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# The Value of Corporate Social Responsibility during the COVID-19 Pandemic

European Evidence

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**ABSTRACT:**
Corporate social responsibility and issues related to it have been in the center of interest of researchers for past decades. However, a generally accepted theoretical framework is still not identified. Furthermore, results related to corporate social responsibility and its effects on corporate financial performance are conflicted. Some studies show a positive relationship, whereas others show a negative or a neutral relationship. In this thesis, the different definitions of corporate social responsibility and the history of the concept are presented. Furthermore, previous studies around the topic are discussed.

The purpose of this thesis is to examine the relationship between corporate social responsibility and corporate financial performance during a negative market shock. The examination is done by studying whether high-ESG rated companies performed better than low-ESG rated companies during the first year of COVID-19 pandemic. The COVID-19 pandemic started to spread around the world in the beginning of 2020 and caused a global health concern. The pandemic triggered a negative market shock that affected countries and companies globally. Since the shock was not caused by economic conditions but by public health concerns, it gives an opportunity to study the relationship between corporate social responsibility and corporate financial performance from an original point of view.

In this thesis, performance is measured as monthly abnormal returns, but also as operating performance. Furthermore, the volatility of stock returns is examined as well. The data is gathered from developed European markets, and listed companies with an available ESG-rating data from 16 European countries are included in the sample. The study is conducted as cross-sectional regressions.

The regression results for monthly abnormal return regressions and the mean abnormal return of 2020 regressions do not show a significant relationship between stock returns and ESG-rating. The volatility regressions show that companies with higher ESG-rating had a lower volatility when controlled only for ESG-rating. However, when other variables are added to control, the companies with higher ESG-rating have a higher volatility. Other significant results are not found. Therefore, the results indicate that there lies no relationship between corporate social responsibility and corporate financial performance during the first year of COVID-19 pandemic in the developed European markets. The relationship between corporate social responsibility and volatility could be studied further, since the results in this thesis are conflicted.

**KEYWORDS:** COVID-19, Corporate Financial Performance, Cross-Sectional Study, ESG, European Evidence, Socially Responsible Investing

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**TIIVISTELMÄ:**
Yritysvastuullisuutta ja siihen liittyviä teemoja on tutkittu viime vuosikymmenten aikana paljon. Yleistä teoreettista viitekehystä liittyen yritysvastuullisuuteen ei kuitenkaan ole muodostettu, ja tutkimustulokset yritysvastuullisuudesta ja sen vaikutuksesta yrityksen taloudelliseen suorituskykyyn ovat ristiriitaisia. Osa tutkimuksista osoittaa positiivisen suhteen yritysvastuullisuuden ja taloudellisen menestymisen välillä, kun taas osa tutkimuksista osoittaa negatiivisen tai neutraalin suhteen. Tässä tutkielmassa käydään läpi yritysvastuullisuuden eri määritelmät, konseptin historia, sekä aikaisempia tutkimuksia aiheesta.

Tämän tutkielman tavoitteena on selvittää, onko yritysvastuullisuudella vaikutusta yrityksen taloudelliseen suorituskykyyn negatiivisen markkinashokin aikana. Tutkielma toteutetaan vertaamalla, suoriutuivatko korkeammin ESG-luokitellut yhtiöt heikommin ESG-luokiteltuja yhtiöitä paremmin COVID-19 pandemian ensimmäisen vuoden aikana. COVID-19 pandemia alkoi levitä vuoden 2020 alussa ympäri maailmaa aiheuttaen maailmanlaajuisen terveysuhan. Pandemia aiheutti negatiivisen markkinashokin, joka vaikutti maailmanlaajuisesti niin eri maihin kuin yhtiöihinkin. Pandemia antaa uuden tavan tutkia yritysvastuullisuuden ja yrityksen taloudellisen suorituskyvyn välistä suhdetta, sillä siitä aiheutunut markkinashokki ei johtunut taloudellisista olosuhteista, vaan kansanterveyteen liittyvistä huolista.

Tässä tutkielmassa yritysten taloudellista menestystä mitataan sekä kuukausittaisilla ylituotoilla, erilaisilla taloudellisen suorituskyvyn mittareilla että osaketuottojen volatiliteetilla. Tutkimusjoukko koostuu kehittyneistä Euroopan maista kerätystä datasta. Tutkimusjoukossa on 16 eurooppalaisen maan pörssilistatut yhtiöt, joilla on saatavilla oleva ESG-luokitus. Taloudellisen menestyksen ja yritysvastuullisuuden välistä suhdetta tutkitaan poikkileikkaustutkimuksella.

Regressiotulokset näyttävät, että yhtiön ESG-luokituksella ei ole merkittävää vaikutusta kuukausittaisiin tai vuoden 2020 keskimääräisiin ylituottoihin. Volatiliteettiin liittyvät regressiotulokset osoittavat, että korkeamman ESG-luokituksen yhtiöiden osaketuottojen volatiliteetti oli matalampi, kun kontrollimuuttujana on ainoastaan ESG-luokitus. Kuitenkin, kun regressioon lisätään muita kontrollimuuttujia, korkeamman ESG-luokituksen yhtiöiden osaketuotoilla vaikuttaa olevan muita korkeampi volatiliteetti. Muita merkittäviä tuloksia ei löydy, joten tulokset indikoivat, että yritysvastuullisuuden ja yrityksen taloudellisen menestymisen välillä ei ole yhteyttä COVID-19 pandemian ensimmäisen vuoden aikana. Yritysvastuullisuuden ja volatiliteetin välistä suhdetta tulisi kuitenkin tutkia pidemmälle, sillä tutkimustulokset tässä tutkielmassa ovat ristiriitaisia.

**AVAINSANAT:** COVID-19, Corporate Financial Performance, Cross-Sectional Study, ESG, European Evidence, Socially Responsible Investing

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## Abbreviations

| | |
|---|---|
| CAPM | Capital Asset Pricing Model |
| COVID-19 | Coronavirus Disease 2019 |
| CFP | Corporate Financial Performance |
| CSP | Corporate Social Performance |
| CSR | Corporate Social Responsibility |
| EMP | Environmental Management Practices |
| EPS | Earnings per Share |
| ES | Environmental and Social |
| ESG | Environmental, Social and Governance |
| IHR | International Health Regulations |
| nonIG | Non-Investment Grade |
| PHEIC | Public Health Emergency of International Concern |

| | |
|---|---|
| ROA | Return on Assets |
| ROC | Return on Capital |
| ROE | Return on Equity |
| SARS-CoV-2 | Severe Acute Respiratory Syndrome Coronavirus 2 |
| SRI | Socially Responsible Investment |
| VIF | Variance Inflation Factor |
| WHO | The World Health Organization |

# 1 Introduction

The first known infections of a new type of coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), were discovered in Wuhan, China, at the end of 2019. On 30 January 2020, the World Health Organization (WHO) declared that the outbreak of the virus constitutes a Public Health Emergency of International Concern (PHEIC). The WHO and International Health Regulations (IHR) define a PHEIC as "an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response" (World Health Organization, 2019). On the February 11, 2020, the WHO named the disease as "Coronavirus Disease 2019" (COVID-19). Soon after, on the 11th of March 2020, the WHO declared SARS-CoV-2 as a pandemic. Various countries set lockdowns and other restrictions to prevent the virus from spreading, but despite the acts, new cases of SARS-CoV-2 started to appear around the world.

The pandemic and its consequences led to crashes in stock markets around the world. Figure 1 shows the adjusted closing prices in 2020 of Wilshire 5000 Total Market Index which is largely used as a benchmark for the U.S. stock market. The lowest value of the stock index marked as 23rd of March with the value of 22,465.14. In comparison, the value of the index in 1st of January was 33,142.20 meaning the index dropped by 32,2% during the first 72 days of 2020. The index reached its 1st of January level again in July 2020.


**Figure 1.** Adjusted Closing Prices of Wilshire 5000 Total Market Index in 2020.

The beginning of the pandemic affected the US companies significantly through the lockdowns. The lockdowns caused a high demand for liquidity especially by BBB-rated companies, which resulted in growing their risk of being downgraded to non-investment grade (nonIG). Especially the BBB rated companies converted committed credit lines into cash and therefore the balance sheets of the banks were affected as well (Acharya & Steffen, 2020, p. 266-468).

Acharya and Steffen (2020, p. 468) speculated that growing drawdowns of credit lines and reservations for possible future credit losses might bring banks closer to the regulatory minimum capital requirement which in turn would have far-reaching effects on endangering the financial stability of banks and limiting intermediation. Kozak (2021) then studied the impact of COVID-19 pandemic on equity and performance of 141 banks in 18 Central Eastern South European countries. His study shows that the banks in the Central Eastern South European area are well capitalized, and they would have maintained the capital requirements with 12 % increase in non-performing loans. His study also shows that the resilience is higher in non-EU countries.

However, the pandemic raised concerns about contagion effect spreading through the markets. Iwanicz-Drozdowska et al. (2021) are defining contagion effect as how a negative economic shock, for example a crisis, is affecting the economy. If the contagion effect spreads, it might increase the volatility of asset prices and lead to financial crisis. Iwanicz-Drozdowska et al. studied which events are more contagious by examining over 300 major economic and non-economic events and how stock markets reacted to these events in developed and emerging countries. Virus events, such as the COVID-19 pandemic, was one of the non-economic events studied. Their study finds that the COVID-19 pandemic created market contagion that was the most widely and rapidly spreading of all events. Okorie and Lin (2021) have also studied the contagion effect caused by the COVID-19 pandemic. The examination was done by observing the stock market returns and volatilities, and the results show that COVID-19 pandemic had a significant but short-term contagion effect on the stock market when the pandemic started. The effect was greater on countries that had a larger number of confirmed COVID-19 cases.

Bénabou and Tirole (2010, p. 1) have stated that the society is demanding "individual and social responsibility as an alternative response to market and redistributive failures". However, economics today is based on the shareholder-value approach, which means that the shareholders should be controlling companies whereas the other stakeholders should be protected through governmental means, such as regulation. Therefore, market failures and inequality in income or wealth should be corrected by the state, not the citizens or companies. This statement is supported by neoclassical economics and an assumption that individuals are rational operators in the market, and their actions are driven by utility maximation (Teraji, 2018, p. 137). This conflict in views is one of the main areas studied in the literature about corporate social responsibility.

According to Navickas et al. (2021, p. 139), the COVID-19 pandemic is "one of the most significant environmental changes in the modern world, which could potentially have a

great influence on the development of corporate social responsibility". Past crises have shown that the general interest for corporate social responsibility and themes surrounding the concept are rising especially during and after negative events. For example, according to Galbreath (2012), the importance of addressing environmental, social and governance (ESG) issues has grown especially since the financial crisis in 2008. The crisis showed that the world is now more connected than ever, and globalization is not only having its effects on business and markets, but also having social and environmental consequences.

## 1.1 Purpose of the Study

Some of previous studies have shown positive association between ESG and financial performance, whereas others show a negative or a neutral relationship. However, Albuquerque et al. (2020, p. 594) argue that the causal link between ESG and financial performance is uncertain, since it has not been studied enough if the positive association results from companies with strong financial performance having better premises to engage in ESG activities, or if the ESG activities performed by companies are adding value to the company shareholders. The COVID-19 crisis created an opportunity to examine the causality between ESG and firm value with an event study for a couple of reasons. Firstly, as Albuquerque et al. argue, the crisis caused an unparalleled shock since it led to lockdowns which caused an unexpected shock to global stock markets, and ultimately led to stock market crash. Furthermore, the shock was not originated out of economic conditions but public health concerns. The shock was unexpected and spread rapidly, and therefore companies had limited time and capacity to prepare and respond to the crisis. Consequently, the reactions in the stock market responded mainly to the preexisting conditions of companies to tolerate the crisis.

The purpose of this study is to investigate whether corporate social responsibility has helped companies to perform better during the COVID-19 pandemic in the European stock market. More specifically, publicly listed European companies and their CSR/ESG

scores are examined pre 2020 to form an understanding of what the scores were before the pandemic started in the first quarter of 2020. The financial performance is measured by accounting performance and stock return performance during the year 2020, and cross-sectional data regressions are conducted to examine whether there lies a relationship between the financial performance and the CSR/ESG score of a company. This study is going to conduct to the existing literature by examining the impacts of the pandemic in the European stock market.

## 1.2 Hypothesis

Previous studies about the relationship between CSR and stock performance are presented more closely in the chapter four. However, the results vary between studies, some studies showing a positive relationship and other studies showing a negative or a neutral relationship. Since the previous studies about the relationship between Corporate Social Responsibility and stock performance are conflicted, the hypothesis in this thesis is non-directional. The purpose of this study is to examine whether there lies a relationship between the CSR/ESG rating of a company and its financial performance during the year 2020 when the COVID-19 pandemic started. Therefore, the hypothesis is formed as follows:

H: The CSR/ESG rating of a company is associated with the company performance during a negative market shock.

## 1.3 Structure of the Study

The thesis is structured as follows: theoretical background is divided to chapters two and three. In the second chapter the history and concept of Corporate Social Responsibility is discussed in detail. The third chapter includes theories behind corporate finan-

cial performance and stock pricing. The purpose of second and third chapter is to form an understanding related to these themes so that the empirical part can be conducted.

The fourth chapter is the literature review, in which the previous studies about the relationship between Corporate Social Responsibility, negative market shocks and company performance are presented. The fifth chapter presents the data and methodology used in this thesis, and the sixth chapter consists of the empirical analysis, in which the results of the study are discussed. Finally, the seventh chapter will conclude the paper.

# 2 Corporate Social Responsibility

According to Russo and Perrini (2010, p. 207), a generally accepted theoretical framework related to corporate social responsibility is still not identified even though CSR-related issues have been in the center of interest of researchers for past decades. Therefore, this chapter will first present the different definitions of CSR that has been used in the literature, and how the history of the concept has evolved. Then, the main theories of CSR are presented each in their own subchapters.

## 2.1 Definition and History

The definition of Corporate Social Responsibility (CSR) is not fully unambiguous even though the term has been used in the literature for decades. The concept of CSR has evolved throughout the years, and definitions have varied from decade to decade. In addition, the importance of CSR has been debated over the years, and while the definitions have evolved, so has the general opinion about CSR's importance and role in business making.

According to Carroll (1999, p. 269), the starting point of modern period of literature on CSR can be marked as Howard R. Bowen's landmark book Social Responsibilities of the Businessman in 1953. Bowen (1953, p. 6) defined CSR as business leaders pursuing policies, making decisions, and following actions which are desirable in terms of the purposes and values of the society. According to Bowen (1953, pp. 4-5), social responsibility must be considered by business leaders if the freedom of choice is wanted to be allowed in the future, since it benefits the economic system of free enterprises. However, Bowen (pp. 107-108) stated that one of the main issues of CSR is that it is not always the most cost-efficient way of leading a corporation. When the goal of a company is to create goods with minimal cost, acting socially responsible might increase the costs of production and lead to losing in the competition unless all the operators in the market are equally as concerned about CSR. Bowen (p. 107) argued that only the

companies that have a monopoly in a certain market can engage in socially responsible activities.

After Bowen, Levitt (1958, p. 44) argued that social responsibility is changing the economy to worse, and it is being an attack against capitalism, because embracing social responsibility would centralize power to corporations and harshen social discipline. Levitt believed that social responsibility would lead corporations to turn into "twentieth-century equivalent of the medieval Church" (Levitt, 1958, p. 44), if companies were required to take care of CSR-related issues such as employee welfare. According to Levitt (1958, p. 48), the only rational reason to pursue corporate social responsibility is if it is making economic sense, because the main goal of a corporation should be maximizing its profits. Levitt believed that the social responsibility should be taken care of by the government and not the corporations.

Most of the writings from 1950's and 1960's are considering CSR to be an unnecessary expense to a company, and not a concept that creates value. Davis (1960, p. 70) called social responsibility as a "nebulous idea" and defined it as "businessmen's decisions and actions taken for reasons at least partially beyond the firm's direct economic or technical interest". According to Davis, corporate social responsibility has two sides; companies are responsible for the public welfare because businesses are creating economic developments, but at the same time they are obligated to cherish and develop morals that people value. Frederick (1960, p. 60) said that social responsibility is "a public posture toward society's economic and human resources and a willingness to see that those resources are utilized for broad social ends and not simply for the narrowly circumscribed interests of private persons and firms". Friedman (1962, p. 133) argued that the only social responsibility of a company and the people who are running the company is to use resources so that the company is creating maximum profits for its stockholders, and government should be responsible for social responsibility.

In his column for The New York Times, Friedman (1970) argues that the corporate executive is selected by the stockholders because the purpose of the executives is to create profit for the stockholders while the purpose of corporations is maximizing its profit, and therefore executives spending the profits for social matters are against these purposes. According to Friedman, the allocation of resources should be driven by the market mechanisms and not political mechanisms, and therefore social responsibility is a threat to capitalism.

Sethi (1975, pp. 58-59) claimed that corporate social responsibility has lost its meaning, because it has been used in so many different contexts, and therefore he demanded a stable classification and stable meaning for the term. However, he remarked that a specific action might be socially responsible in one context, but not in another – "the framework of time, environment and the nature of the parties involved" should always be considered when contemplating whether a certain action is socially responsible or not. According to Sethi, corporate social responsibility is "bringing corporate behavior up to a level where it is congruent with the prevailing social norms, values, and expectations of performance" (Sethi, 1975, p. 60).

Overall, the issue whether corporations should have obligations to other groups as to its stockholders has been debated over the decades. Jones (1980, pp. 59-60) used similar terminology than Davis in the 1960's when defining corporate social responsibility; he defined corporate social responsibility as an impression that companies have obligations that are not defined by its stockholders or set by laws. However, for example Wood (1991, p. 695) has stated that corporate social responsibility is based on the concept that business and society are not separate entities but are intertwined, and therefore society always has expectations and requirements for appropriate business performance and outcomes. Bondy et al. (2012, p. 281) are supporting this idea by saying that corporations are not only having financial purposes, but they also need to consider two other necessities, which are social and environmental purposes. All these three aspects are as equal and necessary in business.

Corporate social responsibility can mean different things to different people or groups, and therefore van Marrewijk (2003, p. 96) argues that the definition can be biased towards the interests of each person or group. Furthermore, Carroll (1991, p. 40) has stated that CSR should be defined so that every business responsibility or service line of a company is considered. For example, CSR might mean different things for company's marketing team and finance team so that it fits their purposes, and therefore the definition of CSR might vary not only between companies but also between different service lines of a certain company.

In general, van Marrewijk (p. 102) defines CSR as "company activities demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders" and Carroll (1979, p. 500) has stated that "the social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point of time". With this definition Carroll wanted to especially emphasize that social responsibility and economic perspective are not separate from each other but are intertwined.

Carroll (1991, pp. 40-42) has presented a pyramid that contains the four components he suggests that constitutes the corporate social responsibility: economic, legal, ethical, and philanthropic. This model is known as Carroll's CSR Pyramid, and it is presented in the Figure 2 below. In this model, the economic responsibilities form the base of the pyramid because the profitability of a company is the foundation upon which all the other elements are based on. Economic responsibilities include maximizing the profits, maintaining competitiveness, and operating on a high level of efficiency. The second layer of the pyramid are legal responsibilities, which include obeying laws and regulations, fulfilling legal obligations, and providing goods and services that meet the legal requirements. The third layer of the pyramid constitutes of ethical component. It takes into consideration the importance of social morals and ethical norms, and how corporate goals should not be achieved by compromising the ethical norms of a society. The

ethical component emphasizes the importance of recognizing and respecting the ethical and moral norms adopted by the society. Finally, the top layer of the pyramid is formed by the philanthropic component. Philanthropic point-of-view highlights the importance of voluntary work and charitable activities, providing assistance to educational institutions and visual and performing arts, and volunteering in projects that are increasing the quality of peoples lives. When a company is performing corporate social responsibility, it is taking into consideration all these layers of the pyramid.

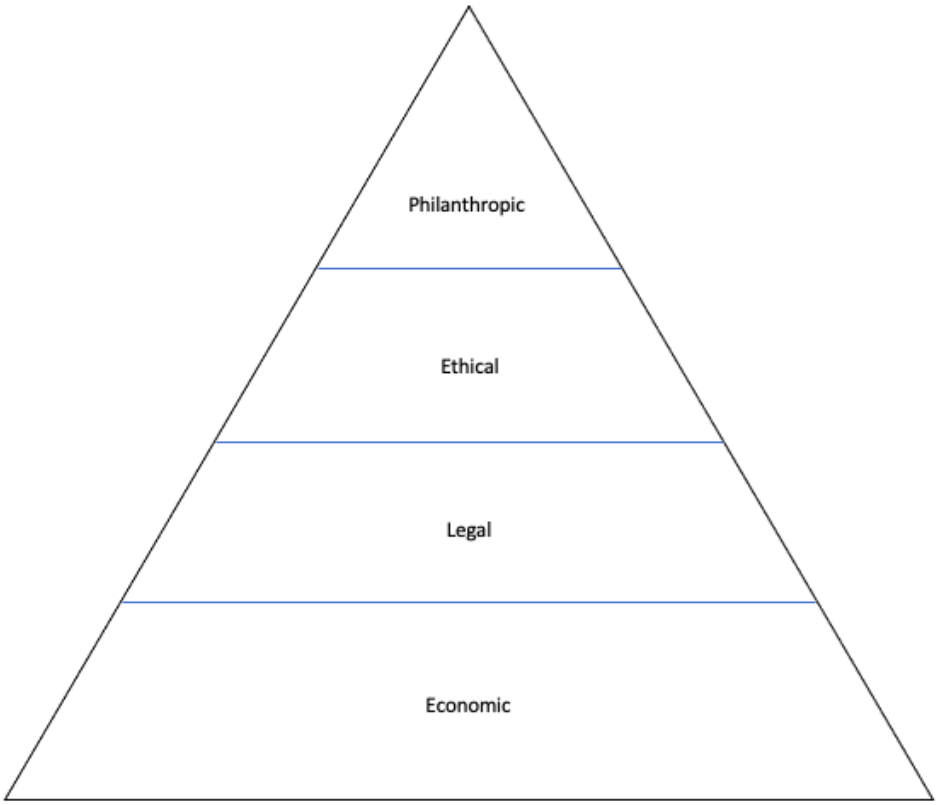


**Figure 2.** Carroll's CSR Pyramid (adapted from "The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders," by A. B. Carroll, 1991, *Business Horizons, 34*, p. 39-48. Copyright 1991 by Business Horizons).

Sheehy (2015, pp. 625-626) says that the issues related to CSR are complex and complicated and therefore stating a clear definition for the term is not possible. However, Sheehy (p. 633) argues that defining CSR is important because legal and economic de-

cisions related to CSR-related issues require a definition so that these decisions can be made, defended, and articulated. Finally, Sheehy (p. 638) defines CSR as “a type of international private law” and “a socio-political movement which generates private self-regulatory initiatives, incorporating public and private international law norms seeking to ameliorate and mitigate the social harms of and to promote public good by industrial organizations”.

United Nations (2021) describes CSR as a way of managing a company while considering social and environmental issues. Social and environmental issues are present in the everyday business operations, but also with encounters with stakeholders, and managing these concepts is classified as corporate social responsibility (United Nations, 2021). The European Commission has stated that CSR should be company led, because it is the responsibility companies have for their impact on society. According to the European Commission, socially responsible companies are “integrating social, environmental, ethical, consumer, and human rights concerns into their business strategy and operations, and following the law” (The European Commission, 2022).

The definitions of CSR by the United Nations and the European Commission are taking into consideration the same components as Carroll in his CSR Pyramid. Even though CSR is still lacking a universal definition and it can mean different things to different people depending on for example their own background or the service line they are working at, the components used in Carroll’s CSR Pyramid are usually factors that are considered today when corporate social responsibility is discussed. Therefore, the definition of corporate social responsibility used in this thesis is the definition presented in Carroll’s CSR Pyramid.

There are not only multiple different definitions of CSR, but also various approaches to the subject have been published. Garriga and Melé (2004, p. 51) have classified CSR-related theories in four groups, which are instrumental theories, political theories, integrative theories, and ethical theories. Instrumental theories see corporations as an

instrument for creating wealth, and whenever social activities are pursued, they are only a means to achieve economic results. Political theories see corporations as powerful operators in society, and therefore companies should be responsible for using their power in the political arena. Integrative theories are focused on the perspective that corporations are fulfilling the satisfaction of social demands, and ethical theories are based on different ethical responsibilities that corporations are believed to have to society. Furthermore, Garriga and Melé argue that each theory has four dimensions, which are related to profits, political performance, social demands, and ethical values. In the following subchapters, the most popular and important theories regarding CSR are presented in more detail.

## 2.2 Corporate Social Performance

The concept of Corporate Social Performance (CSP) was first presented by Archie B. Carroll in 1979. However, like CSR, the definition of CSP is still not fully unambiguous. Wood (2010, p. 50) describes CSP as "a set of descriptive categorizations of business activity, focusing on the impacts and outcomes for society, stakeholders and the firm itself." Ioannou and Serafeim (2012, p. 835) define that "CSP constitutes the social performance outcome of a firm's undertaking of CSR activities."

Carroll created a corporate social performance model, which answers to three core questions. The first question asks, what is the basic definition of social responsibility, and what should be included in social responsibility. The second question asks, what are the areas that the company is socially responsible for, or what issues should the company address. The third question asks, what is the company's philosophy of response to social responsibility (Carroll, 1979, pp. 497-499).

According to Carroll (1979, p. 500), businesses have four types of social responsibilities, which should be met simultaneously. These four social responsibilities give the answer to the first question of the model. The first responsibility is economic responsibility,

which means that companies have responsibilities to produce goods and services for the society, and to generate profits. This first responsibility is the fundamental assumption that all the other business roles are based on. The second responsibility is legal responsibility, which means that a company must operate in the legal framework of a society. The third responsibility is ethical responsibility, which means that companies must not only obey laws, but also behaviors and activities that are expected from the society. The fourth responsibility is discretionary responsibility. Society does not have a clear framework for discretionary responsibilities, which means that companies must leave them for their own consideration and judgment. They are not required by law, and if a company doesn't participate in discretionary responsibilities, it isn't considered to be unethical. An example of discretionary responsibilities could be providing working parents assistance in day-care.

The second question of the model addresses the social issues that a company has. In Carroll's model, this question is divided to six different categories, which are consumerism, environment, discrimination, product safety, occupational safety, and shareholders (Carroll, 1979, p. 503). However, Carroll notes (1979, p. 501) that social issues change over time and might differ for different companies and industries. Therefore, the issues mentioned in the model are only examples.

The third question considers the philosophy of responsiveness. The range of social responsiveness is from no response to a proactive response, meaning that company either does nothing or does much regarding social responsibility (Carroll, 1979, p. 501). In his model, Carroll (1979, pp. 502-502) uses four categories to measure social responsiveness, which are reaction, defense, accommodation, and proaction.

According to Carroll (1979, p. 502-503), the corporate social performance model has three separate issues, and when analyzing social performance, these three aspects form the most important questions that must be addressed. Carroll (1979, p. 503) states that "the model integrates economic concerns into a social performance frame-

work". In Figure 3, Carroll's Corporate Social Performance Model is presented as an illustration.

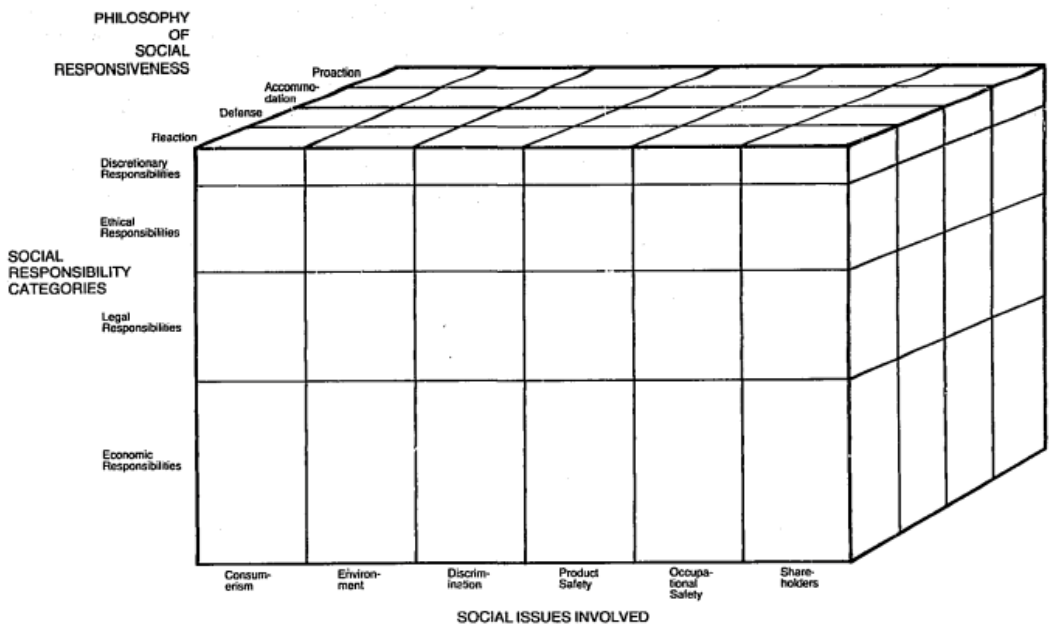


**Figure 3.** Corporate Social Performance Model (Carroll, 1979).

Wartick and Cochran (1985) extended Carroll's (1979) CSP model. According to Wartick and Cochran (1985, p. 767), the principles of social responsibility, the process of social responsiveness, and the policies of issues management are the aspects that the corporate social involvement rests on. In their model, corporate social responsibilities include economic, legal, ethical, and discretionary aspects, and it has philosophical orientation. Corporate social responsiveness includes reactive, defensive, accommodative, and proactive aspects, and it has institutional orientation. Lastly, social issues management include issues identification, issues analysis, and response development, and has organizational orientation.

Furthermore, Wood (1991, p. 693) defines CSP as "a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relation-

ships". Using this definition, Wood reconstructed the CSP model. Wood's model (1991, p. 694) has three categories, called principles of corporate social responsibility, processes of corporate social responsiveness, and outcomes of corporate behavior. Each category is divided to three sub-categories. Principles of corporate social responsibility is divided to institutional principle, or legitimacy, organizational principle, or public responsibility, and individual principle, or managerial discretion. Processes of corporate social responsiveness is divided to environmental assessment, stakeholder management, and issues management. Lastly, the category of outcomes of corporate behavior is divided to social impacts, social programs, and social policies. Wood's CSP model, which she presented again in her other study (2010, p. 54) is presented in the Figure 4 below.

| PRINCIPLES OF SOCIAL RESPONSIBILITY | --> | PROCESSES OF SOCIAL RESPONSIVENESS | --> | OUTCOMES & IMPACTS OF PERFORMANCE |
|---|---|---|---|---|
| **Legitimacy**: businesses that abuse the power society grants them will lose that power. | | **Environmental Scanning:** gather the information needed to understand and analyze the firm's social, political, legal, and ethical environments. | | **Effects on people and organizations.** |
| **Public Responsibility**: Businesses are responsible for outcomes related to their primary and secondary areas of involvement with society. | | **Stakeholder Management**: active and constructive engagement in relationships with stakeholders. | | **Effects on the natural and physical environments.** |
| **Managerial Discretion**: Managers and other employees are moral actors and have a duty to exercise discretion toward socially responsible, ethical outcomes. | | **Issues/Public Affairs Management**: a set of processes that allow a company to identify, analyze, and act on the social or political issues that may affect it significantly. | | **Effects on social systems and institutions.** |

**Figure 4.** Wood's CSP Model (Wood, 2010).

To conclude the chapter, CSP is a model that can be used to analyze and plan a company strategy regarding to CSR. Like CSR, the definitions of CSP have varied throughout the years, and the models have evolved as well.

In the next two subchapters, the shareholder theory and the stakeholder theory are presented. These theories are the most important theories regarding CSR, and most of the literature concerning CSR is based on either of these theories.

## 2.3 The Shareholder Theory

The shareholder theory is often linked to Friedman's (1962) book Capitalism and Freedom, in which he states that social responsibility of a corporation is not in the interest of stockholders, and therefore it is against the concept of a free economy. Friedman argues that in a free economy the only social responsibility of a business should be "to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition, without deception or fraud" (Friedman, 1962, p. 133). Other aspects of social responsibility should be controlled by laws and regulation. Furthermore, if a corporation is giving its funds to for example charity or to support education, it is reducing the amount that can be returned to the stockholders. According to the shareholder theory, shareholders should be able to decide themselves what they want to do with the profits; if they want to support charity, they can do it as private persons and not through the corporation. In short, the fundamental thought of shareholder theory is that the only responsibility a corporation has is maximizing its profits for the shareholders.

In his article for the New York Times, Friedman (1970) argued that only people can have responsibilities, not businesses. Business leaders are in charge of a business that shareholders own, and therefore they have direct responsibility to the shareholders. Their responsibility is to maximize shareholder's profits, and if they are spending the corporation's money on social responsibilities, such as not raising the price of their product to prevent inflation, they are using money that belongs to shareholders. According to Friedman, "the whole justification for permitting the corporate executive to be selected by the stockholders is that the executive is an agent serving the interests of

his principal", and if the corporate executive spends profits to social purposes, this whole justification is no longer valid.

Brown, Helland and Smith (2006, pp. 855-857) studied corporate philanthropy and agree with Friedman's views. According to them, actions towards corporate social responsibility can improve the reputation of a corporate manager and therefore those actions are done with ulterior motives. On that account, spending on charity is an agency cost, unless the cost is offset by reduced compensation. This altruistic behavior causes an opportunity loss for the shareholders. However, Hillman and Keim (2001) studied CSR and management and found that when management is focusing on creating value for stakeholders, it can also create shareholder value and therefore the results of these two studies are conflicted.

In addition, for example Duska (1997, p. 1401) criticizes Friedman's way of thinking by arguing that the motive and purpose of a corporation should be separated. According to Duska, the purpose of something can be clarified by asking the question "Why?", but this question has at least two different answers depending on who is answering the question. One might serve an explanation for the motives behind the business, whereas the other might want to highlight the purpose that "legitimates business as a human activity" (Duska, 1997, p. 1401). Duska (1997, p. 1407) argues that "—if we say that the purpose of business is to provide goods and services, while the motive is making a profit, then the responsibility of the manager or agent of the business is not simply to pursue profits, but to pursue them regulated by the demands of the public interest." Furthermore, the shareholder theory doesn't consider personal or societal values of shareholders. The shareholder theory is based on the assumption of maximizing profits, but for example Bollen (2007, p. 685) argues that an investor might have a multi-attribute utility function which considers additional aspects or values in addition to the standard risk-reward optimization.

The shareholder theory can be classified as an instrumental theory, since it sees CSR only as an instrument to achieve wealth creation (Garriga & Melé, 2004, p. 53). The shareholder theory has faced a lot of criticism especially from the 1990s onwards. One of the main theories created to challenge the shareholder theory is called the stakeholder theory, and it is discussed in more detail in the following subchapter.

## 2.4 The Stakeholder Theory

The stakeholder theory can be seen as a criticizing movement against the shareholder theory because multiple concepts have stated that corporations don't only have direct responsibilities to their shareholders, but also to other stakeholders as well, such as their employees, suppliers, and customers (Mansell, 2013, p. 583). Miles (2017, p. 437) argues that the stakeholder theory is not a single theory more than a combination of miscellaneous statements emerged from business ethics, corporate governance, finance, and strategic management. However, the stakeholder theory was first mentioned by Edward Freeman in his book Strategic Management: A Stakeholder Approach, and therefore Freeman is oftentimes considered to be the creator of the concept.

Freeman (1984, pp. 37-40) argues that modern companies are more complex than corporations used to be, and therefore for example the shareholder theory is too simplified for the modern world. In the past, companies were simple family-dominated businesses that bought a material from their supplier, converted it into a product, and then sold it to the customers. However, due to for example globalization and new technologies, the world where companies are working at is a lot more complex and multi-level than before. Therefore, companies have shifted from "the production view of the firm" to "managerial view", which means that ownership has become more dispersed, as not only stockholders are financing modern corporations, but also banks and other institutions are financing them as well. In addition, company leaders don't only have to satisfy the owners, but also company's employees and their unions, suppliers, and customers. According to Freeman (1984, p. 43), the world needs new concepts that rebuild

people's way of seeing the world, so that present and future changes can be considered.

Freeman (1984, pp. 88-90) says that the stakeholder theory considers all the groups and individuals that play a role in affecting or are affected by the achievements of organizational purpose. In addition, all the groups can be broken down to multiple smaller categories if it is useful. For example, the shareholders of a company might be its employees, owners, suppliers, customers, media, environmentalists, and competitors. According to the stakeholder theory, all these stakeholders should be considered equally when doing business. Freeman (2010, p. 7) argues that the basic idea of capitalism is that over a long period of time amongst shareholders all can win, and therefore the perspective that one specific group should always get priority is inconsistent.

The stakeholder theory is addressing two key issues: what is the purpose of a company, and what responsibility does management have to stakeholders. It rejects the separation thesis, which assumes that ethics and economics are separated. Instead, the stakeholder theory assumes that values are necessary in the business-making (Freeman, Wicks & Parmar, 2004, p. 364). Furthermore, a corporation can be seen as a set of contracts among stakeholders, and the key vision of stakeholder theory is that the stakeholders have joint interests. The stakeholder interests should be seen as joint rather than opposed, and therefore trading off one versus another should not be done. When using this "no trade-off method", even stakeholders that are difficult to please, such as critics, can be sources of value creation (Freeman, 2010, p. 8).

Freeman (2010, p. 9) argues that "the primary responsibility of the executive is to create as much value as possible for stakeholders." If the interests of stakeholders are conflicted, the executives must resolve these conflicts. However, if trade-offs are necessary due to for example time pressure, the executives should consider how to improve the trade-offs for all participants.

According to Donaldson and Preston (1995, pp. 70-72) the stakeholder theory can be separated to three different approaches: descriptive, instrumental, and normative. The descriptive approach describes and explains characteristics and behaviors of corporations. The instrumental approach is using descriptive data to identify the relationship between stakeholder management and achievements of corporate objectives, such as profitability. Lastly, normative approach is used to identify moral and philosophical guidelines for corporations.

To conclude the main difference between the shareholder theory and the stakeholder theory, the shareholder theory can be seen as an economic theory, whereas the stakeholder theory is more of a management theory. The shareholder theory is based on assumptions used in the economics, such as utility maximation, whereas the stakeholder theory is considering more moving parts to the equation. Furthermore, using the breakdown of CSR theories by Garriga and Melé (2004, pp. 53-60), the shareholder theory can be classified as an instrumental theory, whereas the stakeholder theory can be classified as an integrative theory or as an ethical theory depending on the viewpoint. Ethical theories are focused on the ethical requirements between businesses and society, whereas integrative theories contemplate how businesses are integrating social demands. According to the integrative theories, the existence, continuity, and growth of a business depends on society, and therefore social demands must be considered.

# 3 Corporate Financial Performance and Firm Value

In this chapter, the concept of corporate financial performance (CFP) and company valuation are presented more closely. The first subchapter focuses on CFP, and the second subchapter focuses on valuation. This chapter provides theoretical background for measurements that are used in the empirical part of this thesis.

## 3.1 Corporate Financial Performance

According to Kaplan and Norton (1992, p. 77), companies have financial goals that usually are related to profitability, growth, and shareholder value. The company performance towards these financial goals is measured by financial performance measurements. Multiple different accounting measures have been generated to help measure the CFP. For example, the return on capital (ROC), the return on equity (ROE), and the return on assets (ROA) are book rates of return. CFP can also be measured as operating performance. Operating performance ratios are for example asset turnover ratio and operating performance margin. Furthermore, CFP can also be measured as leverage and liquidity. However, since all these ratios are based on accounting information, the ratios do not include expectations about future, which are included in the stock prices (Brealey, Myers & Allen, 2020, p. 751-752).

However, Rodgers, Choy, and Guiral (2013) argue that the long-term company performance is related to two main themes: financial performance measures and investors' observations of a company's efforts related to CSR and its capability to invest in innovation. Therefore, the CFP consists of both accounting-based measures, such as profitability, leverage, or liquidity, but also its "ability to increase or maintain its CFP in the future" (Rodgers et al., 2013, p. 610).

## 3.2 Firm Value

Firm value can be measured by multiple methods. Firm value metrics indicate the overall value and performance of a company. A few of these methods are presented in this subchapter more closely.

A company can be valued by the market value and by the book value. The market value of a company, also known as the market capitalization, is calculated by multiplying the company's current share price by its outstanding shares, whereas the book value of a company is the assets shown on the company balance sheet (Ross, Westerfield & Jordan, 2003, p. 27). Inflation is not considered in the book value of a company. Book value consists of historical costs of assets that the company owns, and usually also exclude intangible assets, such as patents and trademarks that cannot be priced unequivocally (Brealey, Myers & Allen, 2020, p. 80).

Tobin's Q is another way of measuring firm value. Tobin's Q, or the Q ratio, is a model that was presented by James Tobin in 1969, and it can be used to estimate whether a company or a market is undervalued or overvalued. It measures the relation between company assets and its market value. However, despite James Tobin being the person who made the Q ratio popular to the public, it was first created by an economist Nicholas Kaldor in 1966. Kaldor (1966, p. 309) argued that neoclassical economics is based on assumptions, such as the profit maximization under conditions of perfect competition, and that capital is fully adaptable, and the capital-labor ratio, which measures the capital intensity of a company, is identical among different industries. Kaldor remarked that basic assumptions in economics about market behavior, profit maximization and universal perfect competition are necessary to draw consistent conclusions about the market and economy, but that assertions about reality cannot be derived from these assumptions.

Tobin (1969, p. 29) has stated that aggregate demand is affected by financial policies and events when the valuations of physical assets relative to their replacement costs are changed. Exogenous events and monetary policies can cause these changes.

In their paper, Tobin and Brainard (1976, pp. 1-2) describe the Q ratio as “the ratio between two valuations of the same physical asset. One, the numerator, is the market valuation: the going price in the market for exchanging existing assets. The other, the denominator, is the replacement or reproduction cost: the price in the market for newly produced commodities”.

# 4 Literature Review

This chapter focuses on previous studies and literature published regarding corporate social responsibility and its impact on financial performance. The chapter is divided to four subchapters so that the first three subchapters are focused on the relationship between CSR and financial performance from three different perspectives: neutral relationship, negative relationship, and positive relationship. The fourth subchapter is focused on literature around previous crises and CSR.

## 4.1 Neutral Relationship Between CSR and Financial Performance

Previous research has found positive, negative, and neutral relationship between CSR and financial performance. Surroca, Tribó and Waddock (2010) argue that the variety of results is due to the aspect that the mediating effects of intangible assets are not accounted in the studies. Their results show that CSR and financial performance are not linked directly, but intangible assets of a company have a mediating effect in which the relationship between CSR and financial performance is relied on. This subchapter presents studies that have found a neutral relationship between CSR and financial performance.

Ullmann (1985) argues that a lack of theory, vague definition of key terms around the topic, and shortcomings in the empirical data bases that are available are causing inconsistent findings in studies around the topic. Furthermore, McWilliams and Siegel (2000, p. 603) suggest that inconsistent empirical analysis might cause the inconsistency of reported relationship between CSR and financial performance. Number of studies use regression analysis as a tool to estimate the effect of CSR on corporate performance. McWilliams and Siegel argue that the modelling is inaccurate because investment in R&D is hardly controlled in these models, even though it is an important measurement factor of company performance. In addition, Aras, Aybars, and Kutlu (2010, p. 230) argue that studies and results about the relationship between CSR and

financial performance are affected by the traditional assumption that CSR activities and financial performance are being deleterious to each other. Due to the different methodologies between studies, and different approaches to the matter, the results around the topic vary.

In 1979, Abbott and Monsen used self-reported disclosure as a method of measuring corporate social involvement. With a content analysis of the annual reports of companies listed in the Fortune 500, they measured the changes of social involvement over time, and how the corporate social responsibility effects the corporate profitability. Their results do not show a link between corporate social activities and corporate performance in any direction.

Aupperle, Carroll and Hatfield (1985) used forced choice method for company CEOs to examine the relationship between corporate social responsibility and company profitability. Their results indicate that corporate social responsibility has no impact on long term company profitability, with or without an adjustment for risk. Aras et al. (2010) got similar results in their study. They studied the relationship between CSR and company performance in companies that were listed in the Istanbul Stock Exchange between years 2005-2007. They found no significant relationship between CSR and company profitability. Furthermore, Mahoney and Roberts (2007) reached a similar result in their study, in which they examined the relationship between CSR, financial performance and institutional ownership in publicly held Canadian companies. However, their study proves a significant relationship between environmental and international company activities and financial performance. Also, their study found a significant relationship between the number of institutions investing in a company stock and the company's CSR score. Likewise, the relationship between corporate financial performance and financial performance in publicly held Canadian companies was studied by Makni and Francoeur (2009) as well. They studied the causal relationship between corporate social performance and financial performance on 179 listed Canadian companies. They used corporate social performance measures from years 2004 and 2005

provided by Canadian Social Investment Database. Their findings were partly in line with the results of Mahoney and Roberts; they did not find significant relationship between CSR and financial performance. However, their findings suggest that return on assets, return on equity, and market returns measures were affected negatively by CSR. This finding supports the hypothesis that companies with higher socially responsible activities experience lower profits, and their shareholder wealth is reduced, which limits socially responsible investments.

A concept closely related to CSR is investing in socially responsible investments (SRI). A great amount of CSR-related literature is focused on SRI and especially the performance of SRI portfolios and funds. However, the differences between SRI investing strategies might impact the performance of an SRI fund or portfolio. Investing techniques related to SRI are for example positive and negative screening. Positive screening focuses on stocks that perform well with for example environmental, social and governance aspects, and place little or no weight on stocks that perform poorly on these areas. Negative screening means that investments which perform weakly on these aspects are restricted (Nofsinger and Varma, 2014, p. 182). The relationship between CSR and investing has been studied a lot. For example, Statman (2006) studied CSR and company profitability from the SRI point of view by comparing the returns of S&P 500 Index and four socially responsible indexes. The list of companies in the socially responsible indexes and in the S&P 500 Index largely overlapped, but in general the returns of socially responsible indexes exceeded returns of the S&P 500 Index. However, the returns were not statistically significant and therefore the study does not prove a significant relationship between corporate social responsibility and company performance. In addition, Statman and Glushkov (2009) studied SRI by comparing returns of socially responsible stocks and conventional stocks during the period of 1992-2007. Their results show a neutral relationship between CSR and corporate performance as well. Similar results are confirmed by Revelli and Viviani (2015) in their meta-analysis of 85 studies and 190 experiments; their study suggests that SRI is neither a weakness nor a strength compared to investing in conventional investments.

Albuquerque et al. (2020, p. 596) studied the relationship between companies' ES ratings and financial performance during the first quarter of COVID-19 pandemic. Their study shows that before the negative market shock due to COVID-19 hit on March 2020, the difference of returns between high-ES firms and low-ES firms was not significant. Therefore, their findings suggest that during normal times corporate social responsibility does not add extra value for a company.

## 4.2 Negative Relationship Between CSR and Financial Performance

Preston and O'Bannon (1997) analyzed the relationship between CSR and financial performance with a data sample of 67 large U.S. companies during the period of 1982-1992. The hypotheses in the study concerned trade-off, managerial opportunism, and negative synergy. They computed 270 correlations but did not get any negative results that were significant and therefore concluded that social and financial performance have a positive association in the large U.S. companies. However, despite the findings of Preston and O'Bannon, and other studies presented in the next subchapter that confirm a positive relationship between CSR and financial performance, some studies show a negative relationship between the matters. These studies are presented more in depth in this subchapter.

Vance (1975) studied the relationship between CSR and financial performance by examining the percent change in price per share of 26 U.S. companies in 1974-1975. The companies had two social responsibility ratings, both based on surveys. The first rating was generated from a survey in which 86 corporate managers rated 45 major company's social responsibility performance, and the second rating was generated from a survey in which 300 business student graduates rated the companies. The stock value was lower the higher the social responsibility rating was, and therefore Vance's results show a negative relationship between CSR and financial performance. However, his

study only considers the change in share prices as a measurement, and therefore the result should be approached critically.

Later, Brammer, Brooks and Pavelin (2006) studied the relationship between CSR and stock returns more closely. They used social performance scores from the year 2002 offered by The Ethical Investment Research Service, and their data consisted of listed UK companies. Their study shows that companies with higher social performance scores achieved lower returns, and in turn the companies with lower scores outperformed the market. However, they note that different aspects of socially responsible behavior should be studied separately, since some of the aspects affected the results more than the others. For example, environmental and community indicators affected the results negatively, whereas employment indicator had a weakly positive impact on stock returns. After the study by Later et al. (2006), Fisher-Vanden and Thorburn (2011) studied the cumulative abnormal stock returns for a sample of companies participating in either U.S. Environmental Protection Agency's (EPA) Climate Leaders program or Ceres. The Climate Leaders program is targeting reductions in greenhouse gas emissions, and Ceres has general environmental commitments. Their findings show that the stock price of a company declined when the company participated in the Climate Leaders program, suggesting that the investors assume greenhouse gas emission reduction cause significant costs for the company, leading to a decline in shareholder wealth. However, the stock prices of companies participating in Ceres were not affected significantly. Fisher-Vanden and Thorburn argue the reason being that Ceres focuses on general principles in all environmental areas, whereas Climate Leaders have specific standards related to climate change, and therefore it is harder to assess whether the Ceres membership is affecting the cost structure of the company.

Furthermore, López, Garcia and Rodriguez (2007) studied the effect of CSR in European companies in the period 1998-2004. Their data sample consisted of two groups of 55 companies, the other group included in the Dow Jones Sustainability Index and the other in the Dow Jones Global Index. The companies included in the Dow Jones Sus-

tainability Index must fulfill its requirements in implementing CSR practices in the company activities, whereas companies included in the Dow Jones Global Index do not have requirements related to CSR. Their results show that when sustainability practices are first applied in a company, the performance indicators are affected negatively. The negative effect continues throughout the first few years.

Some studies related to SRI have also found a negative relationship between CSR and financial performance. Renneboog, Horst, and Zhang (2008) found that SRI funds around the world generally underperform their domestic benchmarks by -2.2 % to -6.5 %. However, their findings also suggest that there is not statistical difference between SRI funds and conventional funds in risk-adjusted returns. Furthermore, Galema, Plantinga, and Scholtens (2008) examined the returns of SRI by comparing the excess returns of portfolios they formed. The portfolios were based on stocks tracked by KLD Research and Analytics, Inc. during the period of 1992-2006. The excess returns were measured by Carhart four-factor model. Their results show that SRI lowers the book-to-market ratio. Hence, the motives behind investing in SRI might be related to other aspects than reaching for superior financial performance. For example, Riedl and Smeets (2017) found in their study that social preferences and social signaling present a bigger role in SRI than financial motives, and therefore investors investing in SRI are ready to ignore the financial performance of an investment to invest based on their social preferences.

## 4.3 Positive Relationship Between CSR and Financial Performance

Various studies prove that CSR-related actions improve corporate financial performance. CSR-related actions have also been proven to enhance a company productivity, which in turn affects financial performance positively (Hasan et al., 2018). This subchapter focuses on studies that have found a positive relationship between CSR and financial performance.

Cochran and Wood (1984) studied the relationship between CSR and financial performance in two time periods. The first period was from 1970 to 1974, and the sample of companies contained 39 companies in 29 industries in the U.S. The companies were compared to 386 companies in their industry control groups. The second period was from 1975 to 1979, and the sample of companies contained 36 companies in 28 industries in the U.S. The control group contained 366 companies. Financial performance was measured by accounting data. Their findings show a positive relationship between CSR and financial performance. According to the results, asset age is the most strongly correlated with the company CSR rating, showing that companies with older assets have lower CSR ratings. However, since the study was conducted with a data sample from the 1970's, it should be noted that the regulations related to for example polluting have changed and therefore the quality of assets have changed over time.

McGuire, Sundgren and Schneeweis (1988) examined the relationship between CSR and financial performance by accounting, stock-market, and risk-based measures. Furthermore, they studied the relationship between prior financial performance and CSR. Their results show that prior financial performance is closely and positively related to CSR, and that CSR is benefitting from reducing corporate risk. Later Waddock and Graves (1997) got similar results about the relationship between financial performance and CSR. Their data sample consisted of 469 companies from different industries, and their results suggest that the better the financial performance of a company is, the more CSR is improved. Furthermore, their results also suggest that improved CSR is resulting in improved financial performance. Nollet, Filis and Mitrokostas (2016) also found a positive relationship between the matters in the longer run when investments and achievements regarding CSP has been made, but on shorter term the effects of CSP to return on capital are negative. Their data consisted of companies listed in the S&P500 Index during 2007-2011.

Russo and Fouts (1997) analyzed financial performance and ESG ratings of 243 companies through the years of 1991-1992. Their results show a positive correlation between

the ESG rating and financial performance. The relationship was stronger in companies operating in growing industries. Khan, Serafeim and Yoon (2016) also found a positive relationship between a company's sustainability rating and its financial performance. More specifically, companies with higher ratings on material sustainability outperformed the companies with lower ratings on these issues.

The topic of CSR and financial performance has been studied through meta-analysis as well. Orlitzky, Schmidt and Rynes (2003) conducted a meta-analysis of 52 studies related to CSR and corporate financial performance, and their analysis suggests that actions towards CSR are likely to benefit a company. However, their study also implies that accounting-based measures rather than market-based indicators are more correlated with CSP. Furthermore, Busch and Friede (2018) conducted a second-order meta-analysis that combined 25 previous meta-analyses. Their findings are similar to Orlitzky et al. (2003), suggesting that CSP and corporate financial performance have a "highly significant, positive, robust, and bilateral" relation (Busch and Friede, 2018, p. 584). In addition, Friede, Busch and Bassen (2015) combined the findings of circa 2200 studies related to CSR and corporate financial performance. Their findings show that most of the studies found a positive relationship between CSR and financial performance.

Some studies regarding SRI have found a positive relationship between SRI and portfolio performance. Derwall, Guenster, Bauer, and Koedijk (2005) found in their study that SRI generates superior performance. They examined two equity portfolios over the period of 1995-2003 consisting of large cap companies, the other portfolio having a high eco-efficiency rating and the other having a lower rating. The portfolio with the higher rating outperformed the portfolio with the lower rating. Kempf and Osthoff (2007) formed two portfolios as well, the other portfolio having stocks with high SRI ratings and the other having stocks with lower SRI ratings. They studied the performance of the portfolios through 1992-2004 and found that buying highly SRI rated stocks and selling stocks with low SRI rating generates high abnormal returns of 8.7% per year. Furthermore, Gil-Bazo, Ruiz-Verdú and Santos (2010) studied US SRI funds

throughout years 1997-2005 and found in their study that SRI funds managed by companies that are specialized in SRI significantly outperformed their conventional counterparts. However, they also found that SRI funds managed by companies that are not specialized in SRI underperform their conventional counterparts. Therefore, the results suggest that choosing the fund management company matters in terms of profit.

Montabon, Sroufe and Narasimhan (2007) studied the relationship between environmental management practices (EMP) and financial performance. They tested the relationship between two sets of variables with multivariate regressions, the independent variables corresponding to EMPs and the dependent variables corresponding to performance measurements. Their results imply a strong positive relationship between EMPs and corporate financial performance. Furthermore, Ameer and Othman (2012) found in their study that the financial performance of a company is higher when a company emphasizes sustainability practices. Financial performance in their study was measured by return on assets, profit before taxation, and cash flow from operations.

Eccles, Ioannou and Serafeim (2014) studied whether corporate sustainability influences organizational processes and performance. Their data consisted of 180 U.S. companies, and they ranked companies as high sustainability companies and low sustainability companies based on whether the company voluntarily adopts sustainability policies. Sustainability policies studied were related to for example environment, products, and employees. Their study finds that the companies ranked as high sustainability companies have more likely established processes that are aiming on stakeholder engagement. Furthermore, the high sustainability companies are more likely to display greater measurement and disclosure of nonfinancial information and outperform the low sustainability companies in the long term both based on stock market and accounting performance. Shabbir and Wisdom (2020) got results supporting these findings in their study, in which they researched the relationship between CSR, environmental investments, and financial performance of 15 listed Nigerian manufacturing companies. They studied the internal and external environmental investments on firm's financial

performance with regression analyses and found a significant positive relationship between internal environmental investments and company performance. Internal environmental investments in the study consisted of employee benefits and staff training costs. Also, the external environmental investments and company performance was found to have a positive relationship, but not significantly.

## 4.4 Crises and CSR

Financial crises have recurred throughout history, even if the reasons of the crises have varied. The relevance of CSR during the crises has been studied a lot, but the results and the implementation of CSR in companies during a crisis-period vary. For example, Fehre and Weber (2016) found in their study that company CEO's talk less about CSR during the times of crisis and the management's interest is focused on other issues, even though various studies show a positive relationship between CSR and financial performance during crises (see e.g., Lins et al. (2017), Albuquerque et al. (2020), and Havlinova & Kukachka (2023)). This subchapter focuses on literature that has been written about financial crises and the relevance of CSR during the crises.

The financial crisis of 2008 is considered to be the most severe recession since the Great Depression in the 1930s. The crisis started from the U.S. subprime mortgage crisis in 2007 and grew into global financial crisis after a U.S. investment bank Lehman Brothers filed for bankruptcy in 2008. Chiaramonte et al. (2022) studied European banks over the period of 2005-2017 and found that banks with higher ESG score were more stable and not as exposed to issues during financial distress as banks with lower ESG score. Their results also suggest that banks that are engaging in CSR activities are making more sensible financial decisions and overall operating more responsibly. Since the financial crisis of 2008 was partly caused by the public distrust in the banking sector, these results are relevant while considering ways to prevent banking crises in the future.

Lins, Servaes and Tamayo (2017) studied the value of CSR in the financial crisis of 2008. They conducted regressions with the pre-crisis CSR ratings and stock returns during the crisis to examine whether companies entering the crisis with higher CSR ratings performed better during the crisis. Their study shows that companies with high CSR ratings had 4-7 percentage points higher stock returns in the crisis period of 2008-2009 than companies with low CSR ratings. Previous studies have shown that cash holdings and leverage of a company are the most important factors affecting the stock returns during a crisis-period, but Lins et al. found that the effect of social capital in stock returns is as important. However, the results show that CSR impacted the returns positively only during the crisis period and not before or after the crisis. This finding is supported by the results of Braune, Charosky and Hikkerova (2019), who found in their study that systematic risk and social performance have a negative relationship. Securities with high social performance gather higher profitability during crisis period. Furthermore, Havlinova and Kukacka (2023) found in their study that CSR affected companies' stock market performance significantly positively during the period of 2007-2020. Their data consisted of 486 companies from the S&P 500 Index.

According to Lins et al. (2017), the public trust in companies was greatly affected during the financial crisis of 2008. Furthermore, Guiso et al. (2008) argue that the lack of trust might affect the participation of individuals in the stock market by limiting the participation. However, when the stationary time series of stock returns is long enough, the lack of trust seems to fade away (Guiso et al., 2008, pp. 2592-2593). Regarding investing during the crisis period, Nofsinger and Varma (2014) investigated the performance of 240 US domestic equity SRI funds during the period 2000-2011, which includes both in-crisis and non-crisis periods. They argue that even though investing in SRI will most likely generate negative abnormal returns over time, SRI and ESG reduces the downside risk because they hold up better during the crisis period.

Another severe global financial crisis in the 2000s was caused by the COVID-19 pandemic. Albuquerque et al. (2020) studied the impact of environmental and social (ES)

policies on stock performance during the COVID-19 pandemic, and more specifically during the first quarter of 2020 when the pandemic spread through the world. Their data consisted of publicly listed U.S. stocks, and they ran difference-in-differences regression to examine the effects of the pandemic. Their study shows that stocks with higher ES ratings had higher returns and higher operating profit margins during the first quarter of 2020. The results are also showing that the returns were not as volatile when the stock had a higher ES rating as when the stock had a lower ES rating. Al Amosh and Khatib (2023) found in their study that the COVID-19 pandemic affected the performance of companies significantly negatively but based on their results the negative effect was limited in companies which implemented ESG practices. Furthermore, Li, Trinh and Elnahass (2023) found in their study that higher level of ES activities is also generating financial stability in commercial banks because ES activities are lowering credit risk and liquidity risk exposures. On the other hand, Capelle-Blancard, Desroziers, and Zerbib (2021) studied the resiliency of socially responsible stock indexes during the COVID-19 crisis by matching the indexes with conventional benchmarks. The sample of socially responsible stock indexes was gathered from MSCI, STOXX, and FTSE, and it included indexes worldwide. The results show that socially responsible indexes were slightly more resilient in the areas that were affected the most by the COVID-19 pandemic, but in general the indexes did not outperform the conventional benchmarks.

Similar to Capelle-Blancard et al. (2021), the study by Bae et al. (2021) finds no evidence that CSR had an effect on stock returns during the stock market crash caused by the COVID-19 nor the post-crash recovery period. In the study, the market crash is defined as February 18, 2020, to March 20, 2020, and the data consisted of 1750 U.S. companies and two different CSR rating for the companies. Bae et al. (2021) remark that the pandemic has raised interest towards CSR and engagement of environmental and social subjects of companies but based on their results these issues are not creating additional value during the crisis. Therefore, “drawing unambiguous or uncondi-

tional inferences" about the importance or value of corporate social responsibility during the times of a crisis should be avoided (Bae et al., 2021, p. 14).

Like Lins et al. (2017), also Broadstock et al. (2021) found that the positive role of ESG is more important during the times of crisis than out-of-crisis. Broadstock et al. (2021) studied what kind of role ESG plays during the times of the COVID-19 pandemic. Their study shows that portfolios with high ESG scores are outperforming portfolios with lower ESG scores, and ESG performance is lowering the financial risk during the crisis. However, Demers et al. (2021) found that ESG scores cannot explain the positive performance of stocks when market-based measures of risk, financial position and performance measures are considered. Their study shows that stocks with high ESG scores did not create outstanding returns during the year 2020, when the COVID-19 pandemic was affecting the whole world. Furthermore, their study shows that companies which invested in internally generated intangible assets created significant returns during the year of 2020.

# 5 Data and Methodology

This chapter describes the data and methodology that is used in this master's thesis. The methodology is similar to Lins et al. (2017) and Albuquerque et al. (2020).

## 5.1 Data

The first step to test the hypothesis of this thesis is to collect relevant data. The data needed in this thesis is accounting data, data of ESG-ratings of companies operating in Europe, data of historical stock prices, and data of a benchmark index. The research question is limiting the data sample so that the companies researched are in Europe. However, Europe in the whole is a heterogenous area making the comparison difficult and not reasonable. Therefore, the data is gathered from European exchanges that have similarities to minimize the differences between countries affecting the results. This led to the decision to choose companies that are operating in developed European markets.

After limiting the data sample by choosing to study European exchanges that have similarities, the benchmark index was chosen. The benchmark index in this thesis is the S&P 350 Europe index, because it includes companies from 16 developed European markets. The countries included in the data sample are the same as the countries that are included in the S&P 350 Europe index, except for the United Kingdom which is included in the S&P 350 Europe index but is excluded from the data. The reasoning for this decision is Brexit, which officially took place in February 2020. Due to Brexit being partly an economical decision for the United Kingdom, it might affect the results in ways that are not considered in this thesis. On that account, the countries included in the sample are France, Switzerland, Germany, the Netherlands, Denmark, Sweden, Italy, Spain, Finland, Belgium, Ireland, Norway, Austria, Portugal, and Luxembourg.

After limiting the data sample by choosing the countries that are studied, the ESG ratings of companies operating in these countries are collected. The data of ESG ratings is gathered from the Thomson Reuters' Refinitiv ESG database. The ESG scores considered are the scores from year 2018 to measure the effect of the scoring when the pandemic started in the beginning of 2020. The ESG scores from Refinitiv are based on publicly reported data and measure the company performance, commitment and effectiveness associated with ESG-related themes. Each part of the ESG score, environmental (E), social (S), and governance (G) are evaluated in different categories. The categories for E are resource use, emissions, and innovation. For S, the categories are workforce, human rights, community, and product responsibility. For G, the categories are management, shareholders, and corporate social responsibility (CSR) strategy. Furthermore, each category is divided to subcategories that contain several ESG-related themes. The score range is from 0 to 100, and the scores are based on the relative performance and materiality of the factors within the sector and the country the company is operating in. Following the study by Albuquerque et al. (2020), the CSR measure in this thesis is ES, and the governance score is omitted. The ES scores for each company are calculated by multiplying the weight of each pillar and then summing the weights to get the total score. Thomson Reuter's Refinitiv has defined the weight that each pillar has in the total ESG score, and the weight of E and S pillars combined is 70%. The individual weight of each pillar is presented more closely in the Figure 5 below.

| PILLAR | CATEGORY | WEIGHT |
|---|---|---|
| ENVIRONMENTAL | RESOURCE USE | 11 % |
| | EMISSIONS | 12 % |
| | INNOVATION | 11 % |
| SOCIAL | WORKFORCE | 16 % |
| | HUMAN RIGHTS | 4,50 % |
| | COMMUNITY | 8 % |
| | PRODUCT RESPONSIBILITY | 7 % |
| TOTAL | | 70 % |

**Figure 5.** Environmental and Social Pillar (Thomson Reuters' Refinitiv, 2023).

After collecting the data for ES-ratings, the data for financial performance and accounting metrics are collected for companies that have an ES-rating. In this thesis, the dependent variables are abnormal stock returns, volatility, and operating performance. Control variables for accounting information are Leverage, Cash, Size, Dividend yield, Return on Equity, and Tobin's Q. The same measures are used in the study by Albequerque et al. (2020), in which they study the effects of the market crash in the US due to COVID-19 in the first quarter of 2020.

Abnormal returns are used as a measure of financial performance during the year 2020, which was the first year of the COVID-19 pandemic. Due to the availability of the data, the abnormal returns are measured monthly in this thesis. Abnormal returns are calculated for each month of 2020. In addition, the average abnormal returns of the year 2020 are calculated. The possible change in the performance is compared to the ESG rating of the company to measure whether low or high ESG rated companies performed better.

The monthly abnormal stock returns from 31.12.2019 to 31.12.2020 are estimated as the difference between monthly logarithm gross return of a stock and the stock's Capital Asset Pricing Model (CAPM) beta times the monthly logarithm return of the market. CAPM is a security pricing model that measures the relationship between systematic risk and expected return for assets. The model is based on the studies by Sharpe (1964) and Lintner (1965) about asset pricing and valuation. In the CAPM, the measurement for volatility of a security or a portfolio is beta, and the model states that investment's expected risk premium is proportional to its beta (Brealey, Myers & Allen, 2020, pp. 205-206).

The model for CAPM is presented as follows:

$$ER_i = R_f + \beta_i(ER_m - R_f) \quad (1)$$

In the model, $ER_i$ is the expected return of the investment. The systematic risk is represented by the risk-free rate $R_f$, and beta of the investment is represented by $\beta_i$. Therefore, the market risk premium is measured by the difference of the expected return of the investment and the risk-free rate.

For CAPM, the 10-year government bond yield of each country is used as the risk-free rate for that country. For example, the risk-free rate for Finland is the 10-year Finnish government bond yield from the year 2020. Betas for CAPM are calculated by dividing the covariance of the stock returns and benchmark returns with the variance of the benchmark returns. The index used to represent the market return is the S&P 350 Europe.

After calculating the betas of each stock, the abnormal returns are calculated using a multi-factor model approach. The regression is as follows:

$$AR_{i,t} = R_{i,t} - \beta_{i,t}(R_M - R_{f,c}) \quad (2)$$

$AR_{i,t}$ describes the abnormal return of a stock *i* at the end of the month *t*. Therefore, $R_{i,t}$ is the logarithm gross return of the stock *i* at the end of the month *t*, and the $\beta_{i,t}$ is the beta of the stock *i* during that year. Furthermore, the $R_M$ describes the logarithm gross return of the S&P 350 Europe index, and $R_{f,c}$ is the risk-free rate of the country *c* in which the company is listed. The yearly abnormal returns are calculated similarly as the monthly abnormal returns.

In addition to the abnormal return regressions, volatility of a stock is also used as the dependent variable in the cross-sectional regressions. Volatility of stock returns during the year 2020 is measured to demonstrate how the volatility varies between high ES-rated and low ES-rated firms. The volatility of a stock is measured as the square root of variance, which is calculated from the mean of squared deviation of the monthly stock returns.

Thirdly, operating performance of the companies studied is used as a dependent variable for the cross-sectional regressions. Followed by Albuquerque et al. (2020), the operating performance metrics used are return on assets (ROA), operating profit margin (OPM), and asset turnover (AT). The metrics are calculated as the difference between years 2019 and 2020 to measure the effects of the pandemic in accounting measures after the first year.

ROA is calculated as operating income before depreciation divided by book value of assets, as presented in equation (3):

$$\Delta ROA = \frac{Operating\ income\ before\ depreciation}{Book\ value\ of\ assets} * 100 \quad (3)$$

OPM is calculated as the operating income before depreciation divided by sales, as presented in equation (4):

$$\Delta OPM = \frac{Operating\ income\ before\ depriciation}{Sales} * 100 \quad (4)$$

AT is calculated as sales divided by book value of assets, as presented in equation (5):

$$\Delta AT = \frac{Sales}{Book\ value\ of\ assets} * 100 \quad (5)$$

After collecting the data for the dependent variables and ES-ratings, the data for control variables is gathered. The accounting information for this thesis is gathered from Refinitiv Eikon. The data from year 2019 is compared to data from the year 2020 to examine the changes in financial performance after the pandemic started. Previous studies related to the COVID-19 pandemic usually consider only the few days or months around the event date, which is usually defined as the day the WHO defined

COVID-19 as a pandemic. However, in this thesis the whole year of 2020 is considered to examine how the pandemic affected companies in the longer period.

The first three control variables, leverage, cash, and size are based on the same ratios used in the study by Albuquerque et al. (2020). Leverage is measured as book value of debt over book assets, cash is measured as cash holdings over book assets, and size in this thesis is measured as the market capitalization of the firm. The formula for leverage is:

$$Leverage = \frac{Book\ Value\ of\ Debt}{Book\ Assets} \tag{6}$$

The formula for cash is:

$$Cash = \frac{Cash\ Holdings}{Book\ Assets} \tag{7}$$

And the formula for size is:

$$Size = Stock\ Price\ per\ Share * Shares\ Outstanding \tag{8}$$

The fourth control variable is dividend yield. Dividend yield is the ratio between the dividend of a share and its price (Brealey, Myers & Allen, 2020, p. 79). According to Maio and Santa-Clara (2015, p. 33), the general belief is that the variation in dividend yields is related to expected return of a stock more than expected dividend growth. The formula for calculating dividend yield is as follows:

$$Dividend\ Yield = \frac{Dividend\ of\ a\ Share}{Price\ of\ a\ Share} \tag{9}$$

According to Brealey, Myers & Allen (2020, pp. 172-173), the changes in dividend yields could have different causes. The first reasoning for declines in divided yields is that the

investors have raised their prediction of future dividend growth, which would cause dividend yields to decrease. Likewise, forecasts about dividends getting lower in the future would cause dividend yields to grow. Another reasoning for decreasing dividend yields is that a company is using its cash to buy back its stocks. The effect of a stock repurchase is that it reduces the current dividend yield and increases the future dividend growth rate. Therefore, the expected return of a stock would stay unchanged, but the dividend yield is lower.

The fifth control variable is return on equity (ROE), and it is measured by ratio of earnings per share (EPS) to book equity per share or dividing net income by shareholder equity. Therefore, ROE is based on accounting information and is known as a book rate of return. The equation for ROE is as follows:

$$Return\ on\ Equity\ (ROE) = \frac{Net\ Income}{Book\ Equity} \tag{10}$$

Since ROE is based on accounting information and not market value, it is a good measurement for current performance. Furthermore, it is not affected by speculation or expectations about future events that stock market prices are reflecting (Brealey, Myers & Allen, 2020, p. 752).

The sixth control variable is Tobin's Q. The formula for Tobin's Q is as follows:

$$Tobin's\ Q = \frac{Book\ Value\ of\ Assets - Book\ Value\ of\ Equity}{Book\ Value\ of\ Assets} \tag{11}$$

The value greater than 1 suggests that the company is overvalued, and value lower than 1 indicates that the company is undervalued by the market. Therefore, the ideal value would be 1 meaning that the company is fairly valued in the market.

After calculating the ES-ratings for companies that had the data available, and collecting the financial, accounting and stock data, the data sample consists of 907 companies so that the sample has 32 Finnish, 104 Swedish, 48 Norwegian, 38 Danish, 12 Portuguese, 3 Luxembourgish, 80 Italian, 54 Spanish, 38 Belgian, 24 Austrian, 150 German, 15 Irish, 49 Dutch, 111 Swiss, and 149 French companies. The summary statistics are presented in the Table 1 below.

| Variable | Obs. | Mean | St. Dev. | 25 % | Median | 75 % |
|---|---|---|---|---|---|---|
| AR average of 2020 | 907 | -401,90 | 12108,12 | -1,44 | 0,01 | 1,71 |
| Volatility | 907 | 13,63 | 6,82 | 9,45 | 12,36 | 16,42 |
| ΔROA | 907 | -2,16 | 9,78 | -3,97 | -1,37 | 0,38 |
| ΔOPM | 907 | 1,10 | 150,29 | -3,99 | -0,89 | 1,12 |
| ΔAT | 907 | -0,06 | 0,15 | -0,12 | -0,04 | 0,00 |
| ES | 907 | 38,41 | 15,69 | 26,63 | 39,71 | 50,97 |
| Leverage | 907 | 0,29 | 0,30 | 0,15 | 0,27 | 0,39 |
| Size | 907 | 4479103,41 | 10464176,64 | 402805,75 | 1174904,21 | 3354890,26 |
| Tobin's Q | 907 | 0,59 | 0,23 | 0,47 | 0,61 | 0,73 |
| Cash | 907 | 1049901,20 | 3947830,39 | 62778,31 | 194028,00 | 699245,50 |
| ROE | 907 | 1604,06 | 48018,11 | 5,00 | 11,31 | 17,28 |
| Dividend yield | 905 | 2,56 | 2,16 | 0,92 | 2,28 | 3,69 |
| AR January 2020 | 907 | -0,55 | 9,75 | -6,36 | -0,55 | 5,01 |
| AR February 2020 | 907 | 3,45 | 9,96 | -2,29 | 2,66 | 9,03 |
| AR March 2020 | 907 | -1,87 | 10,80 | -6,94 | -1,04 | 4,62 |
| AR April 2020 | 907 | -4822,47 | 145271,49 | -4,91 | 0,88 | 7,24 |
| AR May 2020 | 907 | -0,59 | 28,04 | -5,01 | 0,66 | 6,17 |
| AR June 2020 | 907 | -2,88 | 9,68 | -7,16 | -2,56 | 2,41 |
| AR July 2020 | 907 | 1,59 | 10,40 | -3,92 | 1,34 | 6,47 |
| AR August 2020 | 907 | 0,09 | 9,08 | -4,55 | -0,12 | 4,48 |
| AR September 2020 | 907 | 1,29 | 10,46 | -3,67 | 1,37 | 6,36 |
| AR October 2020 | 907 | 1,24 | 11,12 | -4,33 | 0,35 | 6,00 |
| AR November 2020 | 907 | -2,28 | 10,13 | -7,39 | -2,49 | 2,87 |
| AR December 2020 | 907 | 0,14 | 8,50 | -4,32 | -0,29 | 4,13 |

**Table 1.** Descriptive statistics.

Table 1 shows that the mean of average abnormal return for companies in the year 2020 was remarkably negative, and the biggest drop in returns happened in April. The table shows that even though the pandemic officially started in February, the mean abnormal returns for February were positive, and only slightly negative in March. As

stated, the biggest drop in returns happened in April, and the mean of abnormal returns turned positive again in July. Furthermore, when measured with the change in return on assets and asset turnover, the year on average was slightly unprofitable for European companies.

## 5.2 Methodology

Albuquerque et al. (2020) studied the effects of the COVID-19 pandemic and ES on financial performance by running two sets of regressions, the first set of regressions being difference-in-difference regressions, and the second set of regressions being cross-sectional regressions. The methodology in this thesis is cross-sectional data regression followed by previous studies from Lins et al. (2017) and Albuquerque et al. (2020). Followed by Albuquerque et al. (2020), the dependent variables in the regressions are monthly abnormal returns, volatility of a stock, and operating performance of a company. The independent variable is the ES-rating of a company.

The cross-sectional regression is presented in the equation (12) as follows:

$$Performance_i = \beta_0 + \beta_1 ES_i + \beta_2 Firm\ controls_i + \varepsilon_i. \qquad (12)$$

The observation unit is the company *i* during the year 2020. The dependent variables in the regression are monthly abnormal stock returns, volatility of the stock returns as in total volatility, and operating performance. The operating performance is measured in three different ways as presented in the equations (3), (4), and (5). The independent variable of the regressions is *ES*, which describes the ES rating of a company *i* in the year 2018. Followed by Albuquerque et al. (2020), the control variables for the stock return and volatility regressions are *Tobin's q, Size, Cash, Leverage, Return on equity,* and *Dividend yield* of a company *i* in 2019, and the regressions are conducted as ordinary least square regressions. The control variables for operating performance regres-

sions are *Tobin's q, Cash, Size*, and *Leverage* of a company *i* in 2019, and the operating performance regressions are conducted as median regressions.

# 6 Empirical Results

The empirical results are presented and discussed in this chapter. The regressions for average abnormal return from the year 2020 and monthly abnormal returns from each month of 2020 are analyzed in the first subchapter. The regressions for volatility are analyzed in the second subchapter. Lastly, the regressions for operating performance are analyzed in the third subchapter.

## 6.1 Abnormal Returns

The results for the abnormal return regressions are presented in this subchapter. Both the abnormal returns from each month of 2020, and the mean abnormal returns of 2020 are used as the dependent variable in the regressions. The regressions are conducted as cross-sectional regressions. Followed by Albuquerque et al. (2020), the abnormal returns are measured as CAPM-adjusted log returns. The results for each quarter of 2020 are presented in the following tables so that for specifications 1, 3, and 5, ES-rating is used as the only independent variable, and for specifications 2, 4, and 6, firm controls are added as independent variables to control. The outliers of control variables are winsorized at 1% in each tail, and standard errors are robust to heteroscedasticity. Each regression is tested for multicollinearity by calculating the variance inflation factor (VIF). The results for VIF-tests did not show significant multicollinearity that could affect the results. Furthermore, followed by Albuquerque et al. (2020), regression constants are not reported.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Variable | AR, Jan | AR, Jan | AR, Feb | AR, Feb | AR, Mar | AR, Mar |
| ES | -.0120948 | -.004499 | .0133895 | .013749 | -.0260117 | -.0469415 |
| | (-.0209535) | (.0224921) | (.0216347) | (.024647) | (.0213298) | (.0242023) |
| Tobin's Q | | -1.779307 | | 5.621256*** | | 4.840276** |
| | | (1.788576) | | (1.996154) | | (2.646299) |
| Size | | 2.41e-08 | | -1.33e-08 | | 1.27e-07* |
| | | (5.93e-07) | | (6.74e-08) | | (7.88e-08) |
| Cash | | -1.17e-07 | | 2.08e-07 | | -1.34e-07 |
| | | (2.58e-07) | | (2.60e-07) | | (3.09e-07) |
| Leverage | | 3.430737 | | .5172668 | | -11.24312*** |
| | | (2.773573) | | (2.594418) | | (2.672) |
| ROE | | .0690431*** | | -.0260362 | | .0227589 |
| | | (.0369681) | | (.026604) | | (.025588) |
| Dividend yield | | -.428262** | | .0829382 | | -.8011184*** |
| | | (.1717805) | | (.176614) | | (.2033826) |
| SG&A | | -2.27e-08 | | -1.96e-07* | | 5.75e-08 |
| | | (7.86e-08) | | (6.58e-08) | | (8.29e-08) |
| Number of firms | 907 | 907 | 907 | 907 | 907 | 907 |
| $R^2$ | 0.0004 | 0.0253 | 0.0004 | 0.0248 | 0.0014 | 0.0603 |

*Robust standard errors are in parantheses.*

**** p < 0.01, ** p < 0.05, * p < 0.1*

**Table 2.** Cross-sectional regressions for the first quarter of 2020.

Table 2 presents the results for January, February, and March of 2020. The virus started to spread at the end of 2019, but the WHO declared COVID-19 as a pandemic in March 2020. When COVID-19 was declared as a pandemic, various countries set lockdowns and other restrictions. However, for the first quarter of 2020, the results do not show a significant relationship between ES-rating and the abnormal returns. However, the results implicate that in March, after the virus was declared as a pandemic, companies with higher leverage and higher dividend yield had lower abnormal returns. The finding is significant at the 1% level or better. Furthermore, the results suggest that companies with higher Q ratio performed better during March. This finding is significant at the 5% level. These findings do not support the hypothesis but indicate that companies with higher financial solvency performed better during the first month of the pandemic.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Variable | AR, Apr | AR, Apr | AR, May | AR, May | AR, Jun | AR, Jun |
| ES | -392.8732 | -357.2353 | -.1159701* | -.0970796 | .0079489 | -.0120228 |
| | (392.5939) | (357.5563) | (.0728882) | (.0671809) | (.0217242) | (.0234161) |
| Tobin's Q | | -14717.13 | | -9.537139* | | -3.348543* |
| | | (14855.58) | | (3.110734) | | (1.699382) |
| Size | | .0005429 | | 9.06e-08 | | 2.37e-08 |
| | | (.0005643) | | (1.15e-07) | | (4.18e-08) |
| Cash | | -.0045957 | | -8.30e-07 | | 2.03e-07 |
| | | (.0047006) | | (8.51e-07) | | (1.75e-07) |
| Leverage | | -16224.12 | | -8.30e-07 | | -6.740881** |
| | | (16462.54) | | (3.955568) | | (2.340554) |
| ROE | | 49.37237 | | -5.064641 | | .0039032 |
| | | (56.86604) | | (.0502568) | | (.0248322) |
| Dividend yield | | -1709.97 | | .126566** | | .1330917 |
| | | (1725.709) | | (.3610976) | | (.1745109) |
| SG&A | | .0013785 | | -.8402176* | | 1.11e-07 |
| | | (.0013908) | | (2.58e-07) | | (7.16e-08) |
| Number of firms | 907 | 907 | 907 | 907 | 907 | 907 |
| $R^2$ | 0.0018 | 0.0063 | 0.0042 | 0.0277 | 0.0002 | 0.0351 |

*Robust standard errors are in parantheses.*
**** p < 0.01, ** p < 0.05, * p < 0.1*

**Table 3.** Cross-sectional regressions for the second quarter of 2020.

Table 3 presents the results for April, May, and June of 2020. For May, the results show a small negative relationship between high ES-rating and abnormal returns at the 10% level or better, but when other variables are added to control, this relationship seems to fade. Therefore, the positive impact of higher ES-rating on financial performance cannot be proven with these results. Otherwise in June higher leverage seems to have a negative impact on the abnormal returns at the 5% significance level or better, and higher Q ratio at the 10% level or better. Again, these findings are not supporting the hypothesis of this thesis but indicate that companies with higher financial solvency performed better.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Variable | AR, Jul | AR, Jul | AR, Aug | AR, Aug | AR, Sep | AR, Sep |
| ES | -.047058** | -.0242381 | -.0304047 | -.0294477 | -.0216721 | .0064144 |
| | (.020016) | (.0227497) | (.0220707) | (.0234405) | (.0228101) | (.0256564) |
| Tobin's Q | | -.2819006 | | -1.485564 | | -3.277072* |
| | | (2.045711) | | (1.781641) | | (2.032454) |
| Size | | -2.10e-08 | | -1.33e-08 | | 7.90e-10 |
| | | (5.96e-08) | | (4.23e-08) | | (4.97e-07) |
| Cash | | -6.17e-07 | | 9.37e-08 | | -6.26e-07* |
| | | (2.32e-07) | | (1.95e-07) | | (2.64e-07) |
| Leverage | | 2.976799 | | -1.649459 | | -3.953454* |
| | | (2.509327) | | (2.101107) | | (2.849816) |
| ROE | | .0312145* | | .0561742*** | | .0148031 |
| | | (.0262861) | | (.0302033) | | (.0267959) |
| Dividend yield | | -.5238504*** | | -.2715577* | | -.2463906 |
| | | (.1691352) | | (.1786293) | | (.1883946) |
| SG&A | | 2.30e-07** | | 1.90e-08 | | 1.60e-07 |
| | | (1.00e-07) | | (5.87e-08) | | (7.22e-08) |
| Number of firms | 907 | 907 | 907 | 907 | 907 | 907 |
| $R^2$ | 0.0050 | 0.0361 | 0.0028 | 0.0226 | 0.0011 | 0.0289 |

*Robust standard errors are in parantheses.*
**** p < 0.01, ** p < 0.05, * p < 0.1*

**Table 4.** Cross-sectional regressions for the third quarter of 2020.

Table 4 presents the results for July, August, and September 2020. The results show a negative relationship between higher ES-rating and stock returns at the 5% lever or better in July, but when other variables are added to control, this relationship seems to fade again. Therefore, the hypothesis must be rejected once again, because the relationship between financial performance and a firm's ES-rating cannot be explained with these results.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Variable | AR, Oct | AR, Oct | AR, Nov | AR, Nov | AR, Dec | AR, Dec |
| ES | -.0273768 | -.0395452 | .0831219*** | .0887465*** | -.0592833*** | -.0509157** |
| | (.0214429) | (.0229554) | (.0197022) | (.0222972) | (.0172125) | (.0196351) |
| Tobin's Q | | 1.571248 | | -7.389156*** | | -2.343396 |
| | | (2.172584) | | (2.228794) | | (1.646721) |
| Size | | -1.11e-07 | | -2.29e-09 | | -1.38e-09 |
| | | (6.58e-08) | | (4.85e-08) | | (4.05e-08) |
| Cash | | 5.69e-07 | | 6.14e-07** | | -5.15e-08 |
| | | (2.78e-07) | | (2.33e-07) | | (1.78e-07) |
| Leverage | | 7.141111*** | | 1.62086 | | .8021071 |
| | | (3.279235) | | (2.459337) | | (1.836283) |
| ROE | | -.0353763* | | -.0284269 | | .0436742 |
| | | (.0437666) | | (.0213695) | | (.0242257) |
| Dividend yield | | .0788407 | | .0853382 | | -.1860969 |
| | | (.2060304) | | (.1748026) | | (.1557326) |
| SG&A | | 4.42e-08 | | -1.94e-07* | | -6.22e-09 |
| | | (9.21e-08) | | (7.05e-08) | | (5.62e-08) |
| Number of firms | 907 | 907 | 907 | 907 | 907 | 907 |
| $R^2$ | 0.0015 | 0.0258 | 0.0166 | 0.0442 | 0.0120 | 0.0260 |

*Robust standard errors are in parantheses.*

**** p < 0.01, ** p < 0.05, * p < 0.1*

**Table 5.** Cross-sectional regressions for the fourth quarter of 2020.

Table 5 shows the results for October, November, and December of 2020. The results show a positive relationship between higher ES-rating and higher abnormal returns in November both when controlled only for ES and for other variables. The finding is significant at the 1% level or better. However, for December the results show a negative relationship between ES-rating and stock returns, indicating that companies with higher ES-rating had a lower abnormal stock return. This finding is significant at 1% level or better when controlled only for ES-rating, and 5% or better when added other control variables. Therefore, when the results from each month are contemplated, there does not seem to be a significant relationship between the ES-rating and abnormal stock returns and the hypothesis is not supported.

| Variable | (1)<br>AR, 2020 | (2)<br>AR, 2020 |
|---|---|---|
| ES | -32.75905 | -29.78592 |
| | (32.722) | (29.80159) |
| Tobin's Q | | -1227.878 |
| | | (1238.187) |
| Size | | .0000452 |
| | | (.000047) |
| Cash | | -.000383 |
| | | (.0003918) |
| Leverage | | -1353.52 |
| | | (1372.117) |
| ROE | | 4.137555 |
| | | (4.739512) |
| Dividend yield | | -142.7403 |
| | | (143.8341) |
| SG&A | | .0001149 |
| | | (.0001159) |
| Number of firms | 907 | 907 |
| $R^2$ | 0.0018 | 0.0063 |
| *Robust standard errors are in parantheses.* | | |
| **** p < 0.01, ** p < 0.05, * p < 0.1* | | |

**Table 6.** Cross-sectional regressions for average abnormal returns.

Lastly, the table 6 presents the results for the average abnormal stock returns of 2020. As can be reasoned from the monthly results, the results of these regressions do not show a significant relationship between abnormal stock returns and ES-rating of a company either. Therefore, the hypothesis is rejected again.

In their study, Albuquerque et al. (2020) found a positive relationship between ES-rating and abnormal stock returns at the 5% level or better when controlled for all the variables, and 1% or better when controlled only for ES-rating. Therefore, the results in this study are not consistent with the results from Albuquerque et al. One of the reasons for this might be the different timeframe, since Albuquerque et al. used daily abnormal returns from the first quarter of 2020, whereas in this study the abnormal returns are studied monthly. Furthermore, in their study, Albuquerque et al. used an American sample, whereas the sample in this study consists of companies from multiple countries. The legal policies and differences in for example social distancing and

lockdowns vary between countries and that might have such effects on the results that are not considered in this study.

## 6.2 Volatility

The results for volatility regressions are presented in this subchapter. Volatility of stock returns is measured to study if there lies a relationship between the ES-rating of a company and company's stock return volatility. The volatility of a stock is measured as the square root of variance, which is calculated from the mean of squared deviation of the monthly returns. Standard errors are robust to heteroscedasticity, and the control variables are winsorized at the 1% level in each tail.

The results are presented in the table below. The specification 1 shows the results for ES-rating as the independent variable, and in the specification 2 other variables are added to control. The results for VIF-tests didn't show significant multicollinearity that could affect the results. Followed by Albuquerque et al. (2020), regression constant is not reported.

| Variable | (1)<br>Volatility | (2)<br>Volatility |
|---|---|---|
| ES | -.0430817*** | -.019094 |
| | (.0135832) | (.0136167) |
| Tobin's Q | | 2.161089* |
| | | (1.069682) |
| Size | | -1.49e-07*** |
| | | (3.81e-08) |
| Cash | | 5.04e-07** |
| | | (1.49e-07) |
| Leverage | | 7.189555*** |
| | | (1.697682) |
| ROE | | -.0966859*** |
| | | (.0165365) |
| Dividend yield | | -.2060306** |
| | | (.1106365) |
| SG&A | | -9.09e-08 |
| | | (5.40e-08) |
| Number of firms | 907 | 907 |
| $R^2$ | 0.0098 | 0.1682 |
| *Robust standard errors are in parantheses.* | | |
| **** p < 0.01, ** p < 0.05, * p < 0.1* | | |

**Table 7.** Cross-sectional regressions for volatility.

Table 7 shows that when regressing only for ES-rating as the independent variable, companies with higher ES-rating have decreased stock return volatility the significance level being 1% or better. However, when other variables are added to control, the relationship between ES-rating and stock volatility turns the other way, so that companies with higher ES-rating seem to have also higher stock volatility. In their study, Albuquerque et al. (2020) found that companies with higher ES-rating had decreased stock return volatility when controlled only for ES-rating but also when other variables were added to control. The results presented in the table 7 indicate that bigger companies with higher return on equity had lower volatility, and companies with higher leverage had higher volatility. These results are significant in 1% level or better. However, these variables are not related to the company being socially responsible. The results of these regressions support the hypothesis partly, so that when only regressed for the ES-rating, the company performance and CSR are associated.

## 6.3 Operating Performance

The results for operating performance regressions are presented in this subchapter. In their study, Albuquerque et al. (2020) analyzed the change in operating performance from the fourth quarter of 2019 to the first quarter of 2020. Since the data for the whole year of 2020 is available when writing this thesis, the change in operating performance is measured as the change from 2019 to 2020. Albuquerque et al. used median regressions with least absolute deviation method to reduce the outliers. In this thesis, the regressions are conducted as quantile regressions, and variables are winsorized at 1% in each tail. Standard errors are robust to heteroscedasticity. Followed by Albuquerque et al. (2020), regression constants are not reported.

Followed by Albuquerque et al. (2020), the specifications 1 and 2 present the dependent variable as the return on assets, specifications 3 and 4 as operating profit margin, and specifications 5 and 6 as the asset turnover. Tobin's Q is the control variable in every regression, and then cash, leverage, and size are added to control.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Variable | ΔROA | ΔROA | ΔOPM | ΔOPM | ΔAT | ΔAT |
| ES | -.0009253 | -.0053551 | -.0068846 | -.010178 | -.00065* | -.00075** |
| | (.0066956) | (.0062101) | (.0107295) | (.0106491) | (.0002347) | (.0002115) |
| Tobin's Q | 2.673593*** | 2.926497*** | -.9908224 | .7536145 | .0132877 | -.024446 |
| | (.5736987) | (.4713062) | (.7706278) | (.6981129) | (.0177928) | (.0125859) |
| Cash | | -1.27e-07 | | -2.03e-07 | | -2.60e-09 |
| | | (1.54e-08) | | (1.17e-07) | | (2.47e-09) |
| Leverage | | -1.542163* | | -3.77033*** | | .0899019*** |
| | | (.5294128) | | (.9578582) | | (.0186697) |
| Size | | 3.69e-08 | | 5.24e-08* | | 1.32e-09** |
| | | (5.49e-09) | | (1.89e-08) | | (3.65e-10) |
| Number of firms | 907 | 907 | 907 | 907 | 907 | 907 |
| $R^2$ | 0.0073 | 0.0090 | 0.0003 | 0.0018 | 0.0065 | 0.0142 |

*Robust standard errors are in parantheses.*
**** p < 0.01, ** p < 0.05, * p < 0.1*

**Table 8.** Cross-sectional regressions for operating performance.

The findings are presented in the table 8. Results in columns 5 and 6 show that the asset turnover is lower for companies with higher ES-rating. The result indicates that companies with higher ES-rating did not use their assets efficiently during the first year of COVID-19. This finding is consistent with Albuquerque et al. (2020), who used an American sample in their study. In addition, Albuquerque et al. found that the operating performance margin is higher for companies with higher ES-rating. However, the results in this thesis do not show a significant link between ES-rating and return on assets or operating profit margin. The main differences between this study and the study conducted by Albuquerque et al. include the time frame and industry fixed effects. Albuquerque et al. used data from the fourth quarter of 2019 to the first quarter of 2020, whereas the data used in this thesis is from a longer period. In addition, Albuquerque et al. used industry fixed effects, which are not used in this thesis. However, the hypothesis is supported only by the asset turnover regression.

# 7 Limitations and Suggestions for Further Research

The limitations of this study, data sample, and chosen methodology are discussed in the first subchapter. This study has limitations that could be explored more, and therefore suggestions for further research are discussed in the second subchapter.

## 7.1 Limitations

The relationship between stock performance and firm's corporate social responsibility is estimated with cross-sectional regressions in this master's thesis. Multiple perspectives to estimate company performance are provided to test the hypothesis, and therefore company performance is measured as abnormal stock returns, volatility of the stock, and through operating performance. However, cross-sectional regressions have limitations. Bowen and Wiersema (1999, p. 625) argue that cross-sectional regressions fail to account for variability between companies, which "can lead to biased parameter estimates and incorrect inferences". Furthermore, the model does not consider the firm-specific characteristics which might affect the results.

Corporate social responsibility is measured through the ES-ratings of companies. The information for the ratings is gathered from Thomson Reuters' Refinitiv ESG database. Since the information about company CSR is gathered only from one source, the results are highly dependent of the data that Thomson Reuters' Refinitiv has available. The model assumes that the data used is correct and accurate. Therefore, if the data has errors or every aspect that might affect the rating is not considered, the results of this thesis might be affected. Furthermore, the availability of ESG data reduced the sample size, since Thomson Reuters' Refinitiv does not have ESG ratings of every company in Europe. The sample consists of listed companies, but not every listed company is included in the sample since Thomson Reuters' Refinitiv does not have data available of every listed company in Europe. Furthermore, private owned companies are not in-

cluded in the sample, and therefore the results cannot be generalized to every company in Europe.

The countries included in the sample were the same as the countries included in S&P350 Europe index, because Europe is a heterogeneous area and the differences between countries might have affected the results. S&P350 Europe index includes countries and companies from developed markets, and therefore the data sample in this thesis is formed of only companies that operate in the developed markets. On that account, the results from this thesis cannot be generalized to represent the Europe as a whole. In addition, the United Kingdom is omitted from the sample because the consequences of Brexit might have affected the results.

Despite the markets chosen for this study have similarities, they also have differences that might affect the results. Especially during the first year of the COVID-19 pandemic countries had different approaches to social distancing, vaccinating, and other methods to prevent the virus from spreading. In addition, countries had differences between supporting the companies during lockdowns and other restrictions. Despite the most countries included in the sample are a part of the European Union, and the Union having its laws that obligate the members, the countries in Europe have also their own legislation. The legal differences between countries are not considered in this thesis. Furthermore, the countries in Europe have cultural differences which affected the countries differently. The initial plan of social distancing and other restrictions was to protect elderly and other groups of people which were more prone to face serious issues with their health if they fell ill with Covid. The reasoning behind this was to prevent the healthcare system from collapsing. However, for example Italy faced considerably bigger issues with its healthcare system than many other European countries. In Italian culture, traditionally multiple generations are living under the same roof, whereas for example in Finland children generally move out of their parent's houses at a relatively young age. Therefore, the social distancing was easier in some countries than in others.

## 7.2 Suggestions for Further Research

The sample in this study consists of companies from the developed markets, and generally most of the studies related to themes around CSR are from the developed countries. One suggestion for further research is to study the relationship between CSR and stock market performance during a health crisis in countries that are not as developed. COVID-19 is the biggest health threat that has affected the whole world, but other health threats have previously affected developing countries.

Another suggestion for further research would be to study the effects of a health crisis such as COVID-19 in those European markets that are considered to be developed but have had issues in their economy in the recent past. For example, Italy faced large issues from the financial crisis in 2008. Differences in economical stability between countries might affect the results in this thesis, since those differences are not considered.

In this thesis, developed European markets are treated as one market, and the origin of each company is not considered at the country-level. However, as mentioned previously, the legislation in the European countries differs and the practices related to for example social distancing varied. Therefore, one suggestion for further research would be to examine the effect of different social distancing practices on corporate financial performance. For example, Sweden did not have heavy restrictions whereas other countries, such as Italy had stricter policy regarding social distancing and lockdowns.

# 8 Conclusions

The initial purpose of this study was to investigate whether corporate social responsibility has helped companies to perform better during the COVID-19 pandemic in the European stock market. More specifically, companies from developed European markets were examined to solve whether companies with higher ES-rating performed better during the first year of COVID-19 pandemic. Financial performance was measured as abnormal stock returns, operating performance, and stock volatility.

Previous literature has found positive, negative, and neutral relationship between CSR and financial performance. The results in this study indicate that there lies a neutral relationship between ES-rating of a company and the financial performance of a company during the first year of COVID-19. In general, abnormal return regressions do not show a significant relationship between ES-rating and financial performance. However, volatility regressions show a significant relationship between ES-rating and stock volatility when controlled only for the ES-rating of a company. This result suggests that generally companies with higher ES-rating had a lower volatility in their stock returns. However, when other variables are added to control, the relationship between volatility and higher ES-rating seem to turn the other way around. Therefore, further investigation is needed to examine the relationship between CSR and stock volatility.

The operating performance regressions suggest that companies with higher ES-ratings did not use their assets efficiently during the first year of COVID-19. This finding is consistent with the finding of Albuquerque et al. (2020), who studied the relationship between company ES-rating and financial performance during the first quarter of 2020 in the US.

COVID-19 pandemic gives an ordinary possibility to examine the relationship between CSR and corporate financial performance. However, further research is needed since for example differences between national policies are not considered in this thesis. Since the pandemic caused orders regarding social distancing, lockdowns, and other

restrictions, the corporate performance cannot be explained with just a few variables, but the causes are more multifactorial. The effects of different restrictions on corporate financial performance and financial stability should be studied further to prevent the disadvantages of too strict policies in the future.

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