

Can CSR Shield Firm Value During a Pandemic?

Evidence of European Consumer Good Firms During the Covid-19 Pandemic

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Abstract

The link between corporate social responsibility (CSR) and corporate financial performance (CFP) has during the latest years received large attention, yet little clarity is provided within the topic. The crisis of the Covid-19 pandemic caused financial markets to drop while simultaneously providing research a novel opportunity to examine the link through an exogenous event. Hence, this paper studies the relationship between pre-crisis CSR and financial performance during the Covid-19 pandemic with regards to three specific event dates and the year of 2020 as a whole. Using a sample of 260 European companies within the sector of consumer goods, no clear evidence of an existing link between CSR and CFP can be stated neither in the short nor the long run. Some support for a shield of financial performance can be identified for retail firms with high CSR rating during the initial phase of the pandemic. Evidence also shows that the institutional context, such as the European Union, in which a firm operates within can impact the direction of the link. To conclude, pre-crisis CSR is not a guarantee for shielding firm value during a pandemic.

Keywords: Corporate Social Responsibility, Corporate Financial Performance, Covid-19, Event Study, Consumer Goods

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1. Introduction

1.1 Background to the problem

The Covid-19 pandemic has caused a switch in how people consume, behave and socialize which has led to a new perspective of the environment. National measures such as lockdowns have caused businesses to shut down, supply chains to disrupt and constrained people from traveling. Consequently, this uncertainty has made consumers change their purchasing habits. Since consumers are highly driven by feelings, it is not surprising that the pandemic has influenced their decision making. There is an urge to compensate for the uncertainty by preparing for an unpredictable future, and consumers therefore tend to increase their savings while decreasing larger investments. Eurostat identifies differences in consumption between certain sectors of consumer goods. Sectors such as food, alcohol and tobacco, household equipment and health had an increasing harmonised indices of consumer prices (HICP), whereas transport, hotels and restaurants experienced a lower HCIP. “HICP is an economic indicator of consumer prices of a basket of goods and services acquired, used or paid for by the households in each EU Member State” (Data Europa.eu, 2020).

Focusing on the stock market, March 2020 exceeded both volatility levels in the U.S. during the Black Monday in 1987, and the Global Financial crisis in 2008 (Baker et al., 2020). Concentrating on the retail industry within consumer goods, a steady growth has since 2013 been identified. Though, as a consequence of the Covid-19 crisis, retail turnover dropped in March and April 2020 (Eurostat, 2020). According to Bloomberg, the retailers across Europe have encountered many challenges due to governmental restrictions including lockdowns and public gatherings. As a result of people staying at home, large merchants including H&M AB and Inditex SA have lost up to one third of their sales (Unsted and Easton, 2020).

It is crucial for firms to understand the new needs of the customer base to determine risks with the current business model and to identify new opportunities during this pandemic. For example, it has become more important for consumers to purchase from companies that share their values (KPMG, 2020). Many businesses are engaging in novel social initiatives like producing face masks and contributing to those in need as a reaction to Covid-19. These engagements are valuable for retailers who want to maintain a long-term brand image and reputation of being sustainable (Deloitte, 2020).

Naidoo and Casparatos (2018) reviews several drivers of environmental and sustainable

initiatives within the retail sector of consumer goods. Both increased regulations, policies and consumer pressure have accelerated the development of sustainable practices. It is stated that legislation is the main driver for adoption of corporate sustainability initiatives since they are pushing firms to be responsible throughout the entire value chain. However, retailers must consider their reputation and simply complying with legislation may be insufficient to maintain a strong brand value and customer loyalty. For this reason, the leading retailers today are often ahead of legislation in their sustainable operations.

Prior theories claim that engaging in responsible activities also has positive effects for the firm alone. For example, it is discussed that firms can create immunity towards crisis by creating shareholder value through strategies, such as corporate social responsibility (CSR) (Ding et al., 2021). The crisis of Covid-19 has provided a great opportunity for researchers to examine whether this condition between corporate financial performance (CFP) and CSR actually holds. Since the unstable economic conditions of an economic collapse make shareholders uncertain about the firms' financial information they tend to compensate for the ambiguity, by relying on other metrics such as CSR which combine aspects of firm value and integrity. Hence, being trustworthy becomes crucial when the market cannot be trusted (Lins et al., 2017).

1.2 Statement of the problem

Despite drivers of sustainability, there are still debates whether there is an existing link between CSR performance and financial performance (Duque-Grisales and Aguilera-Caracuel, 2021). Meta analyses have been performed to examine the relationship between CFP and CSR but little clarity has been brought to the topic. Evidence has been provided both for a positive relationship, negative relationship and no relationship (Peloza, 2009). For example, it has previously been argued that CSR performance can operate as an insurance for firms in crisis and mitigate the negative effects of the shock. Whether or not this effect also has generated a financial advantage during the Covid-19 crisis has not yet been finalized (Ding et al., 2021).

1.3 Significance of the study

The study contributes to the existing literature on the relationship between CFP and CSR in several ways. Firstly, with focus on the Covid-19 pandemic, previous literature has primarily examined the early effect of the crisis, limited to the first and second quarter of the virus outbreak. This has provided insight into initial short-term effects of CSR on CFP during crises (e.g. Ding et al., 2021; Albuquerque et al., 2020; Qiu et al., 2020; Bae et al., 2021). However,

as Zhang et al. (2020) and Lins et al. (2017) suggest, CSR performance and reputation takes time to build and establish, and if succeeded, the firm can mitigate negative market shocks. This report thereby considers both the short term effects during the pandemic and a longer horizon.

Secondly, research within consumer behavior has examined how consumers purchase when they perceive to have lost control, similar to a pandemic. It is for example proven that consumers purchase utilitarian products (i.e., necessities e.g., household products) to engage in problem solving of everyday obstacles to create a feeling of being in control again (Chen et al., 2017). By considering the full year of 2020 and several specific event dates during the pandemic, this study captures the effect of CSR on CFP at different stages of the pandemic such as reactions to the initial pandemic outbreak and later reactions including regulations and fear of new outbreaks.

Thirdly, existing evidence is provided with regards to the US and Chinese market (Zhang et al., 2020; Albuquerque et al., 2020; Qiu et al., 2020; Bae et al., 2021). Despite the fact that Covid-19 is considered a global pandemic, examined in Ding et al. (2021) with over 56 markets during the Covid-19 pandemic, regulations are tied to country and union borders. Since European countries are exposed to a different economic market than US and Chinese firms, this study addresses the lack of research on European firms and focuses on companies within European borders.

Fourthly, building on the gap in previous literature, this report focuses on the sector of consumer goods during the Covid-19 pandemic. Consumer goods are interesting during the pandemic for various reasons. One being that they are in an exposed position in times of crisis. Evidence shows that consumers tend to change their behavior when times are uncertain, making them reprioritize their spending (Data Europa.eu, 2020). Second, lockdowns are limiting the touchpoints between companies and consumers, forcing the shopping experience to shift to online formats which may be uncomfortable and strange both for businesses and consumers (Deloitte, 2020). Third, consumer trends show that environmental and social values are important during the pandemic. Consumers want firms to establish a sense of trust and purpose through engaging in activities that align with their values (KPMG, 2020). Lastly, it is found that consumer-focused industries are more likely to state that sustainable initiatives create value (McKinsey & Company, 2020).

1.4 Research question

To what extent did a strong CSR performance of European companies within the sector of consumer goods mitigate the negative stock price effect of the Covid-19 crisis?

1.5 Delimitations

The study is delimited to stock market effects as a measure of financial performance, also known as market-based measures. It does not consider accounting-based measures as financial performance. In addition, the analysis is constrained to the cumulative abnormal returns for three specific event dates with a window of one day prior to the event and one day post the event date and a longer time perspective of a buy-and-hold approach. The event dates and analysis are delimited to the year of 2020. Since the pandemic is still ongoing, neither effects prior to the Covid-19 pandemic nor effects post the Covid-19 pandemic are examined. Moreover, stock price effects not covered by the event windows are not explored.

Sample delimitations are performed with regards to the geographical area and sector. The market is specified to European borders and only firms with incorporation within Europe are included in the sample. The sector is determined by consumer goods and the definition by The Refinitiv Business Classification (TRBC) of consumer cyclicals and consumer non-cyclicals is applied for sampling.

1.6 Definition of Terms

In table 1.6.1 important terms for this report are defined according to their meaning for this study.

Term	Definition
CSR	The concept of CSR has traditionally been defined as “the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time” (Carroll, 1979). CSR will be used as an umbrella term for sustainability performance in this study.
ESG Score	ESG Score is one example of a sustainability measure. In this report, Refinitiv Eikon’s ESG Score is the measure of a firm’s CSR performance. The underlying framework for the ESG Score is discussed in 5.1.1 CRS Data.
CFP	Corporate financial performance provides a general explanation to how well a firm’s financial health is during a specific period. There are different ways to measure CFP such as operating income, cash flow, growth etc (Brower and Dacin, 2020). In this report, CFP is measured through stock returns.
Covid-19	Covid-19 refers to the ongoing coronavirus pandemic. The report concerns the pandemic’s global effects caused by the disease, though limited to the year of 2020.
Consumer goods	Consumer goods refer to the definition of consumer cyclicals and consumer non-cyclicals within the Refinitiv Eikon Database’s TRBC classification.

Table 1.6.1: Definition of Terms

2. Review of Literature

2.1 Literature Review

2.1.1 Relationship between CSR and Financial Performance

CSR has during recent years become a highly central topic within academia and business management (Madorran and Garcia, 2016). Firms have been pressured to maximize profitability and productivity while facing demand from stakeholders to invest in CSR practices (Kolk and van Tulder, 2010).

One of the most critical debates regarding CSR has been on the topic of whether it improves CFP (Brower, Kashmiri and Mahajan, 2017). Brower & Dacin (2020) found that more than 300 academic works have covered this topic in the recent decade. Despite being a widely studied topic it has created controversial results and researchers have been unable to reach a consensus (Duque-Grisales and Aguilera-Caracuel, 2021). In a meta-analysis by Peloza (2009) it was found that out of 159 studies on the topic, 63% showed a positive relationship while 15% showed a negative relationship, and 22% reported a neutral or mixed relationship. Thus, there seems to be a generally small positive relationship, but which is not consistent in all contexts. On one hand, it is not surprising that previous research has produced such different results since there are many factors impacting financial performance and therefore very few direct and causal relationships of any construct of financial performance (Grewatsch and Kleindienst, 2017). Some therefore argue that researchers should stop asking questions about this relationship, but given the growing body of literature on this topic that outcome is unlikely, and there is still a strong interest in defining when “being good pays off” (Brower & Dacin, 2020).

Some researchers suggest that CSR provides private benefits to executives in the way that their reputation is improved by the general public. This indicates that CSR does not necessarily provide benefits to shareholders and that it could even potentially harm market performance (Ding et al., 2021). Also, evidence of reduced shareholder wealth due to CSR activities is found. It is argued that companies engaging in CSR activities draw resources from the core business which constrain profit maximization (Hull and Rothenberg 2008). On the other hand, other researchers claim that CSR activities result in trust from stakeholders which leads to long-term benefits and resilience to negative market shocks (Ding et al., 2020). According to a report by McKinsey & Company (2020), a majority of professionals and executives do themselves believe that ESG programs create shareholder value. A majority of the respondents said that

the programs yield both short-term and long-term shareholder value.

Hull and Rothenberg (2008) also point out the complexity of measuring the relationship between CSR and CFP such as incorporating moderating effects, direct effects and indirect effects. The relationship between CSR activities and firm financial performance may further be affected by the choice of measure. Financial performance measures can be categorized into market-based, accounting-based and perceptual measures (Grewatsch and Kleindienst, 2017). Commonly, market-based measures and accounting-based measures are combined for robustness. However, according to Grewatsch and Kleindienst (2017), the theory underlying each measure is fundamentally different and in that case unrelated which an article by Gentry and Shen (2010) confirmed. Therefore a combined measure should not be used, but rather a single type of measure. Market-based measures reflect investors expectations and are thus a forward-looking and long-term measure of financial performance while accounting-based measures reflect on past performance.

2.1.2 Financial Effects of CSR During Crisis

Despite the fact that many companies are expected by both consumers and shareholders to advance their CSR activities during difficult times and take responsibility, it is not uncommon that firms need to reduce their CSR investments in order to control their costs. This paradox has made it crucial for firms to understand if investing in CSR is financially justifiable in crisis (Qui et al., 2021; Lins et al., 2017). A high ESG score may provide safety for stakeholders like suppliers and customers who want to ensure that the firm will fulfill their end of the contract despite the difficult times due to shared values, and therefore, high-rated ESG firms can perform better in times of crisis (Lins et al., 2017). For example Peloza (2006) identifies CSR as positive for maintaining sales and price levels during these times.

Prior research has discussed the long term perspective of CSR on financial performance. Stated in Zhang et al. (2020), CSR can operate as a protection of firm value in negative market shocks. For example, a CSR firm suffers less from ethical concerns compared to other firms. A social and responsible firm establishes a goodwill of positive reputation such as being reliable and trustworthy (Lins et al., 2017). The responsible operations therefore work as an insurance for future difficulties (Zhang et al., 2020). Despite the fact that the goodwill takes time to develop and maintain, it is one of the firm's most valuable assets, especially in crisis when financial returns are lower (Lins et al., 2017).

Related studies have been provided by Lins et al. (2017) who examined 1,673 U.S companies during the Global Financial crisis between 2008 and 2009. The authors conclude that firms with

a higher CSR rating outperform firms with a low CSR rating during the crises. By incorporating CSR in the business model, high-rated CSR firms' stock returns could exceed low rated CSR firms with 4 percentage points.

In agreement with Lins et al. (2017), Zhang et al. (2020) debated the findings of the relationship between social performance and financial performance for listed firms in France during the Global Financial crisis. A high social performance-firm exceeded the lower social performing firms. Additionally, high social performing firms were less affected by negative publicity (Zhang et al., 2020). Just as Lins et al. (2017) presented, this study also identified a diminishing positive relationship between social and financial performance throughout the crisis and recovery period. The strongest positive relationship was determined during the early stages of the Global Financial crisis where high CSR firms generated up to 7 percentage points higher stock returns (Zhang et al., 2020).

2.1.3 Financial Effects of ESG During Covid-19

According to Baker et al. (2020), the Spanish Flu during the 1920s tops the Covid-19 virus lethality and health effects, despite this, Covid-19 caused larger stock market effects. No levels above 2.5% in volatility on the daily stock market was noted during the Spanish flu compared to the Covid-19 pandemic where more than 20 of these cases can be identified. Explanations brought to light discuss the cross-border supply chains and globalization as plausible reasons for large stock market drops.

Ding et al. (2021) examined the role of pre-existing CSR performance on stock price during Covid-19. Pre-existing CSR refers to what the stakeholders knew about the company's sustainability performance at the outbreak of the pandemic. The study examines both Refinitiv Eikon's overall CSR index and the separated perspectives of Environmental, Social and CSR Strategy on 6,000 firms and 56 markets. The findings presented show that a higher CSR performance resulted in less stock price falls during the pandemic. The relationship holds for both the overall CSR index, as well as the sub-indexes. 2 months after the Covid-19 outbreak, a firm with a high CSR score would perform 2 percentage points better than a low CSR firm. A related study performed by Albuquerque et al. (2020) also found a positive relationship between environmental and social (ES) performance and stock returns amid the Covid-19. The report is based on Refinitiv Eikon's ESG database along with 2,171 U.S stocks. A high rated ES firm performed better than other firms according to the findings. This condition is reinforced during market collapses. Additionally, operating profit margin is higher for a high-scored ES firm explained by customer loyalty, despite declining sales volume during the pandemic. Aligned

with Ding et al. (2020), Albuquerque et al. (2020) found less volatility in stock returns for high ES firms.

Consistent with the previous studies, Qiu et al. (2021) found a positive effect of CSR on stock returns. The effect reaches its peak shortly after the CSR announcement and thereafter diminishes between day 5 to 50. Community and customer driven initiatives such as charity, public health protection and hygiene standards are particularly rewarding. A similar study executed by Broadstock et al. (2020) within the Chinese market's CSI300 shows that firms with a higher ESG rating performed better short term during the pandemic. Moreover, the findings presented show that the coefficient of the relationship between ESG and stock returns in normal times is negative, implying that shareholders pay an insurance premium and obtain lower returns in normal times, with the expectation of benefiting in a financial crisis.

Contradicting the mentioned results, Bae et al. (2021) found no effect of CSR on stock returns during Covid-19. The authors agree that the pandemic contributed to increased attention to social and environmental engagement, but that the CSR performance itself did not impact the financial performance. The study explored 1750 U.S firms during the pandemic with regards to Q1 and Q2 of 2020. Moreover, Bae et al. (2021) included both MSCI ESG Stats and Refinitiv ESG ratings in the analysis. Despite this, a relationship between CSR and stock market returns are neither found for specific industries nor post the market crash period.

As a consequence of the pandemic, financial constraints have caused firms to seek short term gains through fraud and misconduct by sacrificing long term CSR investments and reputation (He and Harris, 2020). This is also confirmed by Bae et al. (2021). According to Bae et al. (2021), some high achieving CSR firms have reduced their workforces and risked the health care benefits of their employees when they needed them the most. Hypothesized by He and Harris, (2020), CSR will be more essential in a post-covid world as firms realize that survival is dependent on balancing the needs of stakeholders. The authors emphasize that the Covid-19 conditions have created new opportunities of CSR activities among firms. The question is therefore not whether to invest in sustainability or not, but rather how to optimize investments accordingly.

2.2 Summary of Literature Reviewed

Table 2.2.1 provides a summary of previous literature examining the relationship between CFP and CSR during crisis.

Author(s)	Sample	Title	Source	Findings
Lu Zhang, Yuan George Shan, Millicent Chang. (2020)	US firms with financial restatements due to unintentional errors, and issued standalone CSR reports over the period 2000 to 2017	Can CSR Disclosure Protect Firm Reputation During Financial Restatements?	Journal of Business Ethics	CSR disclosures mitigate reputational damage and works as an insurance or value protection role during crisis periods
Karl V. Lins, Henri Servaes, Ane Tamayo. (2017)	Nonfinancial firms with an ESG rating at MSCI ESG STATS during the financial crisis 2008-2009.	Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis	The Journal of Finance	Firms with a high social capital (measured by CSR) had higher stock returns by four to seven percentage points to low social capital firms
Wenzhi Ding, Ross Levine, Chen Lin, Wensi Xie (2021)	6,000 firms and 56 markets within Thomson Reuters Eikon during Q1 2020.	Corporate immunity to the COVID-19 pandemic	Journal of Financial Economics	Firms with more CSR activities experienced a milder stock price drop during the pandemic
Rui Albuquerque, Yrjo Koskinen, Shuai Yang, Chendi Zhang. (2020)	US stocks included in Thomson Reuters' Refinitiv ESG database. Q1 2020.	Resiliency of Environmental and Social Stocks: An Analysis of the Exogenous COVID-19 Market Crash	The Review of Corporate Finance Studies	Stocks with higher ES rating experienced higher returns, lower return volatility and higher operating profit margin

Qiu (Charles) Qiu, Jianing Jiang, Xinming Liu, Ming-Hsiang Chen, Xina Yuan. (2020)	Hospitality companies listed in China Stock Exchanges within China Stock Market and Accounting Research database. Q1 2020.	Can corporate social responsibility protect firm value during the COVID-19 pandemic?	International Journal of Hospitality Management	Hospitality firms engaging in CSR activities increased stock returns and stakeholder attention during the pandemic.
Kee-Hong Bae, Sadok El Ghouli, Zhaoran (Jason) Gong, Omrane Guedhami (2021)	US firms included in MSCI ESG STATS and Refinitiv Q1 and Q2 2020.	Does CSR matter in times of crisis? Evidence from the COVID-19 pandemic	Journal of Corporate Finance	No evidence of a relationship between CSR and stock returns during the pandemic.
David C. Broadstock, Kalok Chan, Louis T.W. Cheng, Xiaowei Wang (2021)	Chinese firms included in SynTao Green Finance Database Q1 2020.	The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China	Finance Research Letters	ESG performance is positively associated with short term stock returns during a crisis but negative in normal times.

Table 2.2.1: Summary of Literature Reviewed

3. Hypothesis Development

3.1 Theoretical Background

3.1.1 Shareholder, Stakeholder and Institutional Theory

Several theories on CSR have emerged in the last decade and journals such as *Journal of Management Studies* (McWilliam et al., 2006) and *Academy of Management Review* (Bies et al., 2007) have published special issues solely focused on CSR theories. The shareholder theory is a traditional theory associated with CSR and used by Friedman, (1962). He states that the only social responsibility of a firm is to increase its shareholders wealth. Thus, a company would only engage in CSR if it has a net present value for its shareholders.

Moreover, the stakeholder theory states that managers must implement processes which satisfy the groups who have a stake in the business (Freeman, 2001). This includes shareholders, employees, customers, suppliers, communities and other groups with a stake in the business. The theory lies on the assumption that firms are affected by stakeholder actions and therefore must intend to their interests (Frynas and Yamahaki, 2016). Another dominating theory within the field of CSR is the institutional theory which states that in order for firm's to survive and grow they must be able to legitimize their actions in a given business environment. Firms need a level of external social approval and therefore need to conform to institutional norms. CSR is not seen as a voluntary action, but is instead explained by different modes, including the market, state regulation and beyond (Jennings and Zandbergen, 1995).

The institutional theory provides a perspective to why and how CSR is treated differently in different countries and in different industries. In short, the main idea of these three theories is that firms need to take shareholder interests and stakeholder interests into account and legitimize their activities in order to grow and survive. This implies that CSR activities create value when they are in line with the demand of society and firm stakeholders (Bae et al., 2021).

3.1.2 Market Efficiency Hypothesis

The market efficiency hypothesis states that stock prices immediately reflect all information available. For this reason, all stocks are traded at their fair price, leaving no room for profiting from purchasing undervalued stocks (Fama, 1998). The hypothesis has been widely acknowledged within accounting, finance and economics since the 1950s (Jensen, 1978), however, there have been arguments that the stock market incorporates information slowly and

hence, a long horizon should be analyzed when determining stock price effects. Despite this, Fama (1998) presents two arguments for why indeed market efficiency exists. First, the efficient market generates both overreactions and under reactions to individual events approximately to the same extent. If the deviations in reaction were to be split randomly, they are consistent with market efficiency. Second, in the long horizon, large deviations cannot be attributed to chance, and an even split would again speak for market efficiency (Fama, 1998).

3.2 Hypothesis

The interest for sustainability and responsible operations are growing among stakeholders. It is not sufficient today to comply with legislation, and firms are expected to go beyond what is required by law in their CSR activities (Naidoo and Casparatos, 2018). The context of Covid-19 has not only provided firms with new opportunities to take responsibility (Deloitte, 2020), but it has also generated a growing interest among consumers for CSR (KPMG, 2020). Building on the stakeholder theory, firms need to address the interests of their stakeholders and it would therefore be expected of them to engage in CSR activities to achieve satisfaction among these. Moreover, it can be expected that CSR initiatives generate a financial advantage in the form of increased stock returns as the shareholder theory claims that firms only engage in activities that improve shareholder wealth. Hence, by measuring financial performance through stock returns, the study capitalizes on the shareholder theory of increasing shareholder wealth and the market efficiency hypothesis which state that all information about CSR activities will be instantly incorporated in the stock market.

Despite the fact that few studies have been performed on the European market and consumer goods as an industry, previous studies within the topic of CSR and CFP during Covid-19 present evidence of a positive relationship between CSR and CFP including: Qiu (2020), Albuquerque et al (2020) and Ding et al (2021). Moreover, in a meta-analysis by Peloza (2009), a positive link between CSR and CFP was found in a majority of the studies examined. Following previous literature, the independent variable, CSR, is measured using ESG scores and the dependent variable, CFP, is measured through stock returns. The ESG score is able to capture what the investors knew about the firm's CSR practices during the crisis while stock returns are able to instantly reflect the worsening economic conditions during the crisis and firm's response to it. Given that previous literature and the theoretical background suggests a positive relationship between ESG scores and stock returns, the following hypothesis is tested in this study:

Corporate social responsibility is positively related to the financial performance of European firms within consumer goods during the Covid-19 crisis.

4. Research Design and Methodology

4.1 Research Design

The thesis aims at answering whether a strong CSR performance mitigates the negative stock price effect during the Covid-19 pandemic through a quantitative approach. The disposition of the report follows the structure for a quantitative approach presented by Nenty (2009). The hypothesis will be answered both in a shorter and longer time perspective to provide a more complete picture of investment strategies and effects during the pandemic. A short term view is examined through cumulative abnormal returns for event windows of 1 day prior to the event and 1 day post the event. The longer time perspective assumes the event of the stock market crash on March 16 2020 and considers the full year of 2020, i.e. -75 days and +290 days.

4.2 Event Study Methodology

Given the market's rationality, i.e. market efficiency, new information is directly incorporated in stock prices. Therefore, an event study method is adopted to examine the immediate effect of a particular event on the firm's value. One of the first event studies was conducted in 1933 and the underlying methodology has been revised throughout the years. Today, the most known approach emerged during the 1950s. This method includes adjustments to individual stock prices by removing the general market's fluctuations (MacKinlay, 1997).

Previous studies concerning the relationship between CSR and CFP during crises commonly follow the same event study methodology. Albuquerque et al. (2020) conduct an event study based on events during the Covid-19 pandemic and find a positive relationship for a higher ES score and stock performance through a regression on daily abnormal returns. Similarly Qiu et al. (2021) use the event study to discover improved stock returns, using cumulative abnormal returns (CAR), as a result of CSR activities among hospitality firms.

According to the market efficiency theory, abnormal returns will reflect the full impact of the event on the stock market. For robustness, and considering the criticism of market efficiency, the buy-and-hold abnormal return (BHAR) is also incorporated. BHAR considers a longer period of time and can capture possible lags on the stock market (Fama, 1998). As argued by Ritter (1991), CAR and BHAR can therefore be used for answering different questions. The calculations and effects are explained in detail in the following sections. The computation of CAR and BHAR are performed through Wharton Research Data Services'

(WRDS) International Event Study tool using Compustat Global.

4.2.1 Events and Event Window

The event study methodology in this report mainly follows the framework by MacKinlay, (1997), Albuquerque et al. (2020) and Qiu et al. (2021). Hence, as a first step, the event windows are determined based on their significant importance during the pandemic in terms of financial and political impact. Three event dates are determined for robustness with the aim to reflect the different economic conditions during the pandemic. The decision of including several event dates is also supported by the study of Albuquerque et al. (2020).

The event window is set to one day prior to each event, and one day after the event date, i.e., -1 and +1 for CAR. The decision of +1 incorporates the stock price effects of the event announcement when the market closes. Moreover, including a period prior to the event has the possibility to capture market anticipations before the event actually occurs. A short event window is examined to prevent other occurrences of impacting the findings and aiming to isolate the effects related to the pandemic (MacKinlay, 1997). For the BHAR, as a long-term perspective, the calculation considers the event date of the stock market crash on the 16th of March. The event window for BHAR is specified to 1st of January to 31 of December 2020, reflecting the full year of the pandemic as of 2020. This indicates an event window of -75 days prior to the event and +290 days post the event.

Then the estimation window for the market performance model should be defined. The estimation window is not to overlap the event windows, in order to prevent the returns from having an extensive impact on the expected return's parameters. Otherwise, the expected returns and the abnormal returns would both reflect the event impact. A common approach is to include a number of 120 days to determine the market model's parameters (MacKinlay, 1997). However, the WRDS tool adopts the market adjusted model which does not require an estimation window and instead pre-assumes the model parameters.

Following are the specific event dates along with important occurrences at the event date.

Event 1. Monday March 16 2020:

On March 16 2020 the worst stock market drop since 1987 for S&P 500 was noted at 12%, replacing the numbers during the Global Financial Crisis. Dow Jones Industrial Average dropped 12.9% and the Nasdaq Composite with 12.3% (CNN Business, 2020). Thomson Reuters (2020) publishes an article on several measures taken by retailers such as: IKEA closing 98 stores, Urban Outfitters and Apple closing all their physical stores and Nike closing all stores

across US, Canada, Western Europe, Australia and New Zealand. In addition, the European Union proposed a 30 day suspension of all non-essential travels, and Canada's prime minister, Justin Trudeau, closed international borders. As a consequence of the pandemic precautions, the global financial markets dropped in fear of a recession (Rawlinson, 2020). Prime minister of the United Kingdom, Boris Johnson, acknowledged the upward curve of reported cases and called for further actions. The population was asked to avoid leaving their homes for two weeks at all times, if experiencing symptoms within the household. All unnecessary social contacts were limited including workplaces, pubs, theatres and so on (Gov.uk 2020).

Event 2. Thursday June 11 2020:

On June 11 2020, WHO reported a number of seven million cases globally. Remarkable increases within Africa, America and Eastern Europe (World Health Organization, 2020). Investors expressed a fear for a second wave of cases due to lighter restrictions. Bloomberg reported the highest volatility in 12 weeks for U.S stocks. The S&P 500 dropped 6%, Dow Jones Industrial Average 7.1% and Stoxx Europe dropped with 4.1% (Nazareth et al., 2020). It was not only the investors who expressed concerns for a second wave, also scientists confirmed this theory due to lower immunity than previously expected and new potential mutations. (Sridhar, 2020)

Event 3. Wednesday October 28 2020:

On October 28 2020, the European Commission launched additional measures to limit the spread of the Covid-19 virus. Statements from the president of the European Commission, Ursula von der Leyen, concerned the serious situation of the pandemic. Member states were encouraged to work together to prevent additional cases (European Commission, 2020). Emmanuel Macron, president of France, announced a national lockdown, and Angela Merkel, German chancellor, confirmed a partial lockdown (Murray et al., 2020). The stock market experienced the worst numbers in months. Dow Jones Industrial Average and S&P 500 experienced similar effects as June 11 and Nasdaq Composite experienced drops as September 8th (CNBC, 2020).

4.3 Abnormal Returns

Abnormal returns measure the actual return of a stock minus the normal return at the event window. The normal return is also known as the expected return and is a well established method adopted by MacKinlay, (1997), Qiu et al. (2021) and Albuquerque et al. (2020 to mention a few. The expected return is explained through the market model which assumes

a linear relationship between the stock return and the market return (MacKinlay, 1997). The abnormal return is expressed as:

$$AR_{i,\tau} = R_{i,\tau} - E(R_{i,\tau}|X_\tau) \quad (4.1)$$

Where:

$AR_{i,\tau}$ is the abnormal return for firm i on event date τ

$R_{i,\tau}$ is the actual return for firm i on event date τ

$E(R_{i,\tau}|X_\tau)$ is the expected return for firm i on event date τ

The market model holds advantages compared to the economic models such as the Capital Asset Pricing Model (CAPM) when determining the expected return. CAPM was primarily used during the 1970s but its application today is rare. It is realized that the restrictions of CAPM impacts the sensitivity of the results. The sensitivity can simply be avoided by using the market model. The market model deducts the return related to the variation in the market's return which generates a lower variance for the abnormal returns. Additionally, the market model can be acknowledged as a one factor model. One could also use a multifactor model similar to the Fama French Three Factor Model to explain the normal return. These additional factors contain adjustments regarding industries, firm sizes and so on. However, as explained by MacKinlay, (1997) multifactor models are inefficient for event studies since the additional explanatory variables provide low reduction in the variation. Based on this, the one factor market model is used in this study. This approach improves the probability of identifying event effects.

Since WRDS adopts the market adjusted model, there is a risk of potential bias arising from the assumed model parameters (MacKinlay, 1997). The market adjusted model assumes beta equal to one and alpha to zero. Previous literature such as Sohail et al. (2012) examined different models including the market adjusted model, the market model and the CAPM for observing and calculating stock prices. One could observe a slightly higher return for the market adjusted model since it is not adjusting for the risk factor, opposed to the market model and CAPM. Though the results for all three models were similar, with no significance, indicating that the differences between the calculated returns are not extensive. This is also supported by Lynch and Mendenhall, (1997) who acknowledge that inferences between the different models are rarely contrasting. Moreover, Cable and Holland, (1999), compared models of normal

returns used in event studies and found that no model was correct for all studies. They argue that regression models do not outperform non-regression models such as the adjusted market model.

It is assumed that the expected stock returns are constant across securities, but not over time periods (Dyckman and Philbrick, 1984). The WRDS tool uses the the individual firm's country's market return as a risk model for determining the expected return for firm i , with β constrained to one and α to zero. For any given firm i , the market model can be defined as:

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \epsilon_{i,t} \quad (4.2)$$

Where:

$R_{i,t}$ is the return of firm i on period τ

α, β are the parameters of the market model

$R_{m,t}$ is the return for the market portfolio m on period τ

$\epsilon_{i,t}$ is the error term

4.3.1 Cumulative Abnormal Returns

To facilitate general inferences of the event impact, the abnormal returns are aggregated. CAR is the sum of the abnormal returns over the event window (MacKinlay, 1997). The CAR from the event window τ_1 to τ_2 is denoted as:

$$CAR_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{i,\tau} \quad (4.3)$$

Important to remember is the measurement bias within CAR since the calculation ignores the effect of compounding. It is therefore argued that CAR may be a biased predictor of the long-run abnormal returns. In addition, the inclusion of newly listed firms within the market portfolio can impact the population mean of CAR if the newly listed firms are not yet incorporated in the sample known as new listing bias. If the newly listed firms perform above the market average, the population mean CAR will be positive, and if they underperform, the population mean CAR will be negative (Barber and Lyon, 1997).

4.3.2 Buy-and-Hold Abnormal Return

To complement CAR, the measure BHAR is added. BHAR is a passive investment strategy in which a stock is purchased and held for a long period of time, despite market fluctuations (Barber and Lyon, 1997). For this reason, BHAR reflects a more accurate picture of the long term return obtained compared to the aggregated abnormal returns since BHAR adjusts for the effect of monthly compounding which minimizes the measurement bias (Fama, 1998). Though, neither the new listing bias nor a skewness bias can be avoided. The skewness bias concerns the fact that BHAR is positively skewed, evoked by compounding (Barber and Lyon, 1997). This implies that the abnormal return for period one can be non-existing, but grow over time and generate a positive BHAR (Fama, 1998).

The buy-and-hold abnormal return assumes the event date of event 1 (March 16 2020) and examines the effect of the full year of 2020 accordingly:

$$BHAR_{i,\tau} = \prod_{t=1}^{\tau} [1 + R_{i,t}] - \prod_{t=1}^{\tau} [1 + E(R_{i,t})] \quad (4.4)$$

Where:

τ is the period of time the stock is held

$R_{i,t}$ is the return for firm i on event day t

$E(R_{i,t})$ is the expected return for firm i on event day t

4.4 Regression Models

Linear regression is performed to find an initial relationship between the independent variable, *ESG scores*, and dependent variable stock returns, i.e., CAR for event 1 (*CAR1*), CAR for event 2 (*CAR2*), CAR for event 3 (*CAR3*) and *BHAR*. Thereafter, a cross-sectional regression is performed as a main analysis to account for possible control variables between the relationship *ESG scores* and stock returns.

The regressions are based on the Gauss-Markov six assumptions. First, linearity is assumed between the dependent variable and the independent variable, that is that the dependent variable is a linear function of the independent variable. Second, homoscedasticity is assumed, meaning that the residual variances are constant across all values of the independent variable. Third, the residuals are assumed to be uncorrelated. Fourth, it is assumed that the residuals follow a

normal distribution. Fifth, absence of influential observations within the data set is assumed so that extreme deviations are not impacting the results. Sixth, absence of multicollinearity is assumed, implying that the independent variables are uncorrelated (Best and Wolf, 1975).

The linear regression for ESG and stock returns can be stated as the following:

$$\hat{y} = \beta_0 + \beta_1 x_1 + \epsilon \quad (4.5)$$

Where:

$\hat{y}$ is the dependent variable; stock returns

β_0 is the constant term (y-intercept)

β_1 is the slope coefficient for the independent variable

x_1 is the independent variable; ESG scores

ϵ is the model error term (residuals)

Since the dependent variable, stock returns, may depend on other factors than the ESG score, a cross-sectional regression with control variables is performed to prevent the findings from potential bias. Hence, the cross-sectional model test for additional variables while holding the effect of the remaining independent variables constant. This method of linear regression allows for examination of the effect between the independent and dependent variable as if the analysis are not differing with respect to characteristics included in the model (Best and Wolf, 1975).

For the relationship between *ESG scores* and stock returns, the following control variables of firm characteristics are taken into consideration: *Firm Size*, *Leverage*, *Dividend Yield*, *ROE*, *Price-to-book* and *Firm Age* for firm i . The control variables are included through multivariate regression on the grounds of previous accounting research (Albuquerque et al., 2020; Zhang et al., 2020; Lins et al., 2017, Ding et al., 2021; Qiu et al., 2021). For example, controlling for firm size is important as larger firms can benefit from economies of scale. Additionally, the stakeholder theory states that larger firms may receive additional pressure to engage in CSR activities, and it is therefore important to control for these biases. It is also believed that a firm's financial structure will impact decision making and the financial risk and therefore control variables for leverage are included. The definition of control variables and the calculations of such are further explained in "5.3 Definition of Research Variables".

The cross-sectional regression can be specified accordingly:

$$\hat{y} = \beta_0 + \beta_1 x_1 + \beta_2 FirmCharacteristics_i + \epsilon \quad (4.6)$$

Where:

$\hat{y}$ is the dependent variable; stock returns

β_0 is the constant term (y-intercept)

β_1 is the slope coefficient for the independent variable

x_1 is the independent variable; ESG scores

β_2 is the slope for control variables

$FirmCharacteristics_i$ are the control variables for firm i

ϵ is the model error term (residuals)

5. Data

5.1 Data Collection

The population of the study consists of European listed companies with an *ESG score* and within consumer goods. European listed companies are considered to be commercial businesses whose shares are quoted on the public market and which have their country of incorporation within Europe. Consumer goods are defined as consumer cyclicals and consumer non-cyclicals.

5.1.1 CSR Data

The sample construction begins with all listed European firms within consumer cyclicals and consumer non-cyclicals in the Thomson Reuters' Refinitiv ESG database. ESG scores are used to measure the CSR performance. ESG score is a score grade of a company based on its performance within environmental, social and governance activities. Prior literature (e.g., Ferrell et al., 2016; Dyck et al. 2019; Albuquerque et al. 2020) have used the Refinitiv ESG scores. The Refinitiv ESG scores are based on 186 comparable metrics whose input consists of company-reported data. The scores are relative to the performance and materiality of the industry sector (for the environmental and social score) and country (for the governance score). The scores range from 0 to 100, where 83-100 indicates excellent ESG performance. Since the Refinitiv Eikon ESG score only reflects verifiable reported public data, the findings are controlled by external sources and there might therefore be instances where the company's performance is not entirely reflected by the score. However, to avoid transparency bias, the Refinitiv Eikon scoring system uses weighting which means that not reporting immaterial data does not impact the ESG score a lot, while not reporting highly material data negatively impacts the ESG score. The ratings of 2019 are used to ensure that the independent variable, the CSR rating, is derived before the event dates. In practice, this explains what the investors knew about the firms' CSR performance during the pandemic.

Additionally, The Refinitiv Business Classification (TRBC) is used for selecting the industries of the sample: consumer cyclicals and consumer non-cyclicals. Consumer cyclicals include firms that produce consumer goods that are affected by economic fluctuations. Consumer non-cyclicals are consumer goods firms which are not impacted by business cycles. To ensure that the sample includes all consumer goods firms, both consumer cyclicals and consumer non-cyclicals are selected when obtaining the data. The TRBC allows for filtering on 62 industry

groups across 130 countries. The classification is performed by local analysts and covers more companies than any other sector classification system. The industry selection is revised every four years to account for market changes (Refinitiv, 2021).

5.1.2 Financial Data

The data on stock market abnormal returns was obtained from Compustat Global using the Wharton Research Data Services (WRDS). To construct the cumulative abnormal return for the three event dates and the buy-and-hold abnormal return for the full year of 2020, the WRDS International Event Study Tool is used. WRDS is the leading provider of data analytics and business intelligence to more than 50,000 researchers. All data is rigorously reviewed and validated before publication which ensures that all data is reliable (Wharton, 2021). The sample is delimited by the availability of share price data in Compustat Global. The tool replaces potential non-trading days within the selected period with the closest trading day. This ensures that the effect of the event still is reflected when the market is open.

The study benefits from using a computing tool to collect stock market data and compute the abnormal returns by avoiding the human error term in which mistakes may occur when manually handling the tests and data. The error is further minimized by using instruments with high reliability and validity. Though, the tool also limits the ability to adjust the computation and model requirements which may restrict the results. Companies with missing share values in Compustat Global for the selected event windows are automatically excluded from the WRDS tool. Thus, the sample is delimited because the WRDS tool gives the output of the parameters which the evaluation of this study is based on.

5.1.3 Accounting Data

Accounting data for 2019 are obtained from Thomson Reuter' Refinitiv Eikon database. This data is used to construct the control variables, namely *Firm Size*, *Leverage*, *Dividend Yield*, *Return on Equity*, *Price-to-book* and *Firm Age*. Following previous research (Albuquerque et al., 2020), the natural logarithmic value of firm size and firm age is constructed. Lastly, some data cleaning was conducted to ensure that all variables were in a quantitative format, details of which are available in Appendix A, for the interested reader.

5.2 Final Sample

After matching all data sets, the final sample consists of abnormal stock return data and ESG scores on 260 firms in 18 countries within Europe. The sample to population ratio is 83.87%. See table 5.2.1 for the steps of the sample selection process.

	Sample Attrition	Observations
All firm observations		310
Less firms with missing values for ESG score as of 2019	-14	296
Less firms in countries not included in WRDS	-16	280
Less firms with missing values in WRDS for CAR1, CAR2, CAR3	-20	260
Final Sample		260

Table 5.2.1: Sample Selection

The 18 countries included in the sample account for 91.45% of the European gross domestic product (Statista, 2020) and 95% of the European stock market capitalization (Statista, 2021). The sample distribution of countries can be found in Appendix B. Furthermore, the two economic sectors, consumer cyclicals and consumer non-cyclicals, are made up of 12 business sectors. The distribution of firms within each business sector can be found in Appendix C.

5.3 Definition of Research Variables

	Variables	Definition
Dependent variables	<i>CAR1</i>	Cumulative abnormal return for event window 1
	<i>CAR2</i>	Cumulative abnormal return for event window 2
	<i>CAR3</i>	Cumulative abnormal return for event window 3
	<i>BHAR</i>	Buy-and-hold abnormal return
Independent variables	<i>ESG Score</i>	Relative sum of Refinitiv EIKON's environmental, social and governance pillars year of 2019
Control variables	<i>Firm Size</i>	Natural logarithm of sales plus one EUR € year of 2019 (Albuquerque et al., 2020)
	<i>Leverage</i>	Total debt to total equity in EUR € year of 2019 (Eikon, 2021)
	<i>Dividend Yield</i>	Dividend per share over price per share times a hundred EUR € year of 2019 (Albuquerque et al., 2020)
	<i>ROE</i>	Net income over total equity of common shares EUR € year of 2019 (Eikon, 2021)
	<i>Price-to-book</i>	Price to book value per share measured in EUR € year of 2019 (Eikon, 2021)
	<i>Firm Age</i>	Natural logarithm of founding year subtracted from year of 2020 (Albuquerque et al., 2020)

Table 5.3.1: Definition of Research Variables

5.4 Descriptive Summary Statistics

Table 5.4.1 presents summary statistics of all variables used in the study. The final sample consists of return observations for 260 distinct firms in event 1, event 2 and event 3 and 209 firms for the buy and hold abnormal return. The independent variable, *ESG Score*, has a mean value of 53.94 and median of 53.96 which indicates that the *ESG score* has a symmetric distribution around the mean since the score ranges from 0-100. Also, given the standard deviation of 19.76, the minimum value of 8.51 and maximum value of 91.38, the distribution of *ESG score* is close to normal distribution.

Variable	Obs.	Mean	Median	St.dev.	Min	Max
<i>CAR1</i>	260	-0.049	-0.026	0.133	-0.639	0.357
<i>CAR2</i>	260	-0.015	-0.009	0.060	-0.616	0.156
<i>CAR3</i>	260	-0.008	-0.004	0.046	-0.156	0.164
<i>BHAR</i>	209	0.056	-0.048	0.475	-0.967	2.537
<i>ESG Score</i>	260	53.937	53.958	19.760	8.512	91.382
<i>Firm Size</i>	260	22.564	22.428	1.567	18.637	27.186
<i>Leverage</i>	259	0.250	0.243	0.159	0.000	0.968
<i>Dividend Yield</i>	228	0.032	0.279	0.020	0.000	0.122
<i>ROE</i>	258	0.176	0.140	0.253	-0.730	3.279
<i>Price-to-book</i>	260	0.300	0.232	0.651	-87.074	22.639
<i>Firm Age</i>	260	3.483	3.496	0.979	0.000	5.433

Table 5.4.1: Descriptive Statistics

Appendix E reports the Pearson correlations coefficients between the dependent and independent variables. First, the correlation between *ESG Score* and *CAR1* is positive and significant indicating that firms with higher *ESG scores* had a higher cumulative abnormal return during event 1. Second, *ESG Score* is significantly negatively related to *BHAR*, which implies that firms with higher *ESG scores* had a lower buy and hold abnormal return during 2020. Third, *ESG Score* is highly positively related to *Firm Size* which indicates that firms who are larger have a higher *ESG score*. The main concern is the extent to which *ESG Score* is correlated with the control variables as this would indicate an issue with multicollinearity in the model estimations. The correlation of *ESG Score* with other independent variables is quite low and less than +/- 0.20 (with one exception, *Firm Size*).

6. Empirical Results

The standard significance level researchers use to reject a null hypothesis is 0.100, 0.050 or 0.010 with 0.050 being most commonly employed (Söderlund, 2018). Within accounting and financial academia, 0.050 is the generally accepted limit (Albuquerque et al., 2020; Qiu et al., 2020; Ding et al., 2020). Moreover, the size of the sample can have an impact on p-values in the way that it is more difficult to obtain significant results with a small sample (Söderlund, 2018). Consequently, to compensate for the small sample size in this study and to follow the conventional approach, the significance threshold employed for this study is 0.050. If significance levels are above 0.050, but below 0.100 they will be considered weakly significant. All p-values will be reported in three decimal places and the strength of a relationship will be included for all results.

6.1 Main Analysis

Table 6.1.1 presents the results regressing abnormal stock returns on firms' *ESG score* and other firm characteristics. Column (1), (3), (5) and (7) show our most parsimonious specification where *ESG Score* is used as the only independent variable. In column (2), (4), (6), and (8) firm controls are added as independent variables. In our univariate regression analysis shown in columns (2), (4), (6) and (8), the independent variable *ESG* is related to *CAR1* at the 1% significance level and related to *BHAR* at the 5% level. More specifically, the correlation with *CAR1* is positive, implying that a one unit increase in *ESG Score* leads to an approximate increase in abnormal returns of 20.5% during event 1.

However, when adding firm control variables in column (2), the relationship between *ESG Score* and *CAR1* is insignificant. The control variables, *Firm Size*, *Leverage*, *Dividend Yield* and *Price-to-book* are significantly correlated with *CAR1* at the 5% significance level or higher. Larger firms, firms with lower leverage, firms with lower dividends and firms with a lower price-to-book all perform better during event 1. As presented in Appendix E, *ESG Score* is highly correlated with *Firm Size* (0.650), which emphasizes the importance of controlling for this variable since it is an important determinant for *ESG Score*. Thus, a possible explanation to the lack of significance in event 1 in the multivariate regression analysis is that the analysis controls for *Firm Size*.

Moreover, the relationship between *ESG Score* and *CAR2* and the relationship between *ESG Score* and *CAR3* are both negative but statistically insignificant. The control variable *Dividend*

Yield is significantly negatively correlated with *CAR2*, implying that firms with lower dividends performed better during event 2.

Turning to *BHAR*, the relationship is negative in the univariate analysis (column 7) and implies that a one unit change in *ESG Score* leads to an average decrease in abnormal stock returns of 17%. Although, when controlling for the firm variables, *BHAR* remains negatively correlated but insignificant. Due to the statistical insignificance of the model, we can not reject the null hypothesis that CSR performance is not positively related to firm financial performance. According to our main analysis, there is no evidence of a statistically significant relationship.

Dependent variable	CAR1		CAR2		CAR3		BHAR	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>ESG Score</i>	0.205*** (>0.001)	0.110 (0.210)	-0.014 (0.818)	-0.009 (0.902)	-0.027 (0.659)	-0.014 (0.854)	-0.170** (0.014)	-0.129 (0.203)
<i>Firm Size</i>		0.181** (0.039)		0.020 (0.825)		-0.050 (0.579)		-0.042 (0.672)
<i>Leverage</i>		-0.165** (0.025)		-0.112 (0.138)		0.008 (0.917)		-0.096 (0.281)
<i>Dividend Yield</i>		-0.140** (0.048)		-0.200*** (0.005)		-0.145 (0.044)		0.058 (0.482)
<i>ROE</i>		-0.107 (0.213)		-0.027 (0.759)		0.115 (0.198)		-0.070 (0.519)
<i>Price-to-book</i>		-0.154* (0.080)		-0.067 (0.460)		-0.015 (0.867)		-0.086 (0.444)
<i>Firm Age</i>		0.010 (0.891)		0.067 (0.361)		0.019 (0.797)		-0.018 (0.825)
Control variables	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	260	199	260	199	260	199	209	158
Adj. R^2	0.038	0.079	-0.004	0.059	-0.003	0.039	0.024	0.038

Table 6.1.1: **Main Analysis** This table reports the results of the regression analysis of abnormal returns on firms' ESG score within consumer goods. Standard errors are heteroskedasticity robust. The numbers in parentheses are p-values. Significance levels denoted ***= $p < 0.01$, **= $p < 0.05$, *= $p < 0.10$.

One evident aspect of our results is the relatively low adjusted R^2 values. Given the model specification and according to previous research (Albuquerque et al., 2020; Bae et al., 2021) this is expected. The control variables explain a small share of the variance in abnormal stock returns and are added as a sensitivity analysis on the effect of *ESG Score* in our model.

6.2 Additional Analysis

6.2.1 Excluding firms within Hotels & Entertainment Services

An alternative explanation to the lack of significance in the multivariate regressions between *ESG Score* and the dependent variables *CAR1* and *BHAR* is that firms within the business sector Hotels & Entertainment Services may influence the result by being significantly different from the rest of the observations. According to data from the European Union, hotels and restaurants were most affected by the crisis (Data Europe.eu., 2020). This may have resulted in higher fragility of stock returns for these businesses. To test for this, a multivariate regression analysis is conducted where the business sector Hotels & Entertainment Services is excluded from the sample.

Table 6.2.1 presents the results of the regression analysis. Table 6.2.1 shows that *CAR1* is significantly and positively correlated to *ESG Score* in both the univariate regression analysis (column 1) and the multivariate regression analysis (column 2). In the multivariate regression analysis, the coefficient is weakly significant at the 10% level and the correlation coefficient indicates that a one unit change in *ESG Score* leads to an average increase in abnormal stock returns during event 1 of 16.5%. The coefficient estimate for *CAR2* becomes positive, but remains insignificant. The control variable *ROE* is significantly negatively correlated to *CAR1* and *CAR2*, suggesting that firms with lower *ROE* performed better during these events. All other variables are insignificant. The test shows that our main analysis is not robust to the exclusion of firms within Hotels & Entertainment Services, although the significant positive relationship is weak and only hold for one of the four dependent variables.

Dependent variable	CAR1		CAR2		CAR3		BHAR	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>ESG Score</i>	0.239*** (0.001)	0.166* (0.074)	0.021 (0.751)	0.047 (0.623)	-0.028 (0.671)	0.018 (0.851)	-0.195*** (0.009)	-0.115 (0.296)
<i>Firm Size</i>		0.080 (0.283)		-0.017 (0.860)		-0.109 (0.259)		-0.083 (0.444)
<i>Leverage</i>		-0.016 (0.835)		-0.046 (0.563)		0.056 (0.479)		-0.084 (0.377)
<i>Dividend Yield</i>		-0.101 (0.225)		-0.129 (0.135)		-0.110 (0.204)		0.057 (0.559)
<i>ROE</i>		-0.204** (0.029)		-0.180* (0.062)		-0.058 (0.546)		-0.152 (0.156)
<i>Price-to-book</i>		0.027 (0.783)		0.114 (0.264)		0.170 (0.101)		0.027 (0.822)
<i>Firm Age</i>		0.080 (0.283)		0.091 (0.238)		0.054 (0.489)		0.009 (0.922)
Control variables	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	230	177	230	177	230	199	177	138
Adj. <i>R</i> ²	0.053	0.100	-0.004	0.033	-0.004	0.018	0.033	0.003

Table 6.2.1: **Excluding Hotels & Entertainment Services** This table reports the results of the regression analysis of abnormal returns on firms' ESG score within consumer goods. Standard errors are heteroskedasticity robust. The numbers in parentheses are p-values. Significance levels denoted ***= $p < 0.01$, **= $p < 0.05$, *= $p < 0.10$.

6.2.2 Differentiating between consumer cyclicals and non-cyclicals

Furthermore, to rule out any industry impact, a robustness test is also conducted on the two economic sectors, consumer cyclicals and consumer non-cyclicals. This way, we are exploiting cross-sectional variation in *ESG* within each economic sector. Given that consumer cyclicals are affected by changes in the business cycle, as opposed to non-cyclicals, and the pandemic triggered a recession, the difference between the two groups is interesting to investigate. Table 6.2.2 shows the result of the regression analysis examining consumer cyclicals. The results in Table 6.2.2 differ slightly to those presented in the main analysis. For consumer cyclicals, *BHAR* is negatively weakly significant in the multivariate regression (column 8). The results also indicate that firms with lower leverage and lower dividends performed better during event 1 and event 2. While firms with higher *ROE* performed better during event 3 and firms with higher dividends performed better during 2020 as a whole. The correlation between *ESG Score* and the rest of the dependent variables is insignificant and thereby consistent with the main results.

Dependent variable	CAR1		CAR2		CAR3		BHAR	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>ESG Score</i>	0.162** (0.028)	0.154 (0.126)	-0.077 (0.297)	-0.027 (0.780)	-0.033 (0.657)	0.061 (0.555)	-0.140* (0.082)	-0.188* (0.096)
<i>Firm Size</i>		0.065 (0.511)		-0.096 (0.323)		-0.122 (0.238)		0.100 (0.372)
<i>Leverage</i>		-0.224** (0.012)		-0.237*** (0.006)		-0.071 (0.433)		-0.119 (0.234)
<i>Dividend Yield</i>		-0.194** (0.025)		-0.218** (0.010)		-0.088 (0.318)		0.165* (0.089)
<i>ROE</i>		0.004 (0.972)		0.035 (0.763)		0.213* (0.088)		-0.038 (0.791)
<i>Price-to-book</i>		-0.089 (0.463)		-0.067 (0.574)		0.043 (0.730)		-0.090 (0.539)
<i>Firm Age</i>		-0.038 (0.657)		0.120 (0.149)		0.057 (0.515)		-0.062 (0.516)
Control variables	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	184	136	184	136	184	136	156	116
Adj. R^2	0.021	0.068	0.001	0.112	-0.004	0.010	0.024	0.006

Table 6.2.2: **Consumer Cyclicals.** This table reports the results of the regression analysis of abnormal returns on firms' ESG score within consumer goods. Standard errors are heteroskedasticity robust. The numbers in parentheses are p-values. Significance levels denoted ***= $p < 0.01$, **= $p < 0.05$, *= $p < 0.10$.

Table 6.2.3 shows that for the sample with consumer non-cyclicals, the coefficient estimates on *ESG Score* are positive and insignificant for column (2) and (4) and negative and insignificant for column (6) and (8). The lack of significance of the main variable in the multivariate regression analysis is consistent with the findings in the main analysis. Thus, the analysis presented in table 6.2.2 and 6.2.3 indicates that there is a small cross-sectional variation in *ESG Score* within the two economic sectors.

Dependent variable	CAR1		CAR2		CAR3		BHAR	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>ESG Score</i>	0.258* (0.050)	0.097 (0.642)	0.149 (0.264)	0.120 (0.616)	-0.077 (0.565)	-0.283 (0.225)	-0.112 (0.484)	-0.059 (0.843)
<i>Firm Size</i>		0.199 (0.340)		0.002 (0.993)		0.122 (0.596)		-0.260 (0.375)
<i>Leverage</i>		-0.218 (0.181)		0.239 (0.200)		0.263 (0.145)		0.061 (0.840)
<i>Dividend Yield</i>		0.160 (0.294)		0.020 (0.909)		-0.303 (0.076)		-0.106 (0.624)
<i>ROE</i>		-0.070 (0.710)		-0.106 (0.624)		0.146 (0.484)		-0.130 (0.622)
<i>Price-to-book</i>		-0.286 (0.153)		0.217 (0.340)		-0.070 (0.748)		0.168 (0.614)
<i>Firm Age</i>		0.205 (0.182)		-0.044 (0.801)		-0.006 (0.971)		0.325 (0.154)
Control variables	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	58	47	58	47	58	47	41	32
Adj. <i>R</i> ²	0.050	0.175	0.005	-0.083	-0.012	-0.009	0.024	0.038

Table 6.2.3: **Consumer Non-Cyclicals.** This table reports the results of the regression analysis of abnormal returns on firms' ESG score within consumer goods. Standard errors are heteroskedasticity robust. The numbers in parentheses are p-values. Significance levels denoted ***= $p < 0.01$, **= $p < 0.05$, *= $p < 0.10$.

6.2.3 Retail Business Sector Analysis

The pandemic affected industries differently. The main sample includes 12 business sectors within consumer goods among which retail is one of them. Given the pressure retail companies are experiencing according to previous literature (Naidoo and Casparatos, 2018), it is interesting to examine how the relation between CSR and abnormal returns constitutes within a smaller sample of only retail firms. The results are presented in table 6.2.4. Despite the small sample size, we find significant results for the first event, *CAR1*. *ESG Score* is positively related to *CAR1* at a 5% significance level when including control variables, as shown in column (2). A one unit change in *ESG score* approximates to an average increase in abnormal stock returns of 54.6% during event 1. The adjusted R-squared metric informs us that the selected regressors can explain 26.7% of the variation in the dependent variable *CAR1*, which is a notably higher value than in the main analysis. The results also indicate that firms with lower leverage performed better during event 1, event 2 and during 2020 as a whole. Firms with higher dividends also performed better during 2020 as a whole. Given that significance is only found for event 1, it is suggested that there may be a weak positive association between CSR and abnormal returns

for retail firms

Dependent variable	CAR1		CAR2		CAR3		BHAR	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>ESG Score</i>	0.385** (0.015)	0.546** (0.010)	0.187 (0.254)	0.062 (0.791)	0.212 (0.196)	-0.029 (0.901)	0.023 (0.898)	-0.047 (0.848)
<i>Firm Size</i>		-0.102 (0.619)		-0.004 (0.985)		0.035 (0.885)		0.151 (0.547)
<i>Leverage</i>		-0.424** (0.019)		-0.342* (0.095)		-0.104 (0.604)		-0.357* (0.085)
<i>Dividend Yield</i>		0.151 (0.435)		0.204 (0.384)		0.383 (0.112)		0.511** (0.042)
<i>ROE</i>		0.213 (0.440)		-0.346 (0.281)		-0.250 (0.435)		-0.531 (0.114)
<i>Price-to-book</i>		-0.520 (0.117)		0.452 (0.232)		0.616 (0.110)		0.402 (0.306)
<i>Firm Age</i>		0.169 (0.352)		0.190 (0.362)		0.266 (0.209)		-0.151 (0.466)
Control variables	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	39	30	39	30	39	30	34	30
Adj. <i>R</i> ²	0.126	0.267	0.009	0.009	0.019	-0.002	-0.031	0.172

Table 6.2.4: **Retail Firms.** This table reports the results of the regression analysis of abnormal returns on firms' ESG score for Retail firms. Standard errors are heteroskedasticity robust. The numbers in parentheses are p-values. Significance levels denoted ***= $p < 0.01$, **= $p < 0.05$, *= $p < 0.10$.

6.2.4 Differentiating between non-EU firms and EU-firms

The institutional theory states that engaging in CSR activities is highly dependent on the institutional context. Firms within member states of the European Union (EU) are controlled by the formal regulations set by the union, among which some concern CSR activities for example the Disclosure Regulation 2019/2088 (Official Journal of the European Union, 2019) and the EU Taxonomy Regulation 2020/852 (Official Journal of the European Union, 2020). However, when regulatory bodies force organizations to adopt CSR practices it may be seen as less genuine and thus firms are not rewarded to the same extent. To investigate this difference, two regression analyses were conducted which separated the firms with their incorporation in EU countries from firms with their incorporation in non-EU countries. More specifically, firms in the United Kingdom, Norway and Switzerland were separated from the EU sample leaving a total number of firms of 158 for *CAR1*, *CAR2* and *CAR3* and 152 firms for *BHAR*. The sample with non-EU firms consisted of 102 firms for *CAR1*, *CAR2* and *CAR3* and 57 firms for *BHAR*. Table 6.2.5 presents the results of the firms within the EU. Interestingly, *ESG Score* shows a significant negative correlation to *CAR2* when including control variables (column

4). *CAR1* shows a negative but insignificant relationship to *ESG Score* (column 2) and *CAR3* shows a positive but insignificant relationship to *ESG Score* (column 6) when including control variables. *ESG Score* is negatively related to *BHAR* at a significance level of 5% (column 8). Firms of larger size, lower leverage, lower *ROE* and lower *Price-to-book* performed better during event 1. Firms with lower *ROE* and dividends performed better during event 2 and lower dividends was also better during event 3. The results indicate that high CSR firms in EU performed worse during event 2 and during 2020 as a whole. Thus, there is evidence of a negative association between CSR and abnormal returns for EU firms.

Dependent variable	CAR1		CAR2		CAR3		BHAR	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>ESG Score</i>	0.040 (0.621)	-0.170 (0.129)	-0.084 (0.294)	-0.241** (0.029)	-0.039 (0.628)	0.057 (0.616)	-0.179** (0.027)	-0.241** (0.046)
<i>Firm Size</i>		0.288** (0.011)		0.134 (0.221)		-0.139 (0.227)		0.109 (0.361)
<i>Leverage</i>		-0.175* (0.067)		-0.028 (0.763)		0.005 (0.960)		0.033 (0.748)
<i>Dividend Yield</i>		0.046 (0.664)		-0.198* (0.059)		-0.242** (0.028)		-0.020 (0.861)
<i>ROE</i>		-0.221* (0.077)		-0.231* (0.060)		0.090 (0.482)		0.046 (0.724)
<i>Price-to-book</i>		-0.019* (0.881)		0.079 (0.533)		-0.016 (0.904)		-0.055 (0.687)
<i>Firm Age</i>		-0.061 (0.508)		-0.034 (0.708)		0.057 (0.546)		-0.075 (0.444)
Control variables	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	158	123	158	123	158	123	152	116
Adj. <i>R</i> ²	-0.005	0.064	0.001	0.103	-0.005	0.014	0.026	-0.016

Table 6.2.5: **EU Firms** This table reports the results of the regression analysis of abnormal returns on firms' ESG score for EU firms. Standard errors are heteroskedasticity robust. The numbers in parentheses are p-values. Significance levels denoted ***= $p < 0.01$, **= $p < 0.05$, *= $p < 0.10$.

Table 6.2.6 presents the regression results of the sample with non-EU firms. *ESG Score* is positively correlated with *CAR1* (column 2) and *CAR2* (column 4) at a 5% significance level. *ESG Score* is positively correlated with *BHAR* when adding control variables, but at a statistically insignificant level (column 8). It is shown that firms with lower leverage performed better during event 1 and event 2. Firms with lower dividends performed better during event 1 and firms of smaller size performed better during 2020 as a whole. The analysis suggest that there is a positive association between CSR and abnormal returns for non-EU firms. Thus, there is a notable difference in the association between CSR performance and stock market

performance for EU firms and non-EU firms.

Dependent variable	CAR1		CAR2		CAR3		BHAR	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>ESG Score</i>	0.296*** (0.003)	0.298** (0.036)	0.125 (0.212)	0.300** (0.046)	-0.036 (0.722)	-0.049 (0.753)	-0.120 (0.373)	0.172 (0.388)
<i>Firm Size</i>		0.196 (0.159)		-0.106 (0.468)		0.121 (0.437)		-0.341* (0.078)
<i>Leverage</i>		-0.252** (0.033)		-0.314** (0.013)		-0.010 (0.936)		-0.412 (0.032)
<i>Dividend Yield</i>		-0.234** (0.036)		-0.026 (0.821)		-0.022 (0.860)		0.174 (0.285)
<i>ROE</i>		0.059 (0.732)		0.165 (0.366)		0.185 (0.336)		-0.267 (0.328)
<i>Price-to-book</i>		-0.115 (0.508)		0.020 (0.911)		-0.064 (0.741)		-0.324 (0.255)
<i>Firm Age</i>		-0.019 (0.861)		0.147 (0.200)		-0.072 (0.552)		0.137 (0.393)
Control variables	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	102	76	102	76	102	76	57	42
Adj. R^2	0.078	0.178	0.006	0.077	-0.009	-0.033	-0.003	0.051

Table 6.2.6: **Non-EU Firms** This table reports the results of the regression analysis of abnormal returns on firms' ESG score for non-EU firms. Standard errors are heteroskedasticity robust. The numbers in parentheses are p-values. Significance levels denoted ***=p<0.01, **=p<0.05, *=p<0.10.

6.3 Summary of Findings

Analysis	Result
Main Analysis	No evidence of a relationship between CSR-rating and stock market performance.
Excl. Hotels & Entertainment	Weakly significant positive relationship between CSR and event 1.
Consumer Cyclical	Weakly significant negative relationship between CSR and the long-term variable, BHAR.
Consumer Non-cyclical	No evidence of a relationship between CSR-rating and stock market performance.
Retail Firms	Significant positive relationship between CSR and event 1.
EU Firms	Significant negative relationship between CSR and event 2. Significant negative relationship between CSR and the long-term variable, BHAR.
Non-EU Firms	Significant positive relationship between CSR and event 1. Significant positive relationship between CSR and event 2.

Table 6.3.1: Summary of Findings

7. Discussion

7.1 Main Findings in Relation to Previous Research

The main findings of this study indicate that there is no clear evidence of a significant short-run or long-run relation between CSR and stock market performance for consumer goods companies during the Covid-19 pandemic. The additional tests show that under specific conditions CSR matters. The main results partially follow the underlying theories. It contradicts what is expected from the stakeholder and institutional theory since the implication of these theories is that high-CSR firms would have better stock price performance during the crisis if their CSR activities are genuinely meeting the demands of stakeholders and the environment. This suggests that there may be a potential disconnect between CSR ratings and actual actions since the activities are not increasing the stock price value. However, the results do not automatically contradict the shareholder theory and the market efficiency theory since CSR would not be reflected in the stock returns if it does not add value for shareholders. As stated by Friedman (1962), the only social responsibility a firm has is to increase shareholder wealth. Thus, a company would only engage in CSR if it adds value to its shareholders. Furthermore, if the CSR rating does not add value, the market efficiency theory states that this information would be incorporated in the share prices.

Moreover, our results differ from that of Albuquerque et al. (2020). They found that firms with higher environmental and social performance showcased significantly higher stock market returns during the first quarter of 2020. There are a number of factors which contribute to this inconsistency. Firstly, Albuquerque et al. (2020) use a cross-industry sample of 2,171 US firms whereas this study includes 260 European firms within the consumer goods sector. The larger sample size of Albuquerque et al. (2020) increases the chances of obtaining a significant result. The pandemic also affected countries and industries differently. Moreover, the study by Albuquerque et al. (2020) only covers the first quarter of 2020 while this study covers both the short-term perspective through analysing three event windows and the long-term perspective by applying the buy-and-hold measure.

This study is also related to the research by Ding et al. (2021). They investigated the connection between pre-2020 CSR on the stock price response to Covid-19 using data on more than 6,700 firms across 61 economies. Their results showed that high-CSR performance correlated with superior stock price performance during the crisis. Their study focused on a cross-border and

cross-industry sample unlike this study which solely concentrates on European firms within consumer goods. Also, their analysis only covers the period from January 2 2020 through May 22 2020 whereas this study extends the period analysed to events throughout the entire year of 2020.

Lastly, the results of this study are consistent with that of Bae et al. (2021). Their study showed that there is no evidence that CSR affected stock returns during the crash period. Their results persist in various sensitivity tests and across most industries. Their sample consists of 1,750 US firms and two sources of CSR ratings, the 2019 Refinitiv ratings and the 2018 MSCI ratings. The contrary findings by Ding et al. (2021) and Albuquerque et al. (2020), should not be seen as an empiric anomaly but rather highlight the importance of contextual factors when establishing external validity.

The lack of a significant relation between CSR and stock returns during a crisis, suggests that we should be cautious about drawing unambiguous and unconditional inferences about the positive role of CSR in preserving shareholder value. Nevertheless, it should be noted that significance was found for event 1 in the univariate analysis. A possible explanation to the lack of significance in the multivariate regression is the inclusion of the control variable *Firm Size* which is highly correlated with the independent variable *ESG Score*. This correlation was also found in the study by Bae et al. (2021) and is further discussed in section 7.3. It is not surprising that *Firm Size* is correlated with higher *ESG score* as larger firms often are exposed to heavy demand of CSR activities, explained by the stakeholder theory. Additionally, larger firms are subject to economies of scale and may therefore obtain more resources to invest in CSR. It is therefore important to control for size because the analysis is highly sensitive to this variable.

Moreover, significance was found in the univariate analysis for the long-term variable *BHAR*. The relationship between *ESG score* and *BHAR* was negative which suggests that high-CSR companies in the long-run perform worse. This relationship was also found in the multivariate regressions when analyzing a sample of only Consumer Cyclical and only EU firms. This is a rather surprising finding as most of the studies in the literature review argued for a positive relationship. However, as discussed in Peloza (2009), the relationship between CSR and CFP is very complex and 15% of studies show a negative relationship. Additionally, while some companies ramped up CSR actions during the Covid-19 crisis, others with strong CSR reputations laid off a large amount of their workforce and cut down on health care benefits at a time when they were arguably needed the most (Bae et al., 2021). As discussed by He and Harris

(2020), the financial constraints caused by the pandemic has led firms to seek short-term gains through fraud and misconduct by sacrificing long-term CSR investments and reputation. It is thus possible that our long-term variable *BHAR* incorporates this misconduct and gap between CSR ratings and actual actions.

Moreover, Broadstock et al. (2020), found that CSR firms outperform during crises, but underperform during normal times. Shareholders thereby pay an insurance premium for CSR and obtain lower returns in normal times, with the expectation of benefiting in a financial crisis. While results suggest that CSR may have a positive impact during the initial stage of a crisis for some contexts (when excluding Hotels & Entertainment Services and when analysing Retail Firms and non-EU firms) this initial effect does not hold during the entire crisis and may result in a lower stock market performance spanning the crisis as a whole. Similar evidence is presented in Lins et al. (2017) and Zhang et al. (2020), who found that the strongest positive relationship was determined during the early stages of a crisis and diminished throughout the crisis and recovery period. Thus, it is concluded that pre-crisis CSR is not an effective strategy for shielding shareholder wealth during an entire crisis.

7.2 Other Findings

To further substantiate our main evidence, several additional tests were conducted resulting in a number of interesting findings. When excluding the business sector Hotels & Entertainment, firms with high CSR rating showed higher abnormal stock returns during event 1. An explanation to this is that this sector was highly impacted by the restrictions during the crisis and would therefore have significantly lower returns. After excluding these firms, the results for event 1 are stronger, but this positive relationship was not significant for the remaining two events. The result can be linked to the previously discussed findings by Lins et al. (2017) and Zhang et al. (2020), since the strongest positive relationship was found during the initial stage of the crisis.

Furthermore, when investigating a sample of consumer cyclicals, a negative long-term relationship between CSR and excess stock returns was identified. Similar evidence was presented in Bae et al. (2021) which found a negative significant relationship between durable goods and ESG ratings. A possible explanation to this is that consumer cyclicals are sensitive to changes in economic conditions and represent goods which are not necessities. One could argue that consumers might not see such scarce purchases as part of their environmentally conscious behavior.

When investigating whether the results from the main analysis persisted in a sample solely consisting of retail firms, it was found that during event 1 firms with high CSR rating showed significantly higher excess returns. This indicates that the pressure retail firms are exposed to in terms of CSR also generate a positive financial advantage during crises of high volatility which can provide incentives for retailers to engage in CSR activities beyond legislation. However, these higher excess returns are not identified for the remaining events with lower volatility.

Moreover, the additional analysis which differentiated firms within the European Union from other countries in Europe showed some surprising results. Firms within the EU with a high CSR-rating showed lower returns during event 2 and during 2020 as whole. In contrast to this result, firms outside of the EU with a high CSR-rating had higher abnormal stock returns during event 1 and event 2. A possible explanation to these results can be described through the institutional theory where member states of the EU are governed by the objectives and policies of the union and may therefore not be rewarded for their CSR activities to the same extent as non-member states as these are not based on voluntariness. Hence, firms outside of the EU may be perceived as more genuine in their CSR initiatives which stakeholders demanding CSR consider as value adding in conformity with the stakeholder theory.

7.3 Validity and Causality

The model is controlled for multicollinearity through a Pearson correlation test (see Appendix E) and a variance inflation factor (VIF) test (see Appendix D). According to Kennedy (1984), a VIF value above 10 would indicate a multicollinearity issue. As shown in Appendix D, all independent variables included in this study have a VIF value below 2, suggesting that multicollinearity is not an issue in this study. However, the Pearson correlation test showed that there is a high correlation between the independent variable *ESG Score* and the control variable *Firm Size*. This correlation is statistically significant, but given the low VIF values it is not high enough to cause issues with multicollinearity. Moreover, as discussed in Dohoo et al. (1997), multicollinearity is only certain with correlation coefficients above 0.9. Due to the contradiction between the Pearson correlation test and the VIF test, one can conclude that any hint of multicollinearity does not pose a large threat on the study as a whole. Lastly, when plotting the standardized residuals, no clear pattern could be identified on the scatterplot which implies no heteroskedasticity. Heteroskedasticity can often be identified in samples where the range of observations goes from very small to very large and results in unreliable statistical results.

One must also remember potential errors with the model describing the relationship known as the endogeneity issue. First, there is the issue with omitted variables. The selected variables aimed to explain the outcome variables are based on previous theory, however, there may be additional variables not included in the specified model that could provide additional or alternative explanations to the relationship. Second, the issue of simultaneity. This implies that the independent variables may be jointly determined with the dependent variable meaning that the direction of causality runs both ways i.e., high CSR performance increases financial performance, but also that financial performance may result in more CSR activities due to extensive financial resources. The endogeneity issue limits the validity of the model and one should therefore be aware that results should be interpreted as associations between the variables rather than causations (Chenhall and Moers, 2007). Though, this study limits the impact of the endogeneity issue compared to previous studies on this topic since the pandemic represents exogenous events, with an unexpected increased demand for CSR.

8. Concluding Remarks

8.1 Conclusion

The Covid-19 pandemic has clearly affected firms and their financial performance. This paper provides evidence that there is no clear relationship between CSR and CFP for European firms within consumer goods during the Covid-19 crisis. The results presented are similar to findings supported by Bae et al. (2021). Contrary to previous research on this topic (Albuquerque et al., 2020; Ding et al., 2021) no positive significant relationship is found for firms with high CSR performance when examining European firms within consumer goods.

Despite no evidence for a link between CSR and CFP for consumer goods as an economic sector, some evidence is presented for a positive association between CSR and CFP for the specific industry of retailing. However this tendency is only found for the initial phase of the crisis. The study also highlights how different contexts in which a firm operates within impacts the link between CSR and CFP. Conflicting results between firms within the European Union and non-member states are presented where a high CSR performance within the European Union has a negative impact on financial performance whereas the opposite is presented for non-member states.

8.2 Implications

The presented findings show no explicit evidence for a higher financial performance due to a high CSR performance at the crisis of Covid-19 for firms within consumer goods. Previous researchers have discussed the reduced shareholder wealth due to CSR investments and this plausible explanation may prevent them from engaging with high achieving CSR firms. For example, it is argued that firms with a high CSR performance divert resources from the core business offering to social responsibility and therefore experience lower profits (Hull and Rothenburg, 2008). Managers should in alignment with this study therefore not strive to invest in their CSR performance with an ambition of mitigating neither the short or long term negative stock market effects of a crisis.

Although this study cannot guarantee a positive relationship between CSR and CFP during the Covid-19 crisis, managers of consumer goods should be careful before altering CSR strategies. This study does not conclude that CSR is irrelevant. Many previous researchers have pointed out the complexity with examining the impact of CSR. The pandemic of Covid-19 has provided

firms with great opportunities to engage in social initiatives. Despite no evidence in this study analyzing the CSR strategies prior to the pandemic, one should not undermine the importance of engaging in community related activities in crisis (Deloitte, 2020).

Bae et al (2021), discuss that companies are not fulfilling their CSR beliefs and simply use promises regarding CSR initiatives as a strategy for public relations. This was also pointed out by He and Harris (2020) who claim that firms sacrifice long term CSR for short term gains. This behavior may explain why investors are not valuing CSR performance in times of crisis and why the strongest effects are observed at an early stage of the crisis. It is therefore important for managers to stay true to their promises and shed light on how CSR investments create value for shareholders as other stakeholders including consumers and communities are demanding CSR. To cope with these concerns, managers can aim at providing transparency towards stakeholders to prove that social and competitive improvements are not mutually exclusive. This suggestion goes in line with the stakeholder theory which explains that managers must satisfy all potential groups who have a stake in the business.

Moreover, some supporting evidence for a positive initial crisis relationship between CSR and CFP can be identified for retail firms. One should therefore consider CSR initiatives as a short term shield from initial crisis market reactions. Being one of the most affected sectors during the Covid-19 pandemic due to lockdowns and social distancing (Data Europa.eu, 2020), shareholders perchance relied on CSR metrics when market conditions were uncertain as they were perceived with less ambiguity (Lins et al., 2017). Moreover, the retail sector is exposed to heavy consumer demand for CSR which can explain why CSR activities are more valued in this high consumer-focused industry compared to industries with less consumer contact (Naidoo and Casparatos, 2018; McKinsey & Company, 2020). Hence, evidence from this study recommends managers of retail firms to invest in CSR activities as an initial shield for negative stock market reactions during a crisis.

8.3 Limitations and Future Research

A major limitation of the study, as in many other studies, is the sample size. Significant results and fair representation of the population may be difficult to find within a smaller sample size (Best and Wolf, 1975). The sample is based on Eikon Refinitiv's database in which consumer cyclical and consumer non-cyclical are selected, which explains the smaller sample. All sampled companies had to obtain an ESG score within Eikon Refinitiv's database as of year 2019. Since the Eikon Refinitiv ESG Score is one among many measures of CSR performance, it may be insufficient to reflect the complete picture of a firm's CSR performance. For example,

there is a risk for size bias, when smaller companies have less access to resources when reporting their CSR related activities compared to larger firms. Even though the report concerns the stock market reactions and thus the available information to investors, i.e. ESG Scores, complementing additional CSR measures could strengthen the fairness of interpreting CSR performance. Moreover, the reduction in the sample was also a consequence of the WRDS tool for calculating CAR and BHAR. The tool had restrictions with regards to stock market data for specific countries and hence, occasional countries and observations were excluded. With regards to the scope and time frame of this study, the WRDS tool was adopted to calculate the abnormal returns. The WRDS tool did not allow for adjustments in the market model parameters and assumed beta equal to one. This may have caused some biases in the result and a further study could examine the abnormal returns through the market model where the individual beta is calculated for each firm.

To cope with the limitations of this study, future studies can benefit from examining a larger sample to strengthen the findings of consumer goods. A larger sample would increase the likelihood of significant findings. Additionally, it would be interesting for future studies to look into the positive relationship between CSR and CFP among retail firms. Moreover, future research could consider robustness checks such as incorporating more than one CSR performance measure as institutions and databases use different methodologies for scoring firms. This also applies to measuring financial performance. A future study with financial data of 2020 could include accounting-based measures as a robustness check for the market-based measures when analyzing the impact of CSR on CFP.

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10. Appendices

10.1 Appendix A

Data Cleaning	
1.	Reformatted numbers which included a “%” symbol into decimal numbers by dividing the numbers by 100
2.	Replaced all commas with dots to be able to import the data file into csv. format
3.	To obtain firm age in number of years, the organizational founding year was subtracted from the year of 2020
4.	Logarithmic transformation of the control variables <i>Firm Age</i> and <i>Firm Size</i>

10.2 Appendix B

Sample Country Distribution	
Country of Incorporation	Frequency
Austria	2
Belgium	7
Denmark	7
Finland	3
France	36
Germany	29
Greece	5
Hungary	1
Ireland	5
Italy	17
Netherlands	6
Norway	5
Poland	6
Portugal	2
Spain	10
Sweden	22
Switzerland	18
United Kingdom	79

This table presents the distribution of firms within each country for the main sample of 260 firms.

10.3 Appendix C

Sample Industry Distribution		
TRBC Economic Sector	TRBC Business Sector	Number of firms
Consumer cyclicals	Automobiles and auto parts	22
	Cyclical consumer products	19
	Homebuilding and construction supplies	31
	Hotels and entertainment services	29
	Household goods	5
	Leisure products	8
	Media and publishing	30
	Retailers	40
Consumer non-cyclicals	Food and beverages	9
	Food and drug retailing	19
	Food and tobacco	37
	Personal and household products and services	11

This table presents the distribution of firms within each business sector for the main sample of 260 firms.

10.4 Appendix D

Variable	VIF
ESG Score	1.650
Firm Size	1.637
Leverage	1.147
Dividend Yield	1.059
ROE	1.575
Price-to-book	1.650
Firm Age	1.074
Mean VIF	1.399

This table presents the Variance Inflation Test values for each variable in the main analysis regression model 6.1.1.

10.5 Appendix E

Pearson Correlation Analysis											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) CAR1	1										
(2) CAR2	0.383	1									
(3) CAR3	0.229	0.255	1								
(4) BHAR	0.257	0.295	0.280	1							
(5) ESG Score	0.204	-0.014	-0.027	-0.170	1						
(6) Price-to-book	-0.032	0.060	0.003	0.082	-0.048	1					
(7) Firm Size	0.244	0.036	-0.078	0.146	0.650	-0.25	1				
(8) Leverage	-0.145	-0.174	-0.004	0.079	0.118	-0.213	0.010	1			
(9) ROE	-0.056	0.003	0.103	-0.032	-0.005	-0.504	-0.053	0.071	1		
(10) Dividend Yield	-0.118	-0.164	-0.172	-0.005	0.081	-0.128	0.081	0.180	0.082	1	
(11) Firm Age	0.097	0.094	0.018	-0.093	0.023	0.042	0.194	-0.015	-0.107	-0.054	1

This table reports the Pearson correlation of all variables used in the analysis. Correlation coefficients in bold are significant at the 1% level or higher.