | Notes |
|------------|-------------------|---|---|---|
| 28/01/2014 | Kesko Oyj | Finnwatchin raju paljastus – mehuvalmistaja vaihtui huonosta huonompaan | Finnwatch reveals- juice manufacturer changed from bad to worse | |
| 12/02/2014 | Finnair Oyj | KU: Finnair pyytää työntekijöitä töihin hyvän mielen palkalla | KU: Finnair asks employees to come work for "feel-good" pay | Event removed from study (Financial statements for 2013 released day before) |
| 05/03/2014 | Stora Enso Oyj | Ruotsin tv: Stora Enso alihankkijalla lapsityövoimaa | Swedish tv: Stora Enso's supplier uses child labour | |
| 21/03/2014 | Nokia Oyj | Reuters: Nokiaita vaaditaan 300 miljoonaa euroa Intiassa | Reuters: Nokia demanded to pay 300 million in India | Event removed from study (news on deal completion next day, and annual report timetables) |
| 09/07/2014 | YIT Oyj | Helsingin lahiusjutun epäillyt: YIT on maksanut palkkoja pimeästä | Helsinki bribery scandal suspects: YIT has paid salaries illicitly | |
| 10/07/2014 | YIT Oyj | Epäilly: YIT tiesi lahjonnasta | Suspect say YIT knew about the bribery | Event removed from study (relates to news on 09/07/2014) |
| 02/09/2014 | Finnair Oyj | Homous, raskaus ja lakkoliu kielletty | Being gay, pregnant and going on strike is forbidden | |
| 18/11/2014 | Kesko Oyj | Yle: Citymarketin kassalla 26 vuotta osa-alkaisena – nainen haastoi Keskon oikeuteen | Yle: Employee who worked at Citymarket for 26 year as a part-time employee has sued Kesko | |
| 20/03/2015 | Stockmann Oyj Abp | Stockmann etsii talkootyööäsiä Hullulle Päiville urheiluseuroista? "Moraalinen riike työntekijöitä kohtaan" | Stockmann looks for voluntary workers from sports clubs for Crazy Days? "Moral violation against employees" | Event removed from study (Decisions of annual general meeting day before) |
| 06/05/2015 | Metsä Board Oyj | Naisetekkari haki töitä Metsä Groupilta: "Meillä ei ole näihin hommiliin naisia otettu" | Female engineering student seeked employment from Metsä Group: "We don't employ women in these roles" | |

| Date | Company | News headline | Translation of headline | Notes |
|------------|---------------------|---|---|--|
| 26/10/2015 | HKScan Oyj | Oikeutta eläimille julkaisi videoita teurastamolta – eläimiä rääkätään ennen lopettamista | Justice for Animals published videos from slaughterhouses- animals are treated poorly before being killed | |
| 02/11/2015 | Fiskars Oyj Abp | Arabian tuotteiden valmistus Helsingissä loppuu – lähtöpassit 120 henkilölle | Arabia products will no longer be made in Helsinki - 120 employees will be fired | |
| 18/02/2016 | Raisio Oyj | Suomalaisjohtajan jäitti potti nostettiin esiliin USA:ssa – Raisio kiltstää petosvätteen | Finnish managers jackpot highlighted in the USA- Raisio denies allegations of fraud | |
| 26/02/2016 | Nokian Renkaat Oyj | Nokian Renkaat viljannut testituloksia | Nokian Renkaat window dressed test results | |
| 18/03/2016 | Elisa Oyj | HS: Elisa hidastaa ulkomaiden dataliikenteen minimiin – Sonera ja DNA eivät mietti vastaavia toimia | HS: Elisa slows down foreign data traffic to a minimum | |
| 04/04/2016 | Nordea Bank Abp | MOT: Nordea perusti satoja veropariisiyhdistöitä | MOT: Nordea has created hundreds of companies in tax havens | Original event date 03/04/2016 which is not a trading day, date moved to next trading day. |
| 28/04/2016 | Caverion Oyj | Suomalaisyhtiö Caverion kertoi lahjontaepäilyistä projektissa Saksassa | Caverion reported on allegations of bribery during project in Germany | Event removed from study (Many news items about company around this event date) |
| 19/08/2016 | Kesko Oyj | MT: Keskon ja S-ryhmän kumppanimeijerit epäillään veropetoksesta | MT: Kesko and S-group's partner milk processing plant suspected of tax fraud | |
| 06/10/2016 | Nokian Renkaat Oyj | Aamulehti: Nokian Renkaat valehteli vuosien ajan rengasrespektiäänn – samasta renkaasta eri hinta | Aamulehti: Nokia Renkaat lied about tyres for years- same tyres sold for different prices | |
| 25/11/2016 | Investors House Oyj | Finanssivalvonta on määrittänyt Investors House Oy:lle 35.000 euron seuraamusmaksun | The Finnish Financial Supervisory Authority has fined Investor's house 35,000 euros | |

| Date | Company | News headline | Translation of headline | Notes |
|------------|-------------------|--|--|--|
| 19/12/2016 | HKScan Oyj | HKScan Baltic erotti useita johtajia – ostaneet miljoonilla yrityksiltä, jotka johtoryhmän lähipiiriä lahiüssyyte – yhtiölle vaaditaan 300 000 euron sakkoaa | HKScan Baltic has fired several top managers - bought products/services worth millions from companies related to management team | |
| 03/02/2017 | Caverion Oyj | Caverion Oyj:n johtoryhmän jäsenelle lahiüssyyte – yhtiölle vaaditaan 300 000 euron sakkoaa | Caverion Oyj's member of executive team charged with bribery - a fine of 300 000 demanded from company | |
| 08/03/2017 | Nordea Bank Abp | Financial Supervisory Authority imposes a penalty payment of EUR 1,000,000 on and issues a public warning to Nordea Bank AB (publ), Finnish Branch | | |
| 31/05/2017 | Finnair Oyj | Finnair syrji liikuntavammaista asiakasta – olii pitänyt tarjota alempuista Nizzan matkasta | Finnair discriminated against physically disabled person | |
| 09/06/2017 | HKScan Oyj | Kartanonkosken valkoiseksi värijäytynneen veden mysteeri selvisti – puuroon oli valunut kermaa | The white-water mystery in Kartanonkoski figured out- cream had leaked into the stream | |
| 03/08/2017 | Finnair Oyj | Lentoimäntähdystys Finnairin toimitusjohtajan 130 000 euroon lisäeläkkeestä: "Käsittämätöntä, märkä rättilä vasten kasvoja" | Stewardess association shocked about Finnair's CEO's 13 000 euro supplementary pension | |
| 23/08/2017 | HKScan Oyj | HKScan myrskyn silmässä Virossa – ohikulkijan karuusta videotsta paljastui eiävä kananpoikia roskapöntössä | HKScan in the eye of the storm in Estonia - live chicks found in trash can | |
| 27/09/2017 | Finnair Oyj | Kuluttaja-asiamies vie Finnairin markkinajoikeuteen – kilstää peruttujen lentojen korvauksissa | Consumer Ombudsman takes Finnair to market court-disputes over compensation for cancelled flights | |
| 20/10/2017 | Kesko Oyj | Pam selvitää ruokakaupassa ilmennytä seksuaalista häiriintää – kondistinut useisiin työntekijöihin: Kauppias irtisanoutui | Pam investigation sexual harassment claims in food market | |
| 19/12/2017 | Stockmann Oyj Abp | Stockmann veti pois tiernapojet-videon – pyytää anteeksi rasistiseksi tellattua somevideota: "Harkintakykymme petti" | Stockmann removes video that seems racist | Chosen event date is publication of video (not of apology) |

| Date | Company | News headline | Translation of headline | Notes |
|------------|---------------------|---|--|---|
| 19/01/2018 | Nordea Bank Abp | Ylen toimittaja joutui rasistisen tölvimisen kohteeksi Nordean lainaneuvotteluisissa: "Sitten takaisin kotimaahan" | Yle journalist faced racial discrimination in Nordea's loan negotiation - told to return to where came from | |
| 06/03/2018 | Elisa Oyj | Yli 20 euron liittymä oli tarjolla 2,90 eurolla – Elisan puhelinmyyjät soittivat Moi Mobilin asiakkaille ilman asiakkaiden lupaa | Elisa's phone dealers called Moi Mobile customers without customer permission | |
| 20/03/2018 | Nokia Oyj | Intialainen nuori rainen kuoli ilmeisesti Nokia-puhelimien räjähdyttä käteen | Indian woman died after Nokia-phone accidentally exploded in her hand | |
| 03/04/2018 | Kotipizza Group Oyj | Kotipizza, Subway ja sadat muut ravintolat maksoivat liian pitkää palkkaa – Katsos tästä, millaisia puutteita | Kotipizza, Subway and hundreds of other restaurants paid too low wages to employees | |
| 11/04/2018 | Nordea Bank Abp | Nordealle seuraamusmaksu Finanssivalvonnalta | Nordea received penalty fee from Finnish Financial Supervisory Authority | |
| 14/05/2018 | Kesko Oyj | Mykistävä tilanne Nesteen kassalla tallentui videolle: Myyjä ei suostu palvelemaan romaniesta - "Johtuuko se siitä, että olen mustalainen?" "Nän valitettavasti on" | Dumbfounding video from Neste gas station cashier- salesperson would not serve gypsy customer | Original event date 12/05/2013 which is not a trading day, date moved to next trading day. |
| 14/05/2018 | Neste Oy | Mykistävä tilanne Nesteen kassalla tallentui videolle: Myyjä ei suostu palvelemaan romaniesta - "Johtuuko se siitä, että olen mustalainen?" "Nän valitettavasti on" | Dumbfounding video from Neste gas station cashier- salesperson would not serve gypsy customer | Original event date 12/05/2013 which is not a trading day, date moved to next trading day. |
| 05/07/2018 | Viking Line Abp | Hermoromahduksia, ylikuormitusta ja alentavaa puhetta – yli 50 Viking XPRS:n työntekijää kertoo kiusaamisesta ristellylaivalta | Nervous breakdowns, overworking and degrading speech- over 50 Viking EXPRS employees claim bullying on cruise ship | |
| 31/07/2018 | Finnair Oyj | Vihreiden poliitikko Aino yritti estää pakkopalautuksen – poliisit poistivat hänät koneesta | Greens politician Aino tried to stop forced return - police removed her from plane | |
| 01/08/2018 | Kotipizza Group Oyj | Kotipizza-yrittäjän pyytää hämmensi työnhakijan - "Ei ole perusteltua maksaa sinulle palkkaa päivistä, joista emme saa vastinetta" | Kotipizza- entrepreneur's request confused job seeker- training to be done with no pay | |

| Date | Company | News headline | Translation of headline | Notes |
|------------|-------------------------|--|--|-------|
| 16/08/2018 | Finnair Oyj | Finnair vähvistää: Ilmailikenneliujuopumuksesta epäiltävän lentokapteeni on Finnairin työntekijä – "Meillä on nollatoleranssi pähiteisiin" | Finnair confirms: Pilot suspected for flying under the influence is their employee | |
| 03/09/2018 | Terveystalo Oyj | HS: Terveystalo yrittää estää potilaiden hakeutumista jatkotutkimuksiin muualle – Lääkärillitöityrmää käytännön | HS: Terveystalo tries to stop patients from seeking further tests from elsewhere | |
| 17/09/2018 | Plc Uutechnic Group Oyj | Plc Uutechnic Group Oyj: FIN-FSA imposes penalty payment of EUR 50,000 on previous Vaahio Group Plc Oyj for violation of disclosure obligation | | |
| 03/10/2018 | Nordea Bank Abp | Tanskana Nordeassa epäilty rahapesutapaus – pankin kautta pestiin 34 miljoonaa euroa | Nordea in Denmark suspected to be involved in money laundering - 34 million euros laundered through bank | |
| 16/10/2018 | Nordea Bank Abp | Varainhoitajaviritys: Nordea rikkonut rahapesun vastaisia lakeja – Ruotsin viranomaiset arvioivat tapausta | Nordea violates anti-money laundering laws - Swedish authorities are assessing the case | |

Notes

* Saga Furs Oyj changed company name in 2011. Before this, called Turkistuottajat Oyj.

** Ahtium Oyj changed company name in 2017. Before this, called Talvivaaran Kaivososakeyhtiö Oyj.

Appendix 2. List of events with the CSR category used and ESG scores

| Date | Company | CSR category | ESG overall | ESG controversies | ESG combined |
|------------|------------------------|--------------|-------------|-------------------|--------------|
| 04/02/2008 | Otakumpu Oyj | Law | 72,81 | 58,25 | 72,81 |
| 20/03/2008 | Neste Oyj | Environment | 73,67 | 60,09 | 73,67 |
| 22/04/2008 | Stockmann Oyj Abp | Consumers | | | |
| 17/07/2008 | Neste Oyj | Environment | 73,67 | 60,09 | 73,67 |
| 26/02/2009 | Finnair Oyj | Law | | | |
| 17/08/2009 | Stora Enso Oyj | Law | 60,84 | 58 | 60,84 |
| 19/08/2009 | Kemira Oyj | Law | | | |
| 16/10/2009 | Atria Oyj | Consumers | | | |
| 28/10/2009 | Raisio Oyj | Environment | | | |
| 18/03/2010 | Ahtium Oyj | Environment | 44,97 | 57,54 | 44,97 |
| 24/03/2010 | Neste Oyj | Environment | 62,34 | 57,67 | 62,34 |
| 15/04/2010 | Otakumpu Oyj | Law | 71,73 | 7,29 | 39,51 |
| 23/07/2010 | Atria Oyj | Ethics | | | |
| 17/08/2010 | Nokia Oyj | Ethics | 83,32 | 4,55 | 43,93 |
| 01/09/2010 | Honkarakenne Oyj | Law | | | |
| 01/09/2010 | Neste Oyj | Environment | 62,34 | 57,67 | 62,34 |
| 08/10/2010 | Stora Enso Oyj | Law | 65,3 | 5,36 | 35,33 |
| 10/12/2010 | Neste Oyj | Environment | 62,34 | 57,67 | 62,34 |
| 12/01/2011 | Neste Oyj | Consumers | 64,95 | 63,68 | 64,95 |
| 28/01/2011 | Neste Oyj | Consumers | 64,95 | 63,68 | 64,95 |
| 02/03/2011 | Nokia Oyj | Employees | 79,43 | 2,17 | 40,8 |
| 11/05/2011 | Nokia Oyj | Employees | 79,43 | 2,17 | 40,8 |
| 01/09/2011 | Ahtium Oyj | Environment | 59,62 | 58,88 | 59,62 |
| 13/09/2011 | Otakumpu Oyj | Environment | 69,12 | 8,15 | 38,64 |
| 19/09/2011 | Ahtium Oyj | Environment | 59,62 | 58,88 | 59,62 |
| 14/02/2012 | Finnair Oyj | Law | | | |
| 30/04/2012 | Ahtium Oyj | Environment | 56,3 | 59,57 | 56,3 |
| 10/05/2012 | HKScan Oyj | Animals | | | |
| 14/06/2012 | Finnair Oyj | Law | | | |
| 14/06/2012 | Otakumpu Oyj | Law | 63,24 | 59,57 | 63,24 |
| 26/06/2012 | Fiskars Oyj Abp | Employees | | | |
| 27/06/2012 | Pöyry Oyj | Law | | | |
| 08/08/2012 | Lassila & Tikanoja Oyj | Employees | | | |
| 18/09/2012 | Telia Company | Law | 64,91 | 29,03 | 46,97 |
| 03/10/2012 | Saga Furs Oyj | Law | | | |
| 05/11/2012 | Ahtium Oyj | Environment | 56,3 | 59,57 | 56,3 |
| 21/01/2013 | Kesko Oyj | Employees | 68,93 | 66,67 | 68,93 |
| 22/03/2013 | HKScan Oyj | Consumers | | | |
| 25/03/2013 | Viking Line Abp | Consumers | | | |
| 08/04/2013 | Pöyry Oyj | Law | | | |
| 21/05/2013 | Ahtium Oyj | Environment | 57,29 | 60,07 | 57,29 |
| 29/05/2013 | Marimekko Oyj | Ethics | | | |
| 15/07/2013 | Finnair Oyj | Employees | | | |
| 31/07/2013 | Marimekko Oyj | Ethics | | | |

| Date | Company | CSR category | ESG overall | ESG controversies | ESG combined |
|------------|-------------------------|--------------|-------------|-------------------|--------------|
| 03/09/2013 | Stora Enso Oyj | Employees | 68,94 | 55 | 68,94 |
| 24/09/2013 | Marimekko Oyj | Ethics | | | |
| 22/10/2013 | Neste Oyj | Environment | 71,83 | 62,69 | 71,83 |
| 06/11/2013 | Finnair Oyj | Employees | | | |
| 10/12/2013 | Marimekko Oyj | Employees | | | |
| 28/01/2014 | Kesko Oyj | Employees | 65,91 | 65,67 | 65,91 |
| 05/03/2014 | Stora Enso Oyj | Employees | 66,46 | 12,9 | 39,68 |
| 09/07/2014 | YIT Oyj | Employees | 53,09 | 63,74 | 53,09 |
| 02/09/2014 | Finnair Oyj | Employees | | | |
| 18/11/2014 | Kesko Oyj | Employees | 65,91 | 65,67 | 65,91 |
| 06/05/2015 | Metsä Board Oyj | Employees | | | |
| 26/10/2015 | HKScan Oyj | Animals | | | |
| 02/11/2015 | Fiskars Oyj Abp | Employees | | | |
| 18/02/2016 | Raisio Oyj | Law | | | |
| 26/02/2016 | Nokian Renkaat Oyj | Ethics | 59,46 | 62,29 | 59,46 |
| 18/03/2016 | Elisa Oyj | Ethics | 61,92 | 61,78 | 61,92 |
| 04/04/2016 | Nordea Bank Abp | Law | 80,76 | 57,42 | 80,76 |
| 19/08/2016 | Kesko Oyj | Law | 63,18 | 62,66 | 63,18 |
| 06/10/2016 | Nokian Renkaat Oyj | Ethics | 59,46 | 62,29 | 59,46 |
| 25/11/2016 | Investors House Oyj | Law | | | |
| 19/12/2016 | HKScan Oyj | Ethics | | | |
| 03/02/2017 | Caverion Oyj | Law | | | |
| 08/03/2017 | Nordea Bank Abp | Law | 79,47 | 10,94 | 45,2 |
| 31/05/2017 | Finnair Oyj | Consumers | | | |
| 09/06/2017 | HKScan Oyj | Environment | | | |
| 03/08/2017 | Finnair Oyj | Ethics | | | |
| 23/08/2017 | HKScan Oyj | Animals | | | |
| 27/09/2017 | Finnair Oyj | Consumers | | | |
| 20/10/2017 | Kesko Oyj | Employees | 62,02 | 62,05 | 62,02 |
| 19/12/2017 | Stockmann Oyj Abp | Consumers | | | |
| 19/01/2018 | Nordea Bank Abp | Consumers | 78,55 | 4,23 | 41,39 |
| 06/03/2018 | Elisa Oyj | Ethics | 60,75 | 70,5 | 60,75 |
| 20/03/2018 | Nokia Oyj | Consumers | 91,21 | 11,96 | 51,58 |
| 03/04/2018 | Kotipizza Group Oyj | Employees | | | |
| 11/04/2018 | Nordea Bank Abp | Law | 78,55 | 4,23 | 41,39 |
| 14/05/2018 | Kesko Oyj | Consumers | 57,65 | 68,75 | 57,65 |
| 14/05/2018 | Neste Oyj | Consumers | 77,39 | 20,66 | 49,02 |
| 05/07/2018 | Viking Line Abp | Employees | | | |
| 31/07/2018 | Finnair Oyj | Ethics | | | |
| 01/08/2018 | Kotipizza Group Oyj | Employees | | | |
| 16/08/2018 | Finnair Oyj | Employees | | | |
| 03/09/2018 | Terveystalo Oyj | Consumers | | | |
| 17/09/2018 | Plc Uutechnic Group Oyj | Law | | | |
| 03/10/2018 | Nordea Bank Abp | Ethics | 78,55 | 4,23 | 41,39 |
| 16/10/2018 | Nordea Bank Abp | Law | 78,55 | 4,23 | 41,39 |

Note!

This list has the categories for 89 events were used in the overall analysis to answer the first two research

questions. Events not used in the overall study (16/105 from appendix 1) have been removed from this list (due to conflicting events in event window).

ESG overall and combined scores are based on the previous year to the event and were collected from the Thomson Reuters Eikon database. Those events without ESG scores were not used in the study for the analysis of the third research question.