

Does Sustainability translate into superior share price performance? A comparative study of American, British, and German stock markets

Lars Jochlik

(10557999)

Dissertation submitted in partial fulfilment of the requirements for the degree of  
Master's in business administration, Finance  
At Dublin Business School

Supervisor: Enda Murphy

January 2022

## Contents

<b>Tables</b> .....	3
<b>Figures</b> .....	4
<b>Appendix</b> .....	5
<b>Declaration</b> .....	6
<b>Acknowledgement</b> .....	7
<b>Abstract</b> .....	8
<b>Introduction</b> .....	9
Rationale .....	10
<b>Literature Review</b> .....	12
Terminology .....	12
SRI .....	13
GRI.....	14
CSR .....	15
ESG .....	15
Introduction to Socially Responsible Investment .....	16
Historical development of SRI behaviour .....	20
Development of SRI .....	28
Screening Approach .....	31
The market for SRI: companies, intermediaries, and investors.....	33
Companies.....	34
SRI intermediaries: research and rating agencies as well as stock indices.....	36
The Performance of Socially Responsible Investments .....	39
When SRI = Conventional Portfolio Returns .....	39
When SRI < Conventional Portfolio Returns .....	40
When SRI > Conventional Portfolio Returns .....	42
SR Performance Conclusion .....	44
<b>Methodology</b> .....	49
Qualitative and Quantitative research.....	49
Qualitative Research, Expert Survey .....	50
Participants .....	50
Design.....	51
Materials .....	53
Procedure.....	53
Quantitative Research .....	54
Participants .....	54

Design.....	55
Ethics.....	58
<b>Results.....</b>	<b>61</b>
Qualitative.....	61
Quantitative.....	65
Industry.....	68
Country.....	69
<b>Discussion.....</b>	<b>71</b>
Disclaimer.....	71
Incorporating Objectives and Hypothesis into Findings.....	71
<b>Conclusion.....</b>	<b>74</b>
<b>Appendix.....</b>	<b>76</b>
<b>References.....</b>	<b>83</b>

## Tables

Table 1 Survey Participants.....	50
Table 2 Stock Indexes.....	54
Table 3 Indicators and Equations.....	57
Table 4 Expert Results Overview.....	62
Table 5 Correlation of Variables .....	66

## Figures

Figure 1 Investor needs in the investment process: Cengiz et al. (2010) .....	23
Figure 2 Outliers from the data cluster.....	66
Figure 3 Normal symmetric Q-Q Plot of Rating variable .....	67
Figure 4 Average RoR sorted by Country .....	69
Figure 5 Scatter Plot between Rating score and RoR for British Stocks .....	70
Figure 6 Scatter Plot between Rating score and RoR for American Stocks .....	70

## Appendix

Appendix 1 Questionnaire .....	76
Appendix 2 Distribution of Companies in Industry Categories.....	78
Appendix 3 Correlation between RoR and Rating for US Stocks .....	80
Appendix 4 Software & Service Correlation (V1: Rating, V2: RoR).....	80
Appendix 5 Pharmaceutical Correlation (V1: Rating, V2: RoR).....	80
Appendix 6 Semiconductors Correlation (V1: Rating, V2: RoR).....	81
Appendix 7 Food Products Correlation (V1: Rating, V2: RoR) .....	81
Appendix 8 Retailers Correlation (V1: Rating, V2: RoR).....	82

## Declaration

I declare that this dissertation that I have submitted to Dublin Business School for the award of Master of Business Administration in Finance is the result of my investigations, except where otherwise stated, where references acknowledge it. Furthermore, this work has not been submitted for any other degree.

Signed: Lars Jochlik

Student Number: 10557999

Date: 09.01.2022

## Acknowledgement

I would like to thank my supervisor Mr Enda Murphy, who guided me in the right direction with his constructive inputs and encouraged me to pursue this topic for my dissertation.

I would also like to thank the participants of my survey who took the time to answer all my questions extensively.

Thanks also to my friends and family who supported me throughout the last months with encouragement and constructive discussions.

Special thanks go out to my partner, who helped me keep focused and always had an open ear for me.

## Abstract

This study aims to find a correlation between 242 stock performances on the company level in historically grown SRI markets in the USA, Germany, and Britain and their respective ESG scores of domestic rating agencies, as previous studies focused on SR funds and their performance. Professional input from 5 experts to gain insight into current investment behaviours and strategies and future outlooks. This was accomplished by using a risk reduced Pearson correlation for the stock correlation analysis and a scaled-down Braun and Clarke (2006) framework for the expert survey. The survey showed a substantial shift towards SRI due to rising client demand while not sacrificing returns. Correlation performance varied from industry to industry and might not be solely explained by ESG ratings. It can be expected that customer demand will increase over time and thus naturally lead to the better stock performance of SRI.

## Introduction

Previous research has been conducted extensively on the performance benefits of SR funds. However, a clear conclusion can not be drawn so far. Extensive research exists for three different performance conclusions (SRI performing better, worse, or equal to conventional funds). Moskowitz (1997) and Schwartz (2003), for example, see a positive correlation between SRI and performance since investors are investing more carefully than their conventional counterparts, as they are under more scrutiny and observation (Schwartz, 2003). Rudd (1981) proved lower returns over time, Kurtz (1997) cites uncompensated risk as a reason for the non-profitability of SRI, and Luther, Matatko and Corner (1992) state higher monitoring costs. Bello (2005) proved with a study over several years that SRI did not perform significantly worse or significantly better than conventional funds. This was proven later by Sandberg et al. (2008): the gains by more actively monitoring SRI are equalised by the higher operating costs, leading to a net-zero effect.

This research aims to use a different approach by considering previously identified historically grown SR markets in Germany, the USA, and the UK (Schröder 2004) and using single stocks rather than specifically created ESG funds to find a possible correlation on company level.

Stocks will be chosen from the regional indexes FTSE 100 (UK), DAX 40 (Ger), DOW JONES (USA), and NASDAQ 100 (USA) to incorporate the best performing stock representation, respectively to answer the question if stock performance is correlated with ESG ratings.

Current investment strategies and behaviour will be included in this research by incorporating the viewpoints of several professionals and then incorporating their answers

into prior findings. Lastly, possible recommendations for investment advisors and clients will be concluded in the conclusion section

## Rationale

Continuing with previously completed research, this dissertation will examine the stock markets of the United States, the United Kingdom, and Germany and compare the performance of particular stocks with their various sustainability ratings.

As indicated in the literature study, different rating agencies from the individual nations are selected to reflect the local stock market ratings as closely as possible to eliminate the possibility of a home bias when selecting a single rating agency. For the German stock market, Sustainalytics (Company ESG Risk Ratings – Sustainalytics, 2022) will be used, MSCI Inc. (ESG Ratings & Climate Search Tool, 2022) will be used for the American stock market, and Moody's ESG (Moody's ESG / Solutions, 2022) will be used to represent the British stock market. These scores will then be compared to their respective stock performance in terms of the *"Rate of Return"* (RoR), the *"Earnings per Share"* (EPS), and the *"Price-to-Earnings"* (P/E). This is a short-term observation, keeping with the rest of the research.

Hence the figures used in this study are from October to December 2021. The investigation is primarily concerned with the possibility of a positive association between performance and rating score. It also varies from previous studies in that it focuses on individual equities rather than ESG funds or ESG mutual funds, and it does not take into account risk.

In addition, an expert poll was conducted to investigate how non-listed firms are impacted by social responsibility and environmental, social, and governance (ESG) ratings in their

investment decisions. Their places of origin and countries of operation were considered while selecting the companies (a more detailed list in the methodology and results part). This study aims to bridge the gap between academia and practice regarding ESG ratings, their correlation of stock performance and the subsequent integration in modern investment strategies.

## Literature Review

Structure of the literature review:

- Establishing and explanation of relevant terminology
- Prior research of Socially Responsible Investments (SRI)
- Historical development of sustainable investment with a focus on the United States, Great Britain, and Germany
- Identifying critical roles of intermediaries, companies, and actors in the SRI investment trade. The focus will be on Germany
- SRI performance comparison and analysis of prior research conducted

## Terminology

There is a great deal of variety in the contemporary academic literature when it comes to commonly accepted nomenclature for the term of Socially Responsible Investment. The debate over how to refer to this investment type has been summarised by Cowton (1999) as a "matter of taste". Dorfleitner and Utz (2012), on the other hand, do not believe that a general definition of SRI is necessary, stating that sustainability means something different for every individual investor and that sustainable investments adequately summarise every desirable non-financial impact investments may have, as well as every desirable financial impact investments may have. On the other hand, scholars have attempted to develop a suitable nomenclature. SRI, ethical investment and value-based investing are all concepts that are often heard (Ramsköld *et al.*, 2009). SRI (socially responsible investment) is the most recent term to replace ethical investing (Sparkes, 2001). However, Ramsköld *et al.*

(2009) find that definitions of SRI are consistent in that it means the "integration of certain non-financial concerns, such as ethical, social, or environmental considerations, into the investment process," even though the terms are inconsistent in academic literature. The term SRI is used in this work in accordance with the vast majority of research findings.

In contrast to this word, which refers to the active work of investing in a socially responsible way, the term corporate social responsibility (CSR) is used in academic literature to characterise an organisation's ethical and responsible conduct. It refers to businesses incorporating social and environmental concerns into their corporate governance (Yelin *et al.*, 2003, p. 87). SR investors will be more likely to consider a firm as a prospective investment if it has a solid corporate social responsibility program in place. Alternatively, shareholders may utilise their voting rights to pressure the firm's management to steer the corporation in a more SR direction (Adam and Shavit, 2007). Nevertheless, a brief overview of the terms is given below to establish a consensus.

## SRI

An investment regarded as socially responsible owing to the nature of the business that the firm performs is referred to as socially responsible investing (SRI). It is also referred to as a social investment. It is possible to make socially responsible investments into individual firms that have significant social value, as well as via a socially aware mutual fund or exchange-traded fund (ETF) (*Socially Responsible Investment (SRI)*, 2021).

## GRI

The GRI Standards (global standards for sustainability reporting) are a modular set of linked standards that the Global Reporting Initiative developed in 1997. They enable companies to publicly report on the effects of their operations in a systematic manner that is transparent to stakeholders and other interested parties, and they are becoming more popular. To assist with the reporting process, three series of standards are available: the GRI Topic Standards, which are each dedicated to a specific topic and list disclosures relevant to that topic; the GRI Sector Standards, which are applicable to specific industries; and the GRI Universal Standards, which are applicable to all organisations. By determining which issues are material (relevant) to report on in accordance with these standards, companies may better communicate their contributions – good or bad – to sustainable development (A short introduction to the GRI standard, 2021).

Several disclosures are included in the standards, which offer a standardised way for an organisation to disclose information about itself and its effects on others. The disclosures may contain mandates as well as suggestions, depending on the situation. The requirements outline the information that an organisation is required to report or the instructions that it is required to follow and report in compliance with the GRI Standards. When a recommendation is made, it means that certain information or a particular course of action is recommended but not required. Background information, explanations, and examples may all be used to help people better grasp what they are reading (A short introduction to the GRI standard, 2021). The core of sustainability reporting is for an organisation to identify and prioritise its effects on the economy, the environment, and people - and be open about those impacts - and honest about those impacts.

## CSR

A key concept in contemporary business ethics, Corporate Social Responsibility (CSR), has emerged as a way of framing the question of how corporations should behave in relation to the community in which they operate. Because corporate social responsibility (CSR) is interpreted differently in academia and practice, it is not a clear management concept but rather a leading idea that may be implemented in a variety of ways depending on the company's circumstances. CSR is based on the notion that businesses should strive to maximise sound effects on society and stakeholders while minimising adverse effects. The concept of sustainability serves as an essential guideline for the development of corporate social responsibility policies (Lin-Hi, 2021).

## ESG

Environmental Social Governance (ESG) is a term that is used to refer to corporate social responsibility (CSR). In this section, the assessment of the social responsibility of commercial businesses is carried out. That is to say, the voluntarily made contribution to long-term growth by the business community that goes above and beyond what is required by law.

By extension, ESG should be considered in the context of comprehensive corporate governance or as a subtopic within the broader topics of corporate governance and sustainability (*Definition: Was bedeutet ESG (Environmental Social Governance)? | Erklärung im Fonds-Wiki | Glossar EURAMCO, 2021*).

## Introduction to Socially Responsible Investment

The growth in SR investments over the last decade may be attributed to "grassroots forces" among private investors, which indicates that it is driven by consumer choices rather than being "made up by Wall Street" (Schueth, 2003). If primary financial considerations are taken into account, whether SRI may provide superior returns than traditional investments is discussed in considerable detail in the next portion of this dissertation. Several researchers, including Pasewark and Riley (2010), have linked the desire for SRI among confident private investors to the fact that private investors choose investments congruent with their values, which may be motivated by religious or political convictions. The Bischofskonferenz (Jacquemain, 2010) presents an overview of ethical investments and urges its members to adopt an SRI approach while emphasising that not all investments are appropriate for every family in the world. In their empirical investigation, McCann and Clark (2004) discover indications of a new ethical discourse among investors trying to shift away from the "hard-nosed form of capitalism" and globalisation. While the initial discussion held that only a small number of niche investors considered ethical behaviour when making investment decisions, the current consensus in the literature is that significant growth has occurred in recent years and that SRI has begun to "enter the mainstream of investment practice" (Cowton, 1999). Sparkes (2002, p. 86) finds that, although traditional investors and SR investors are motivated by various distinct factors, they share several common concerns. The issue is whether investing behaviour has changed or seeing the emergence of a new generation of investors.

Four thousand individual investors in socially responsible investments (SRI) were studied by Rose (1991). She discovered that the average SRI investor is younger and better educated

than the average conventional investor. While these investors are concerned about environmental and labour issues, they are unwilling to sacrifice financial returns to support SR behaviour. Michelson *et al.* (2004) also mentioned changes in education as a defining element for increasing SR investments. As Sparkes (2002, p. 86) points out, SR investors are highly educated and earn above-average wages, leading him to believe that they are most likely employed in a caring profession. Institutional investors, in addition to individual investors, seem to be making the switch to SRI. In 2009, Risklab reported that "many institutional investors have officially embraced the promotion of environmental, social, and good corporate governance compliant investing" into their investment strategy. However, this attempt may be distinct from the motivations of private investors. Institutional investors, like financial institutions, must assess the impact that the implementation of SRI might have on the value of their companies since their primary purpose is often the maximisation of shareholder value. However, both individual and institutional investors are simply one kind of organisation that could be interested in socially responsible behaviour.

The second category is comprised of the target firms themselves, as well as their motivations for steering their organisations in the direction of SR principles. Hong and Kacperczyk (2009) demonstrate that so-called "sin" enterprises are penalised by the capital markets due to the higher cost of capital they must pay to fund their operations and operations. This would serve as an incentive to do more responsible actions. While they acknowledge that this may be an option for polluting companies who are able to improve their production processes, they argue that businesses such as those that produce alcohol, tobacco, or engage in gambling are charged higher costs of capital due to the nature of their underlying business, which leaves little room for improvement. In their research, Heinkel and Kraus (2001) demonstrate that socially responsible investing (SRI) may drive

corporations to modify their conduct. They demonstrate this by using a simple equilibrium model that demonstrates that a corporation that utilises a polluting technology would face an increase in the cost of capital if a sufficient number of SR investors pull their money out of the company. The surviving investors then expect more significant returns due to owning more shares in the polluting firm than they had initially been planned. They uncover evidence to support their contention that the existing tiny number of SR investors is insufficient to cause a company's business model to alter.

However, a doubling in the number of socially responsible investors may result in a shift in the SR behaviour of corporations. The authors of that paper also address this issue of the potential value-enhancing effect that SR activity may have on a company's valuation, who examine SR behaviour in the context of mergers and acquisitions. They have discovered that the greater the amount of SRI application on the target's side, the greater the profits for the acquiring business are. One reason they provide for this is the target's capacity to learn from the SRI experience, which they believe is good.

This, of course, only provides value if the SRI tactics applied are really "value-boosting" Szilagyi *et al.* (2008) and colleagues investigate whether or not firms should be certified as socially responsible. It is explained by the authors that, according to a "classic financial approach," if all businesses maximise their profits, resource allocation should be Pareto-optimal and societal welfare would be maximised.

A supporting argument for this is the Friedman argument that businesses should be concerned solely with profits and leave it to the government to deal with externalities. Friedman (1970) says that a socially responsible manager is one who spends other people's money (for example, the money of shareholders, customers, and workers) for social

objectives. He also raises concerns about the manager's authority to choose which social cause to promote. In contrast, more modern economic theory demonstrates that societal utility may not be maximised if certain externalities ultimately increase costs.

They argue that the pursuit of shareholder wealth frequently clashes with the issue of social responsibility and that stakeholder wealth maximisation should be a goal to aim towards in practice (Szilagyi *et al.*, 2008). This conflict of interest between stakeholder and shareholder can be resolved in two ways: one approach would be to only implement CSR methods that also increase the present value of the company's future cash flows; the other would be to implement CSR methods that also increase the present value of the company's future cash flows, and the third approach would be to implement CSR methods that also increase the present value of the company's future cash flows. Steps to prevent expensive government-imposed penalties or limit risk exposure would be examples of such measures to consider (Mackey, Mackey and Barney, 2007).

CSR may be shown to lower the costs of disputes between firms and society when they are included in the business model. Because only ethical customers would purchase ethical brands, CSR would correlate with profit maximisation in product sales. As a result, no detrimental welfare impact should be anticipated (Szilagyi *et al.*, 2008). On the other hand, a firm might adopt steps that restrict its future cash flows, a practice that is known as a so-called expensive charity (Mackey, Mackey and Barney, 2007).

Taking a more global perspective, Allen, Carletti and Marquez (2009) demonstrate that stakeholder-oriented societies have greater business values than shareholder-oriented cultures, proving that CSR and shareholder profit maximisation are compatible.

Rivoli (2003) offers intriguing reasoning for the relationship between social responsibility and corporate valuation. She suggests that corporations may choose to be screened into the upbeat category rather than being screened out owing to unethical actions. She points out that if the share price of a business rises as a result of the fact that the company has been screened into an SRI fund, it can be assumed that, if corporations care about their share price, they will attempt to behave in a manner that guarantees positive screening is achieved. Based on many financial publications, Rivoli (2003) concludes that financial markets are not flawless but rather flawed from various viewpoints.

In light of these flaws, several empirical research has shown that a more significant investor base has a favourable relationship with a firm's stock price. The preferred approach is to be screened as positive and hence to attract SR investors as a result of this screening. Positive signalling effects, which can improve a company's quality or reputation (Fombrun and Shanley, 1990; Friedman and Miles, 2001), increase trust in the company's ability to provide high-quality products (Fisman et al. 2006), or attract motivated employees are some of the other arguments for companies to engage in CSR (Nyborg and Brekke, 2004).

### Historical development of SRI behaviour

It is necessary to evaluate the potential and limitations of socially responsible investments. First and foremost, understanding the logic and procedures of the financial market is required in order to do this. What is the actual mechanism by which the financial market operates? What kinds of logic does he work on? What are the underlying rationales behind these decisions?

The worldwide financial markets had written a unique success story up to the breakout of the subprime crisis in the summer of 2007, which had evolved into a global financial and economic disaster a year later (Lounsbury and Hirsch, 2010). The Bretton Woods system, which was a stable exchange rate system with capital restrictions, came to an end in 1971, and a wave of widespread liberalisation of capital movements started in the 1970s (Huffschmid, 2002; Lütz, 2008), which marked the beginning of the worldwide expansion of financial markets.

The financial markets have grown tremendously in power and influence during this period. They are not only more extensive in terms of volume and liquidity, but they are also more vibrant in terms of the players who trade on them, quicker in terms of their speed of circulation, and more transnational in terms of their interdependencies.

Their product and innovation offerings have become more diverse; in addition, more and more social areas have been entirely or partially surrendered to the financial markets in recent decades [for example, privatisation of old-age provision, mobilisation of non-marketable household savings, privatisation of public services, restructuring of the private corporate sector, and development of (supposed) future technologies and markets (Deutschmann, 2005)].

Alternatively, it has an impact on the financial markets' transfer mechanisms, at the very least in an indirect manner. As a result of the genuine growth numbers in financial volumes and flows, one new neoclassical, liberal economic theory has gained traction, attempting to scientifically explain the notion of open, cross-border, liberalised, and deregulated financial markets as feasible.

According to the assumptions of the Efficient Market Hypothesis (Malkiel, 2003), capital flows - if it is not artificially prevented from doing so - to where it can produce the most significant benefit. Financial markets, which are the prime example of efficient markets, "generally get it right when pricing stocks, bonds, and other financial instruments" (Davis, 2009, p. 20).

Based on the arguments of Friedrich August von Hayek (1945), the market is considered to be the most efficient information processing method available. Because the price comprises all essential information, no market player, not even the state, is alone in a position to function as the market in order to get an overview of the whole market. However, he may obtain a sense of where he is in relation to it.

As a result, market pricing provides for the most efficient allocation of capital without the need for further consideration of social or environmental factors, which would simply distort the market. After taking these concerns into account, it is possible to interpret profits produced on these efficient marketplaces as a unit of measure for societal prosperity as well.

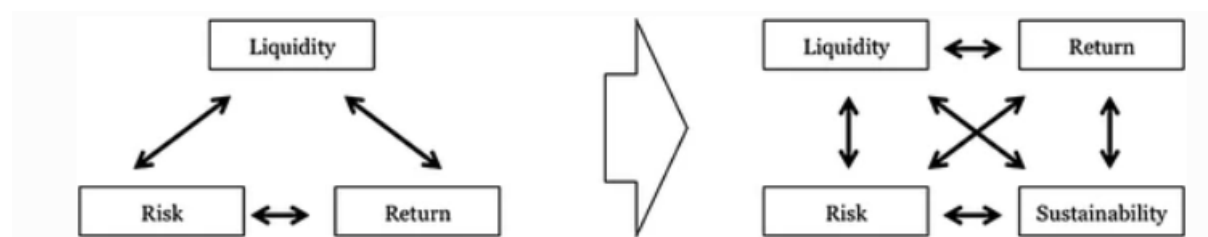
Finally, against the background of the principal-agent theory (Jensen and Meckling, 1976; Fama, 1980), nothing but the residual income that is left in the end remains after all other stakeholders (e.g. suppliers, employees, creditors) have been paid in accordance with the contract; "thus, it represents the excess' value created by the company, a measure of the firm's enhancement of social welfare."

By keeping companies within their legal possibilities to maximise their profit, they also maximise social prosperity. The moral and ethical responsibility of the company does not exist in the special consideration of social or ecological concerns, but solely in the maximum

increase in their profits, which was the tenor of the protagonists of neoliberalism at the time (Friedman, 1970).

In recent years, various approaches have been developed that capture development in the financial market from a social science perspective. Initially, investment choices were based on a basic triangle with three components: liquidity, risk, and return. In today's world, a growing number of investors make use of the magical square, which includes liquidity, risk, return, and sustainability. This may be seen as an improvement on the neoclassical homo economicus, which is only motivated by economic considerations, as shown in Fig. 1 (Cengiz et al. 2010).

Figure 1 Investor needs in the investment process: Cengiz et al. (2010)



In addition to the description of the ever-expanding financial market as Financialization ((Epstein, 2005; Krippner, 2005) has above all that in Western Europe, the concept of financial market capitalism shaped the debate (Deutschmann, 2005, 2008; Windolf, 2005, 2008).

For example, Windolf (2005, 2008) delves into his reflections on financial market capitalism and notes that a "new service class" of financial specialists has emerged in the financial markets. This "new service class," which transcends the operator-oriented logic of the financial markets, is responsible for transferring various transfer mechanisms into the real economy. This dominating class comprises professionals such as financial economists and

attorneys, analysts, fund managers, and investment bankers, to name a few examples. As a result, they are able to consolidate the interests of investors in giant fund firms and thereby gain an advantage over competing interests.

Among the new constellation of actors are institutional investors such as insurance companies and pension funds, which benefit from the large volume of fixed assets they manage and the concentration of Property that they acquire through these means, and who wield considerable power as a result of their size and concentration of Property.

Between 1990 and 2000, the assets managed by institutional investors alone increased significantly in all countries when measured against their share of the gross national product, rising from 127% to 195% in the United States, from 131% to 226% in Great Britain, and from 34% to 80% in Germany (Windolf, 2005, p. 35).

In order to do this, institutional investors have risen to become the dominant owners of major stock businesses: in the United States, they currently hold around 60% of the shares in the 1000 largest publicly traded corporations. The shares are held by the top 20 mutual funds, which account for around 40% of the total. Even if each individual fund only controls a tiny percentage of a business's stock, they may coordinate their actions due to their interests' equality.

As a result, individual corporations combine their influences (working in concert) and are able to exert more influence over the firm (Windolf 2008, p. 518). As a result of their enormous authority and the unique constellation in which they are acting on behalf of firms without taking on ultimate responsibility for it by investing their own money, Windolf refers to institutional investors as "risk-free owners" in addition to "risk-free investors" (Windolf 2008, p. 516).

The institutional investors stand among each other in fierce competition with each other (Windolf 2005, p. 35). Because every single fund strives to attract new investors by offering higher returns than the market averages, and because everyone aspires to earn higher returns than the market averages, the competition is continuously tightening (Lordon 2003, p. 40). Because of these circumstances, all players want to "beat" the market and the market average, so raising the Benchmark from year to year, against which the institutional investors are judged - results in a continually growing level of risk.

Contrary to what the law of supply and demand would predict, despite the continuing oversupply of investment-seeking money, "prices" (i.e., returns) on the financial markets are declining rather than rising. In its place, it will be the somewhat unreasonable return expectations transferred into the firms via the transfer mechanisms developed by the new service class. It is not the corporations that provide the masses of frantic investment-seeking money that may be found in a comfortable negotiation position when a rare excellent "investment opportunity" is available. Even under difficult market circumstances, it is the new service class of financial market capitalism that is able to set the terms of the game.

This goes hand in hand with investment perspectives that are very short in duration.

According to Windolf (2008, p. 526), since the risk grows with more extended periods, and the more and more the risk becomes statistically unpredictable transformed, the forecast period of analysts is one year. It demonstrates empirically that the short-term nature of the investor's perspective has been changing for years, with the turnover rate (tournament range) of shares at the New York Stock Exchange increasing continuously from 12% in 1960 to 73% in 1987 to 103% in 2005 (100% corresponds to the holding period of one year).

In 1960, an investment fund held its shares for an average of 8 years. Today, an investment fund retains its shares for less than a year on average (Windolf 2008, p. 527).

In light of the increasing volatility of the markets, the frequently criticised propensity towards the short term is a sensible response (Windolf 2008, p. 527). Quarterly reports in which corporations report on their financial accounts and are held accountable for their performance are the comparable counterpart at the corporate level. Nevertheless, it is not just due to quarterly reports that the operational logic of the financial markets is carried into companies and the real economy. The implementation of a general shareholder value orientation; the control of the company management via indicator systems and target agreements (Deutschmann 2005, p. 66); the discipline of management about the market for corporate control (Höpner and Jackson, 2001); the coupling of interests from investors and management through stock options that reward short-term stock price increases; or influencing through benchmarking, in which every company in which the fund holds shares are measured against the top companies in the respective economic sector (Windolf 2008, p. 518): they all belong to the transfer mechanisms that discipline the actors in the actual economy act to act in the interests of institutional investors (Windolf 2008, p. 532).

The funds and their managers do not (in most cases) exercise their rights by actively intervening in the company's operational business. However, they agree (i.e. dictate) guidelines on so-called good corporate governance standards (Overbeek, Apeldoorn and Nölke, 2007; Jürgens, 2008) and define principles to which the managers have to orientate themselves, like, for example, the concentration on the core business and the sale of unprofitable or missing business areas.

Overall, from the perspective of institutional investors, the specific order of rationality (Kädtler, 2009) of financial market capitalism aims at gaining control over the most significant possible amount of capital through financialisation that is as liquid as possible so that it can be invested in the most profitable financial locations at any time without significant loss of time or transaction costs to be able to pull it off again.

Financialisation also contributes to commodification in one way: it opens up sectors that were previously unavailable to the financial markets and makes them comparable using a consistent measure of value, capital (Lordon 2003). According to theory, the greater the amount of capital channelled in this manner on the global financial markets, and the greater the extent to which these markets adhere to common rules and standards, which are transparent for almost everyone, the more efficiently they function in terms of optimal capital allocation.

It is profit maximisation with the side consequence of consistently producing external expenses that is the goal of this running worldwide markets after reaching a particular scale. Considering this panorama of financialisation and the financial market capitalism in terms of its modes of operation, logic, and mechanisms, the question of the chances and possibilities of considering non-financial aspects arises. This is a difficult question to answer. When it comes to a financial system that runs exclusively on financial indicators, how can ethical, social, and environmental considerations be included without being quickly buried beneath the logic of profit maximisation?

Despite this apparently diametrically opposed structure, a financial market sector dedicated to long-term investments has developed as a sub-area of the conventional financial market in recent decades. The following section provides information about the SRI segment.

## Development of SRI

SRI has its beginnings in the United States, and it accomplishes it in two ways: first, by establishing a physical presence in the country. Beginning with religious organisations such as the Quakers and the Methodists, who refused to invest in certain companies involved in selling alcoholic beverages, tobacco, pornography, or weapons at the beginning of the twentieth century because of their Christian moral convictions, came to prominence.

In the beginning, SRI was primarily defined by the exclusion of specific firms in order to avoid coming into conflict with one's ideals. SRI formed this phase. The "modern SRI" developed further in the 1960s when the firm decided that it no longer intended to banish from the investment portfolio solely but instead sought to raise a shift in the company's conduct in accordance with the guiding principle.

In addition, SRI investors created new tools and procedures for monitoring and exerting influence on company decisions. Unhappiness with the economy and politics contributed to the urge to switch employers. When Andrew Shonfield (1967) coined the phrase "planned capitalism", the lines between these two subsystems were blurred: certain corporations took over state social services, while politics offered corporations preferential access to new markets.

The Vietnam War, which lasted from 1965 to 1974, inflamed public opinion against the government and a slew of corporations that benefited from the conflict, such as those who sold the chemical agent Orange. During this time, because of their dual disdain for politics and business, the first students attempted to influence corporations via their tuition payments (Sparkes, 2003).

Universities and religious actors in the United States were faced with the dilemma of deciding whether they wanted to be engaged in firms that had invested in the war and profited from it or if they wanted to use their shares to exert pressure on these companies. During this period, several of the essential SRI funds in the United States were founded, including the *PaxWorld (Balanced) Fund* in 1971 and the *Dreyfus Third Century Fund* in 1972.

As a result of the nascent consumer movement at the time, new socially responsible businesses were able to arise, making them more attractive for investors. A broad perception exists that consumer interests are increasingly being sacrificed to the profit-maximising aims of huge businesses, which led to the creation of this movement.

A significant milestone in this direction was the release of consumer lawyer Ralph Nader's book "Unsafe at Any Speed" in 1965, in which he brought to light the many safety flaws in automobiles in the United States. That one of the early motions by SRI shareholders was passed at the annual general meeting of General Motors in 1970, which was the most prominent US firm at the time and also the world's largest vehicle manufacturer at the time (Sparkes, 2002, p. 30).

Despite these developments, the SRI investing market in the United States continued to expand at a very moderate pace in the 1970s. The demonstrations against the apartheid state in South Africa gave SRI a new life, which helped to propel the organisation forward. "If Vietnam unlocked the door to socially responsible investment, South Africa kicked it open" (Sparkes 2002, p. 52).

On 1 January 1977, Reverend Leon Sullivan, an associate of Martin Luther King, issued the Sullivan Principles, which established minimum criteria for US corporations doing business in South Africa. These principles included, for example, the elimination of ethnic segregation in

the workplace, the provision of equal and fair working conditions for all workers, and the payment of equal compensation for equal effort. When it comes to making investment choices, these ideas have served as a guide for a large number of university endowment funds and church funds.

In Europe, a contemporary SRI did not begin until the 1980s, about a decade later than in the United States, with Great Britain serving as a pioneer and trendsetter in this field.

Another decade later, in the late 1990s, socially responsible investing (SRI) began to carve out a distinct niche on the financial market in Germany and (Louche and Lydenberg, 2006; Sandberg *et al.*, 2008).

Because of a growing desire for more and more credible information regarding the engagement of British firms in or with South Africa, EIRIS was established in 1983 with the backing of the Quakers and the Methodists, and it continues to this day. EIRIS is still one of the essential SRI research and rating organisations in the United Kingdom. In Germany, the beginning of the contemporary SRI is generally seen during the 1990s or the 2000s.

However, an examination of the historical record reveals that individual banks had already integrated their investment criteria on social concerns with SRI standards sometime before then. The GLS-Bank, which was established in Bochum, continues to focus on funding ecological, social, and cultural initiatives today, as it was back in 1974. Consequently, the distinctions between the different nations are still discernible today and, when compared to the forerunners, the United States and the United Kingdom, are rather significant in magnitude.

As reported by the European Sustainable Investment Forum (*European SRI Study 2008*, 2008), Germany had 11.1 million Euros out of a total of 1.698 billion euros, or 0.65%, of all

SRI investments, according to Eurosif 2008 numbers. However, it was 959 million out of 4.269 billion Euros in the United Kingdom, representing a multiple of 22.46 times the value of the German currency.

Similarly, in the United States, the corresponding figures are collected by the *2007 Report on Socially Responsible Investing Trends in the United States*(2007), which uses a different definition of socially responsible investing (SRI) than the United Kingdom and Germany.

As a result, a direct comparison between the USA and Great Britain and Germany is only possible to a limited extent.

### Screening Approach

Generally speaking, screening can be characterised as "a criterion applied to a universe of possible investments that assist in narrowing the pool of applicants" (Kinder and Domini 1997). There is a difference between positive and negative screening in the academic literature. Researchers Renneboog and colleagues (2008) discovered that most SRI mutual funds use more than one screening process to select their portfolio compositions. In the United States, 64% of these funds utilize more than five displays, while 18% use just one screen, according to the authors.

When religious groups started to invest according to SRI principles, avoiding "sin stocks"—gambling, alcohol, and tobacco—became a subject of discussion (Cowton 1998), resulting in negative screening techniques. Military contracts, alcohol and tobacco, gambling, and nuclear power are some of the conventional negative social investment screens (Kinder and Domini 1997).

Furthermore, a company's environmental record, product quality, attitude toward customers, corporate responsibility, employee relations, and cultural diversity may be considered throughout the screening process (Camey 1994). Some studies also highlight political contributions and harsh government regimes as sources of income for the wealthy (Luther et al. 1992). Barnett and Salomon (2006) give a detailed overview of the many screening options available via the Social Investment Forum.

Companies with specified qualities are removed from consideration based on a negative screening or avoidance strategy, respectively (Camey 1994; Cowton 1998; Bischofskonferenz 2010; Renneboog et al. 2008). This technique has been critiqued, among others, by Schwartz (2003), who wonders whether all negative ethical screens, such as gambling screens, are really ethical screens. For the vast majority of "questionable" sectors, he says, both bad and good consequences may be implemented simultaneously.

The gambling industry is an example, which most Americans today consider a legitimate recreational activity. His preference is for clear rules of ethics to be implemented rather than screenings that "reflect intended investor's social, religious, or political views and beliefs, which are not always morally justifiable."

Another stumbling block in screening is determining which firms one wishes to eliminate from a portfolio when using this screening methodology. Cowton (1995, p. 222), for example, offers an overview of how various funds perceive the screening technique for military contracts, which is a good illustration of what we mean. Some countries prohibit full participation in the arms trade, while others restrict just the production or distribution of weapons. There is also a distinction between funds that remove just firms with significant involvement in military contracts and funds that exclude companies with a minor overseas

subsidiary that manufactures strategic products such as radar equipment from their portfolios, among other things (Cowton 1995, p. 222).

The positive screening approach refers to the practice of making investments exclusively in firms that match particular criteria (Camey 1994; Cowton 1998). This goal is to support and help firms in their efforts to promote social responsibility (Bischofskonferenz 2010). Using the example of ethical screening, Richardson (2009) attacks the technique. He observes that "in an environment where socially responsible investing is essentially a question of individual choice," some financiers simply "masquerade" as responsible investors while continuing to engage in immoral business activities.

In addition to the traditional approaches of positive and negative screening, mixed strategies—such as the two-stage approach, which begins with negative screening and then moves on to positive criteria—as well as the trade-off approach, which calculates an overall score or rating for companies—are explored (Cowton 1999).

### The market for SRI: companies, intermediaries, and investors

The following section examines the market for socially responsible investments and the environmental, social, and ethical investing standards under which it works. What exactly does one have to imagine under the market for SRI? How, by whom and in what way are SRI criteria established, applied, and adhered to? In addition, brief and simplified depictions of the SRI market will be divided into three primary sections and analysed more deeply.

On the demand side, states and companies are seeking SRI funding and, as a result, emphasising their SRI activities in words and actions (e.g., through sustainability reporting following GRI standards); on the supply side, there are SRI investors who offer sustainable money and their investment strategies that are subject to sustainable criteria; and on the third side, there are sustainability research and rating agencies that act as central intermediaries between supply and demand. They give the relevant information, for example, in the form of reports or sustainability indices, to enable investors to match the services they demand with the firm's services.

## Companies

In the case of SRIs, publicly-traded corporations or states are the primary investment vehicles. Assuming that government bonds are excluded at this point, funds primarily invest in accordance with SRI criteria in large, publicly traded companies that are often transnational. In contrast, small and medium-sized companies that are not financed through the capital market are less affected by SRI investment practices. Differences do exist amongst publicly traded corporations, in any case. A review of the firms whose shares are most often held by European SRI funds reveals that not a single German company appears among the top ten publicly traded corporations in the world (Oekom Research 2010).

Companies, in the absence of regulatory rules, voluntarily report on their performance in the area of Corporate Social Responsibility in order to attract the attention of sustainable investors, for example, they may publish CSR or sustainability reports, or they could include environmental, social, and governance (ESG) considerations into their financial reporting (Sandberg *et al.*, 2008)

Although there are numerous indications and many big and small individual instances, sustainability reports only cover a tiny portion of the ramifications of a company's activities. They are neither comprehensive nor particularly suited for ecological comparisons and social balances (if such comparisons and balances are even possible), but instead, they are tools for the presentation of a company's image. Aside from the sort of reporting, the confirmed information is only validated by the firms that provide the information in the first instance (Kädtler, 2009).

As a result of CSR activities and reporting providing an essential foundation on which SRI intermediaries such as rating and research organisations conduct analyses, CSR and SRI are closely intertwined. SRI has few beginning points when a firm vehemently opposes CSR. For organisations that have already established CSR initiatives, a subsequent "boom" in SRI might provide an additional motivation to extend these activities even further.

It is also possible to include socially responsible investing criteria into financial reporting, which is a second method of doing so. The facts and data on SRI indicators that are not exhibited individually in special CSR reports for the general public, but are recorded as an inherent component of company accounting and made available to the public as part of the quarterly reports, will be covered in this situation (Epstein, 2005).

ESG accounting is a widespread practice incorporating non-financial variables into financial accounting. It is distinguished by the use of ecological (E) and social (S) indicators. Questions on appropriate and accurate corporate management (G / Governance) have been included in this section.

Instead of serving as a basis for the ethical evaluation of companies, ESG criteria are used to identify indicators that may be necessary for the organisation's financial success. This is in

contrast to the reporting of CSR and sustainability reports. ESG is, therefore, a kind of risk management in which the criteria are examined to see whether or not they have a material impact on the company's financial success (Krippner, 2005).

SRI intermediaries: research and rating agencies as well as stock indices

It takes much effort to bring the supply and demand of SRIs together; hence, several rating and research agencies act as brokers. The majority of small to medium-sized businesses accumulate and sell SRI knowledge on the market, except for a few banks and institutional investors that develop their SRI expertise in-house via their research and development departments.

Unlike the creditworthiness rating that has been in place for nearly a century, in which large international rating agencies such as Standard & Poor's or Moody's alone predict a company's financial health and the likelihood of failure, the SRI or corporate social responsibility/corporate sustainability rating has been in existence for only a few decades.

The differences in the various rating systems that are aimed at determining SRI/sustainability performance are, however, significant when it comes to the indicators and methods that they use. "On a worldwide scale, there are now around 60 institutions that carry out an independent sustainability evaluation" (Schäfer et al., 2006).

In their recent paper (Fuchs and Gehring, 2017), the Heidelberg economics professors Fuchs and Gehring propose that investors, bankers, and even rating agency experts put a more significant premium on their own nation than on other countries. Fuchs and Gehring believe that this is true. According to their findings, nations that are comparable to the home countries of the agents get much better ratings as well, which is a significant finding. For

example, a common language was a crucial influencing aspect in the collaboration. The central US agencies consider high public debt in English-speaking nations such as the United Kingdom or Australia to be less severe than high public debt in Italian or Spain.

The conclusions of the research are pretty comforting for investors. Investors make a number of judgments that are supposedly based on objective credit ratings. Government regulations often impose restrictions on large investors, such as insurance firms and pension funds, who are obligated to acquire only securities that have received a particular grade. When judgments are as subjective as the results of the research suggest, such norms are primarily meaningless.

Even minor biases can have significant repercussions for refinancing costs, mainly if they cause nations to go below or rise over specific thresholds (Forbes and Rigobon, 2002; Jaramillo and Tejada, 2011).

Dr Gehring (2017) urges the development of additional credit rating organisations in other parts of the globe to improve the objectivity and reliability of credit ratings. "For example, significant investors may be required to assess two ratings from separate nations' rating organisations", he explains. It is anticipated that this would raise demand for credit ratings and stimulate the entry of other rating companies into the market. As a result, the market leader's monopoly in the United States of America may be challenged at some point in time.

SRI-stock indices are distinguished because they choose their clients based on social and environmental criteria rather than financial ones. Companies' social and environmental performance, rather than their size or profit margin, is being sought in this case. A company involved in atomic energy, weapons, child labour, or animal experiments is excluded from the Nature-Aktien-Index (NAI), selecting those that meet at least two of four positive

criteria. In order to qualify, the companies must, for example, "contribute significantly to the environmentally and socially sustainable solution of societal problems" or "be a leader in their respective industries in terms of product design, technological design, or social design" (*Natur-Aktien-Index - Die NAI-Kriterien - Langfassung, 2021*).

In terms of product design, being a market leader does not necessarily imply having the most beautiful design; instead, it is measured against indicators such as product longevity, product safety, recycling ability, and substitute hazardous substances. Consequently, SRI-Indices convey essential signals to investors, informing them of how well-positioned the listed companies are in terms of long-term sustainability. Other well-known SRI indices include the FTSE4Good index, which is compiled by EIRIS in collaboration with the Financial Times Stock Exchange Group and the Dow Jones Sustainability Indices (DISI), which are based on an evaluation of SRI performance by SAM (DISI) (Hiß, 2011).

Law investors do not mandate investment in SRI. Nonetheless, SRI incentives are associated with socially or environmentally responsible behaviour when investors, on the one hand, become more conscious of the consequences of their investment decisions and, on the other hand, their financial resources that are linked to social and environmental conditions in an indirect manner.

For the data analysis part of the dissertation, SRI ratings of rating agencies in Germany, the UK, and the USA, respectively, will be considered to evaluate the local stock market to reduce the possibility of a "home bias" (Fuchs and Gehring, 2017).

## The Performance of Socially Responsible Investments

The academic literature seems to be divided on whether SRI is profitable or not when comparing SR investments to conventional funds. Many meta-studies are available on the link between financial success and social responsibility. Among the researchers cited by Mill (2006) are Wood and Jones (1995), who examined 60 empirical studies between 1970 and 1994; Pava and Krausz (1996), who examined 21 studies between 1972 and 1992; Margolis and Walsh (2003), who investigated 127 studies between 1972 and 2002. Orlitzky, Schmidt and Rynes (2003) examined 52 studies between 1972 and 1997, and Salzmann, Ionescu-somers and Steger (2005) investigated 15 studies between 1975 and 2001. Mill (2006) also mentions Pava and Krausz (1996). In addition, Hoepner and McMillan (2009) conducted a review of 51 research conducted between 1991 and 2007. Mill (2006) concludes that SRI has a favourable influence on financial performance based on the findings of these meta-studies.

### When SRI = Conventional Portfolio Returns

According to Sandberg et al. (2008), this first hypothesis is compatible with a world in which social responsibility is not priced in the market, i.e., SR investors who wish to sell their shares find enough conventional purchasers for them and hence share pricing is not altered. To put it another way, being a socially aware investor is at the very least not "stupid," as Guerard (1997) says. This also implies that SR firms do not gain anything by operating in this manner since their cost of capital is not decreased compared to regular companies due to their actions. Using the Jensen alpha of 32 SRI mutual funds compared to value-weighted NYSE returns, Sandberg *et al.* (2008) demonstrate that this hypothesis is correct by doing

their research. According to Hamilton et al. (1993), this first hypothesis is compatible with a world in which social responsibility is not priced in the market, i.e., SR investors who wish to sell their shares find enough conventional purchasers for them share pricing is not altered.

In his article, Schröder (2004) evaluates SRI funds from the United States, Germany, and Switzerland and concludes that there is no substantial underperformance compared to their respective benchmarks. He discovers that US investors are more reliant on blue-chip firms, while German and Swiss SRI funds are more reliant on smaller cap businesses.

By employing a matching approach, Bello (2005) demonstrates that between 1994 and 2001, ethical funds did not perform significantly worse or significantly better than conventional funds when it came to the effect of assets held, portfolio diversification, and the variable effects of diversification on investment performance. Bauer, Koedijk and Otten (2005) investigated ethical mutual funds in Germany, the United Kingdom, and the United States and found no evidence of statistically significant differences in risk-adjusted returns between ethical and conventional funds between 1990 and 2001. They used the CAPM and Carhart's four-factor asset pricing model for return calculations, respectively. They discovered that different investing methods are employed—ethical funds, for example, seem to be less vulnerable to market volatility than conventional funds.

### When SRI < Conventional Portfolio Returns

Second, according to Hamilton and colleagues (1993), SRI portfolios should provide lower returns than conventionally managed portfolios over time. In support of this, Rudd (1981) makes an argument that is similar to traditional portfolio theory. Because socially responsible criteria restrict the allocation options available to fund managers, they result in

increased expenses and investment risk, which have a detrimental influence on the portfolio's performance.

The likelihood of uncompensated risk in a socially screened portfolio is also addressed by (Kurtz, 1997), and it is considered one of the most significant impediments to adopting socially responsible investing practices. Similarly, Luther, Matatko and Corner (1992) assert that SRI portfolios' returns may be lower due to higher monitoring expenses, a more limited investment portfolio, and fewer diversification options.

As Cowton (1998) points out, SRI fund returns would probably be lower than those of the different mainstream funds since mainstream investors will create the same portfolio as SR investors, but not the reverse. Several authors, including Michelson *et al.* (2004) and Tippet (2001), have referred to the lower returns of SRI funds as an "ethical cost".

Even though the logic presented above is compatible with classical portfolio theory, just six researches have shown empirical evidence for the notion that SRI portfolios generate lower than anticipated returns when compared to traditional funds. Mueller (1991) evaluates ten mutual funds that include ethical limitations and finds that they underperform conventional funds in this category by a large margin compared to conventional funds in general. When making investments, an investor loses on average around one percentage point of return every year if he or she considers ethical factors.

Teper (1992, p.343) compares the performance of the KLD 400 between 1985 and 1989 with that of the S&P 500 and finds that the SRI strategy underperforms by a wide margin. Based on their findings from matched pair and cross-sectional analyses, Gregory, Matatko and Luther (1997) conclude that ethical funds tend to underperform their benchmarks compared to traditional fund benchmarks. Kahn, Lekander and Leimkuhler (1997) compare

the performance of a tobacco-free S&P 500 portfolio with the performance of the whole S&P 500 portfolio and find that the tobacco-free portfolio underperformed the entire S&P 500 portfolio between 1986 and 1996.

Based on his research findings, Tippet (2001) demonstrates that the three most considerable Australian ethical mutual funds underperformed their benchmarks between 1991 and 1998. He attributes this underperformance to rising transaction costs and management fees, which he believes are to blame. In conclusion, Geczy et al. (2005) relate the costs of SRI to the investment views of different investors: whereas investors who follow a market index incur only a few basis points of underperformance per month, investors who pay closer attention to fund manager skills incur much higher costs of up to 30 basis points per month (von Wallis and Klein, 2015).

### When SRI > Conventional Portfolio Returns

Investors may underestimate the influence that unfavourable news due to irresponsible conduct may have on conventional fund performance. According to the third hypothesis proposed by Hamilton et al. (1993), SRI businesses' returns are more significant than their conventional counterparts.

In the case of bad news, conventional portfolio underperformance would be expected, and in the case of positive news, SRI portfolio outperformance would be expected. It is backed by Moskowitz (1997), who demonstrates that excellent environmental screening reduces the chance of significant expenses due to environmental catastrophes, which would otherwise result in lower returns on traditional portfolios. As a result, he believes that strong social and environmental performance indicates high management quality, which

may improve the returns on SRI portfolios. In addition, he gives the first portfolio of fourteen SR enterprises but does not reach any conclusions about their performance.

Finally, SRI mutual funds may provide better returns than conventional funds since they are subjected to more scrutiny – or at the very least should be – than conventional funds (Schwartz, 2003). As previously noted, the former apartheid system in South Africa served as one of the primary impetuses for establishing SRI. This sparked a worldwide debate over whether or not investments in firms doing business in or with South Africa should be barred from the country.

Using data from South African corporations, Grossman and Sharpe (1986) investigate the impact of divestments on getting more ethical investing outcomes. Compared to traditional funds, they discover that portfolios that exclude South African-related firms provide greater returns while assuming the same amount of risk.

Luther and colleagues (1992) analyse ethical unit trusts in the United Kingdom and find no evidence of outperformance of ethical funds relative to their conventional equivalents on a risk-adjusted basis. They do, however, believe that their findings are restricted since they are too variable and too tightly connected with low yields to allow for any relationship between returns and ethical consequences in SRI portfolios to be established. They also discover that their screened portfolios have a slight firm bias and low dividend yields.

There could be a reason for the slight company bias in that it is very likely to find at least one department in a vast diversified company that could be considered unethical (von Wallis and Klein, 2015, whereas small companies are much less likely than large corporations to be assigned to the "unethical" section of the report.

Research conducted by Mallin, Saadouni and Briston (1995), spanning 1986 to 1993, found no significant performance differences when comparing ethical funds to non-ethical funds. They discovered that ethical trust funds beat non-ethical trust funds but that both outperform the market as well as the market index. Considered in the context of risk, most of the portfolios under consideration exceeded their benchmarks, whereas portfolios with more than 70% of their assets devoted to equities underperformed their benchmarks (D'Antonio, Johnsen and Hutton, 1997). One limitation of this research is that it was conducted over a brief period of time.

### SR Performance Conclusion

When comparing the Domini Social Index 400 to the S&P 500 between 1990 and 1999, Kurtz, Sullivan, and Francisco (1999) discovered that the outperformance is not due to any "social factor," but instead was due to macroeconomic effects, the DSI 400's high exposure to growth-oriented stocks, as well as industry-specific risks, rather than any "social factor".

According to Epstein and Schnietz (2002), the Fortune 500 index is divided into three independent groups: environmental abusers, labour abusers, and the remainder. They then examined a particular period in time, namely the collapse of the 1999 World Trade Organization (WTO) discussions. They discovered that the first two groups outperformed the remaining portfolio by a large margin in the period around this occurrence.

Furthermore, Gompers, Ishii and Metrick (2003) demonstrate that effective corporate governance has a favourable impact on the success of a corporation. Their research created a governance index, which ranked 1,500 companies based on their ability to protect

shareholders' interests. They then put their trading approach into action, selling the companies with the lowest shareholder rights and purchasing the companies with the highest shareholder rights. They generated an extraordinarily high rate of return of 8.5% each year using this straightforward method.

These results are consistent with the argument provided by Tippet (2001) that eliminating businesses whose management activity is deemed unethical should result in considerable outperformance since firms with excessive expenditures are avoided (i.e., firms with unethical management behaviour are excluded).

Hill *et al.* (2007) evaluate 11 companies that are well-known for their socially responsible activity with chosen SRI mutual funds and a conventional benchmark to arrive at their conclusions. For the short-term, 3- and 5-year time horizons, they discovered that neither the single companies nor the SRI mutual funds picked could beat the market. They concluded that there had been no compelling evidence of a link between social responsibility and financial returns.

Following up on their findings, Fowler and Hope (2007) state: "Despite a substantial amount of study, there is no agreement in either the academic or practitioner groups on the relative performance of SRI mutual funds." According to Barnett and Salomon (2006), a possible explanation for the disparate results discussed above can be found in their paper, which proposes a possible explanation for why the debate on the relationship between socially responsible investing and financial performance has raged on for so long.

They concluded that one must choose between adhering totally to a specific SR investment screening procedure and reaping the benefits of better managed and more stable

businesses being picked or excluding just a small number of firms to preserve the capacity to diversify.

Their methodology does not compare SRI and conventional funds, as many previous studies have done, but instead examines disparities within SRI funds and the effectiveness of various screening methods. Ultimately, they found no linear link between financial and social performance; instead, the relationship is curved, with the most significant financial success occurring at the lowest and highest levels of social responsibility, respectively. The 11 chosen businesses, on the other hand, provided many positive alphas over the long run (10 years), outperforming the market as a result.

David Diltz (1995) used the same rationale to a predetermined portfolio and discovered that varied performance outcomes were obtained based on the kind of screen he utilized. When it comes to the relationship between ethical investments and financial returns, the influence of different screening methods is also blamed by Tippet (2001) for the divergent findings in academic literature.

For example, when screening is done solely on a company's product (for example, alcohol or tobacco), profitable companies will likely be excluded from portfolios, and that underperformance will be reported. When screening is done based on management's ethical behaviour (i.e., when the independence of auditors or management remuneration are taken into consideration), excluding firms that are behaving unethically in this understanding will most likely exclude companies from portfolios that bear additional costs and, as a result, will most likely show outperformance when compared to their conventional benchmarks.

The fact that there are so many distinct definitions of SRI, which may have an impact on the outcome of the study, is another reason for the discrepancies in findings obtained by the different studies (Sandberg et al., 2009).

If we look at the empirical research discussed above, we can see a wide range of outcomes when comparing the relationship between social and financial success. Garcia-Castro, Ariño and Canela (2010) identified three possible explanations for the discrepancies in the data. In the first place, they pointed out that assessing social performance is challenging, and sophisticated techniques to do so are still not universally recognized in society. Also stated is that some conditions may impact the link between social and financial success that is not fully understood. Finally, the differences in the results of the long- and short-term analyses of the connection between social and financial success may be explained by the various time horizons used in the analyses.

According to Derwall, Koedijk and Ter Horst (2011), the fact that investors have a variety of investing approaches may contribute to a wide range of outcomes. The "shunned-stock hypothesis," which holds that value-driven investors use negative screening approaches to derive their investments, thereby filtering out non-SR investments, leads to an overall decrease in demand in the market, resulting in relatively lower stock prices, is used to explain the perceived underperformance of sustainable resource investments.

According to them, the opposite is accurate, and they claim that profit-driven investors who use positive screening procedures may account for the outperformance of these assets. The "error-in-expectations hypothesis" may be responsible for the apparent outperformance of social responsibility initiatives since the market seems to consistently underestimate the beneficial benefits that CSR may have on a company's bottom line. Although neither theory

can be proven correct in the long term, the combination of both screening procedures in practice may explain those performance studies that found SR and conventional funds to have equal performance.

The authors of Galema, Plantinga and Scholtens (2008), on the other hand, contend that SRI reduces the book-to-market ratio and that, as a result, alpha is not well equipped to capture the beneficial SRI impacts. Even as they show a positive association between financial and social performance, the researchers also provide a plausible reason why so many different studies come up with varied findings when attempting to establish a correlation between alpha and social responsibility.

## Methodology

A description of the research technique used to answer the research question and achieve the research objectives is provided in the fifth chapter. In addition, the appropriate study design, data collection, and technique of analysis are discussed in detail.

### Qualitative and Quantitative research

There must be a clear understanding of the research approach, which will guide the overall course of the investigation. Bryman distinguishes between quantitative and qualitative research strategies when selecting the most suitable research technique for a given situation (Bryman, 2016).

As a defining quality, this viewpoint might be unsatisfying and unclear, even though it provides a straightforward categorization of the many research techniques (Saunders *et al.*, 2019). As a result, academics have a common belief that the two methodologies are merely different in terms of their quantitative metrics; however, according to (Bryman 2016), there are more distinctions than this surface distinction. The philosophical and ontological assumptions underpinning quantitative and qualitative research are different, impacting both theory and data collection and analysis (Saunders *et al.*, 2019). By understanding participants' sentiments about the issues under investigation, qualitative research may uncover fresh ideas and inner perceptions often represented verbally or visually in the findings (McGivern, 2009).

Combining qualitative and quantitative data in one study or program of inquiry created a new method of research, which (Tashakkori and Creswell, 2007) define as research in which

the investigator collects and analyses data, integrates the findings, and draws conclusions while using both qualitative and quantitative approaches or methods in a single study or program of inquiry.

## Qualitative Research, Expert Survey

### Participants

The target demographic of the qualitative data analysis was senior employees of multinational businesses' investment departments. It was possible to attain a final sample size of five professionals for this research portion, with each employee being male. Their companies have headquarters in Germany, Ireland, the United Kingdom, and the United States. Potential participants were identified via prior work contacts, with the assistance of the mentoring supervisor and their knowledge and experience in the investment field. Table 1 contains information about the interview partners that has been anonymized.

*Table 1 Survey Participants*

Survey Participant	Country of operations	Years of Experience	Job Title
Expert 1	Europe, UK, US	28	Head of Equities
Expert 2	Europe, UK, US, Asia	30+	Director of Business Development
Expert 3	Europe, UK, US, Asia	23	Managing Director, US Equities

			Investment Specialist
Expert 4	Europe, UK, US	10+	Head of Equities
Expert 5	Germany	2+	Junior Manager

## Design

Various qualitative research techniques, such as in-depth interviews, observations, focus group discussions, or accompanied visits, are often utilized when previous information is lacking (Saunders *et al.*, 2019). Quantitative research, on the other hand, is associated with a deductive research approach, testing existing theories through a structured technique of data collection, and is claimed to be a more objective approach due to the distance between respondent and researcher (Hanson *et al.*, 2005; Bryman and Bell, 2016).

This research technique is exploratory in nature, with the goal of adding new insights to previous research in order to better understand the issue at hand. This is in contrast to explanatory research, which examines a scenario or problem in order to explain correlations between variables (Saunders *et al.*, 2019).

Because the primary study purpose is dual in nature, a mixed-methods approach is used, with both qualitative and quantitative data analysis being performed. The qualitative analysis gives essential clues for formulating particular research questions for the quantitative phase of the experiment, which will be used for data collecting in the next stage (Ivankova and Plano Clark, 2018). Furthermore, since this study is based on two separate data sources, the combination of qualitative and quantitative data that is obtained gives a chance to increase validity (Doyle, Brady and Byrne, 2009; Gibson, 2017). It is possible to offer a more extensive overview of the research question by presenting a dual

viewpoint on the topic (Saunders *et al.*, 2019) in an area that has received little prior study. As a result, a mixed-method approach is the most appropriate research strategy for this thesis, given the nature of the research topic and the exploratory aspect of the theory. A qualitative expert survey with five senior members of prominent multinational firms with investing backgrounds is conducted in the first phase, followed by an econometrical review of the stock market performances of 270 distinct stocks in the second phase.

Following the selection of an appropriate research plan, it is necessary to establish a framework for carrying out the study. This is where research design comes into play, which is often described as an overarching framework or strategy that is followed in order to appropriately answer the study questions (Saunders *et al.*, 2019). More precisely, it refers to a set of processes and techniques for data collecting and analysis that are required in order to complete the research project's objectives (Bryman and Bell, 2016).

To summarize, this thesis aims to study the possibility of a positive link between stock performance and the relevant sustainability rating. Due to recent shifts in investment behaviour and the increasing relevance of sustainable investment (*Tectonic shift to sustainable investing – Institutional*, 2021), new primary research is needed to incorporate current Covid-19 trends and to lay the groundwork for further analysis. The qualitative research instrument is a fully structured, in-depth expert survey with senior investment personnel from multinational corporations. It consists of open-ended questions regarding their observations of changes in investment behaviour and current investment methods and questions about current investment methods. The use of open-ended questions was used in order to prevent the potential for bias that may arise from proposing replies to people (Urša Reja *et al.*, 2007). The participants are encouraged to rely on their own personal experiences

and knowledge from the investing environment in order to complete the interviews, which is the goal of conducting expert interviews (Gough, 2015; Mayring, 2014). For the complete questionnaire, see Appendix 1.

## Materials

Considering the literature review, the expert questionnaire consists of 11 different questions (see appendix) regarding changes in investment behaviour and possible opportunity costs of sustainable investment. A total of 5 experts were surveyed. They were asked to give information about their years of experience, the company name, and position in the company.

As each answer differed in complexity and length, the answers provided by the participants were categorized by the question, summarised, and compiled into a table for better comparison. A three-step process was used to evaluate the respective surveys based on Braun and Clarke (2006) six steps. The first step is coding, in which the given answers are combined into different segments, regarding ethics criteria, SRI definitions, how much of the overall percentage are SRI, and financial performance expectations. The next step was the creation of categories to determine overarching similarities in their answers. These categories were then used to present the survey results in the last step.

## Procedure

A categorisation strategy is used to categorise the outcomes of the interviews and, as a consequence, make the analysis more straightforward (Mayring, 2014). Furthermore,

Rädiker and Kuckartz, 2019 explain that factual categories are divided into content and theme categories, analytical and evaluative categories and that this study modifies the employment of these categories depending on the context. The expert survey was sent out through email to all participants who provided their official email addresses.

Due to the scope of this thesis as a master's thesis, no other individuals were engaged in the assessment process other than the author of this thesis.

## Quantitative Research

### Participants

The stock indexes from the German, British, and American stock markets are the target demographic for the quantitative data analysis. With 40 stocks in the DAX, 100 stocks in the FTSE, 30 stocks in the Dow, and 100 stocks in the NASDAQ 100, there were a total of 270 stocks in the indexes selected for the year 2020. The decision to use these stock exchanges was made during the literature review process and resulted in an adequate sample size.

Their success is judged by the performance of a portfolio of stocks belonging to companies operating in a varied range of industries and will be explained in further detail below in the design section. The individual stocks that make up the indices will be analysed to see a favourable association between stock market performance and sustainability rating.

*Table 2 Stock Indexes*

Stock Index	Number of Stocks	Region
DAX	40	Germany

FTSE	100	United Kingdom
Dow Jones	30	United States
NASDAQ 100	100	United States

## Design

### *Single Company Approach*

As previously stated, the majority of research design SRI portfolios compare them to their conventional counterparts on a portfolio or index basis. Another technique is to examine the values of a specific firm in order to identify the impacts of SR activity, which is often referred to as corporate social responsibility. There are two methods to determine the worth of a company: via accounting or through market data. Most studies concentrate on market values, which are calculated by multiplying the stock price by the number of shares outstanding to establish if corporate social responsibility impacts shareholder wealth (Mackey, Mackey and Barney, 2007). Hill et al. (2007) discovered significant variations in European CSR-conscious corporations' performance compared to Asian and US companies. Conclusion: According to the authors of the paper, there may be variations in national cultures across these nations, and European investors tend to place a more significant value on SRI than Asian and US investors. When Mackey et al. (2007) undertake a theoretical investigation, they discover a favourable association between enterprises engaging in CSR and the value of the company.

On the other hand, this seems to be uncomplicated since they operate on the fundamental premise that managers would only undertake SR choices that increase the firm's value. SR

companies have a more significant monetary worth than traditional enterprises, and there are two distinct techniques of determining this. If a company receives an environmental award, for example, as demonstrated by event studies (Klassen and McLaughlin, 1996), or if information about a toxic release or an environmental crisis is made public, the stock price drops significantly (as demonstrated by Hamilton (1995) and Klaasen and McLaughlin (1996), the stock price rises. Dasgupta, Laplante and Mamingi (2001) validate similar results in the context of emerging nations. Already, as shown by Verschoor, a clear commitment to ethical conduct may have a favourable impact on a company's financial success. Boyle, Higgins and Rhee (1997) describe a negative association between a company's success and its membership in the ethical Military Industries Initiative, which is at odds with this finding—at least for the defence industry. Many event studies do not look at corporate social responsibility as a whole but instead concentrate on particular elements like the environment or stakeholders. In specific research, more significant environmental standards are related to better market value; for example, Dowell, Hart and Yeung (2000) and Konar and Cohen (2001) found that high environmental standards are connected with higher market value.

In order to assess the performance of the chosen indexes and traditional returns are displayed in table 3.

Table 3 Indicators and Equations

Indicator	Equation
Rate of Return	Rate of return = $\left[ \frac{(\text{Current value} - \text{Initial value})}{\text{Initial value}} \right] \times 100$
Earnings per Share	$EPS = \frac{\text{Net Income} - \text{Dividends}}{\text{Outstandings Shares}}$
Price-to-Earnings	P/E Ratio = $\frac{\text{Market value per share}}{\text{Earnings per share}}$
Standard Deviation	Standard Deviation = $\sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n - 1}}$
Covariance	$\text{Cov}(X, Y) = \frac{\sum (X_i - \bar{X})(Y_j - \bar{Y})}{n}$
Pearson Correlation	$\rho_{xy} = \frac{\text{Cov}(x, y)}{\sigma_x \sigma_y}$

Each of these indicators was selected for a specific purpose. First and foremost, they give crucial information about portfolio performance and take into account a variety of alternative assumptions about return probabilities. Second, they are based on various distinct portfolio theories, as mentioned before, which allow for a more objective assessment of portfolio performance.

### *Regional Focus of SRI Studies, USA, The UK, and Germany*

The great majority of research is restricted to the United States. Since SRI has been practised in the United Kingdom for quite some time, it is the first nation that comes to mind when thinking of Europe. Another study compares European SRI cars in general rather than focusing on a particular nation. It was decided for this research to include Germany in the comparison because of its economic and political importance. Most of the empirical research presented above is based in the United States and the United Kingdom since these two nations have the oldest SRI histories and considerable assets under management. In recent years, many studies have been published that compare various features of SRI in various nations. Maignan and Ralston (2002) analyse the websites of French, Dutch, United Kingdom, and the United States corporations and discover that the Anglo nations tend to place a greater emphasis on SRI issues than their French and Dutch counterparts (Maignan and Ralston 2002).

Unlike their conventional counterparts in the United States, ethical mutual funds in the United Kingdom and Germany are much more exposed to small-cap stocks than their conventional counterparts in the United States and Germany. This will offer a more comprehensive overview and highlight regional variations in relationships.

### *Ethics*

For researchers, ethical difficulties arise at any level of the research process, including during the design and execution of research initiatives (Jamshed, 2014). When it comes to ethics, they are described as moral standards that govern a particular behaviour (McGivern,

2009). In the context of research, universal codes of ethics serve as guiding principles for avoiding bad research conduct and damage (Saunders *et al.*, 2019) and other purposes. The concepts that are most relevant to the setting of this study are defined in more detail and are taken into consideration in this master's dissertation.

First and foremost, the researcher's honesty, impartiality, and objectivity are formed, among other things, by the quality of the study findings. This ideal is adhered to throughout this master thesis since the author operates in an open and honest manner, promotes correctness, and, above all, shows respect for the survey participants' opinions (Saunders *et al.*, 2019). This requires the researcher to present study results accurately and comprehensively and refrain from using manipulative techniques. The author should notify the research team of any mistakes that may have occurred throughout the study (Zikmund *et al.*, 2013).

Furthermore, there is a general agreement in the ethical literature that damage to participants should be avoided (Abbott and McKinney, 2013; Zikmund *et al.*, 2013; Bryman, 2016; Saunders *et al.*, 2019). Particularly relevant in the data gathering procedure is the ethical consideration of the subjects of the study. The confidentiality of data and the anonymity of participants are vital (Jamshed, 2014). Furthermore, the information gathered is used strictly for this master's thesis and is not shared with other organizations or persons (Jamshed, 2014). Inextricably linked to the issues of anonymity and data confidentiality is the possibility of participants' personal information being compromised (Bell, Bryman and Harley, 2018). Because the researcher cannot predict which questions will be sensitive to the respondents ahead of time, most of the questions are not required to be answered (Bell, Bryman and Harley, 2018). A further ethical problem is the absence of informed permission

on the side of the subjects (Saunders *et al.*, 2019). Responses to research initiatives should be supplied with adequate information to enable them to make an informed and voluntary choice about whether or not they choose to participate in the survey.

This is why the questionnaire begins with a clear explanation of the study's purpose and how the data will be used, followed by a brief description of the data collection method ((Bell, Bryman and Harley, 2018). As a result, the ethical dilemma of misleading volunteers by providing a fictitious study scope is avoided (Bell, Bryman and Harley, 2018).

Being aware that the data would only be used for scientific purposes in this master's thesis may make participants feel more comfortable sharing sensitive information with the researchers (Zikmund *et al.*, 2013). In addition, since the researcher's contact information is included in the survey, participants are encouraged to contact the researcher at any time if they have any questions or concerns about the survey (Zikmund *et al.*, 2013).

## Results

### Qualitative

A scaled-down version of Braun and Clarke (2006) six-step procedure is employed for the expert survey due to the lesser size of the data. The questions in this survey were also designed in such a manner that they already pointed the participant in a specific direction, making subsequent categorisation more straightforward. Eleven categories were compiled in the end (see table 4). This survey is small in sample size and does not accurately represent general investment methods and behaviour.

Markets of interest are locations where the examined businesses do business and make investments, and they are primarily located in Europe and the United States, according to the survey results. As seen in the SRI's definitions section, internal standards and strong ideals are combined with governmental and institutional definitions.

When it comes to the evaluation process, firms use a variety of approaches and degrees of intensity to determine success. Official rules are sufficient for some organizations to utilize as metrics for their investing techniques, but others have implemented different internal procedures to guarantee a sound ESG framework.

Every company publishes yearly reports on its SRI and ESG performance and conducts periodic reviews of those reports as well as the investment methods and strategy. The total socially responsible investment (SRI) proportion of the company's investments varies from less than 10% to 100%. It achieves 100 per cent since all of the company's investments were made in accordance with its SR strategy and are thus regarded as such without the requirement to be expressly labelled as SR investments. The audit of SRI objectives is carried

out either internally by the portfolio management or by independent investment committees or externally by third-party services in conjunction with the annual financial audit.

Companies situated in the United States have already seen a change in investing behaviour since the 1970s, focusing on a more socially responsible framework. That is consistent with the material that has been published regarding the historical development of SRI. In recent years (2017-2018), European-based enterprises have seen a significant rising trend in which customers have become progressively more mindful of the social effect that investments might give.

The experts who responded to the poll cited external and internal issues as the root causes of this shift. The fundamental driving force may be attributed to the customers and their requirements. Modern technology has made it possible to understand better how sustainability-related concerns influence financial results. The Paris Agreement, which came into effect in 2015, was a recent external factor that influenced the change in investment techniques toward SR.

However, the surveyed experts clearly stated that SR is not an option at all costs. The companies still have an obligation towards their clients, and SRI's need to perform inline or better than the chosen benchmark. As an overall guideline, four dimensions need to be balanced out: Security, Liquidity, Profitability, and Sustainability. As long as the risk-reward balance is equal, a SRI is preferred over traditional investments. Lastly, all experts stated that the demand of their clients always drives investment strategies, and more research needs to be done that could link SR and ESG ratings with stock performance.

*Table 4 Expert Results Overview*

Questions	Answers	Category
<b>Question 1</b>	United States, United Kingdom, Germany, Europe, Asia, Singapore, Australia, Japan	Markets of interest
<b>Question 2</b>	<ul style="list-style-type: none"> <li>• Own company definitions according to client values and risk adjustments</li> <li>• International best practice, UN Principles of Responsible Investment (UN PRI), UN Global Compact, UN Sustainable Development Goals (UN SDG)</li> <li>• Forward-looking investment approach delivering a long-term sustainable financial return, client values</li> <li>• Regulated by law (Art. 2 No. 17 Regulation on sustainability-related disclosure requirements in the financial services sector)</li> <li>• Variety of associations and regulatory bodies that oversee SR investments</li> </ul>	Definitions of SRI
<b>Question 3</b>	<ul style="list-style-type: none"> <li>• SRI risk is integrated throughout the investment process, on investment fund level and portfolio level</li> <li>• Own measurements but rely on three pillars: own research on the potential investment, data providers like sustainability, and engagement activities. Proprietary ESG scorecards</li> <li>• Internal criteria set by SRI statements. The four-pillar framework focuses on environmental, social and governance (ESG) Integration, Data &amp; Research, Engagement and Products &amp; Solutions. As well as a 40-checklist questionnaire</li> <li>• UN Global Compact guidelines, Norges Bank ethics standard, CO2 emissions of companies. The list is updated twice a year with the help of a specialised external service provider</li> <li>• MSCI as well as Freedom House Index</li> </ul>	Assessment process
<b>Question 4</b>	<ul style="list-style-type: none"> <li>• Annually</li> <li>• Permanent dialogue between designated departments dedicated to SR integration</li> <li>• On an ongoing basis</li> <li>• SR annually while exclusion criteria for investments are reviewed twice a year</li> <li>• Annually</li> </ul>	SRI update/review rate
<b>Question 5</b>	<ul style="list-style-type: none"> <li>• Less than 10%</li> <li>• 50-60%</li> </ul>	Overall SRI of the company investments

	<ul style="list-style-type: none"> <li>• 100%</li> <li>• 74.16%</li> <li>• Almost 100%</li> </ul>	
<b>Question 6</b>	<ul style="list-style-type: none"> <li>• Internal audit through the portfolio management department or Investment Committees</li> <li>• Through external services combined with the yearly financial audit</li> <li>• The global SRI team is structured into three distinct pillars. Client Solutions, Research &amp; Data, and Investment Stewardship. That team provides ESG research directly for portfolio managers and analysts. In addition to that, a cross-regional, cross-functional SRI group of senior leaders was formed in 2016 to understand the range of tools and techniques individual investment teams are using</li> </ul>	Audit of SRI goals
<b>Question 7</b>	Every company publishes an ESG report in their annual report or a separate paper	ESG reports
<b>Question 8</b>	<ul style="list-style-type: none"> <li>• A noticeable shift towards SR in investment behaviour and client requirements.</li> <li>• As early as 1970, mostly in recent years (2017-18)</li> </ul>	Investment shift
<b>Question 9</b>	<ul style="list-style-type: none"> <li>• By the conviction that only sustainable investment processes will be successful</li> <li>• Based on the solid long-term orientated company culture</li> <li>• European clients were asking questions on ESG criteria incorporated in investment processes</li> <li>• Enhanced risk-adjusted returns over the long-run, while also serving as a foundation to align portfolios with client values</li> <li>• Big data and advanced technologies that help understand how sustainability-related issues impact financial outcomes</li> <li>• Paris climate agreement from 2015 as an external factor</li> </ul>	Driving Factors
<b>Question 10</b>	<ul style="list-style-type: none"> <li>• The options must perform inline or better than the chosen benchmark. There is no underperformance level set</li> <li>• No sacrifice of alpha value</li> <li>• The MSCI World ESG Leaders have outperformed the broader MSCI World by</li> </ul>	SRI Performance

---

	<p>~135bps p.a. over the past three years. The performance is there</p> <ul style="list-style-type: none"> <li>• Additionally, there are some secular tailwinds in the space that could support the durability of corporate earnings and profitability across business cycles for the long-term</li> <li>• Four dimensions need to be balanced out: Security, Liquidity, Profitability, and Sustainability. As long as the risk-reward balance is equal, a SRI is preferred over traditional investments</li> </ul>	
<b>Question 11</b>	<ul style="list-style-type: none"> <li>• It tends to be dictated by the strategy of the investment and the client's wishes/mandate</li> <li>• No, this would only make it way more successful for investors</li> <li>• Investment behaviour is changing because investors are demanding it</li> <li>• Investment behaviour is changing, but currently, not enough reliable research with significant proof available</li> </ul>	Anticipating future Investment behaviour

---

## Quantitative

The Pearson correlation coefficients in SPSS are used to determine if the stock market performance of non-specifically socially responsible created funds in the United States, the United Kingdom, and Germany is connected to their ESG ratings.

The study excluded twenty-eight stocks due to insufficient information, reducing the sample size to 242. A further cut was made after an initial analysis revealed four outliers from the cluster of data points (Figure 2).

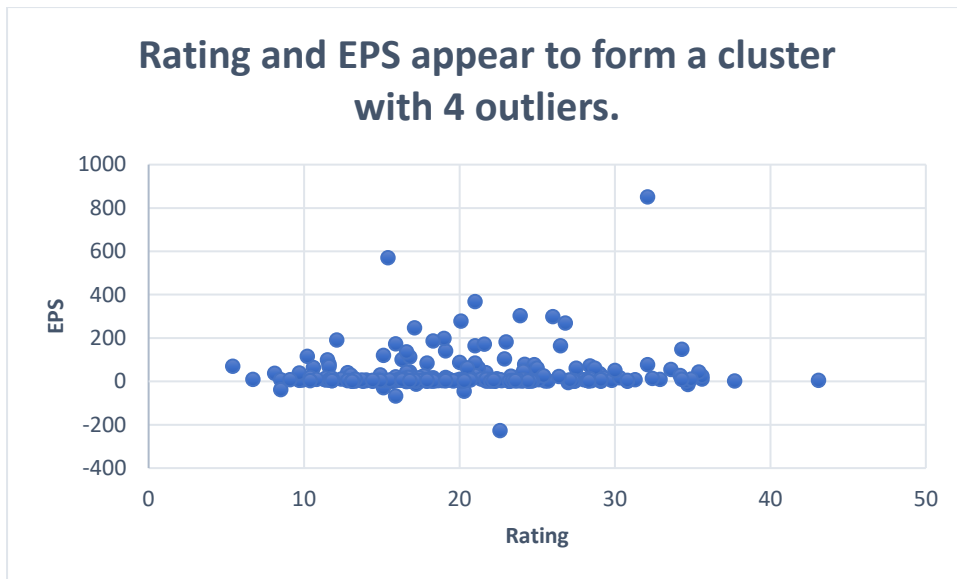


Figure 2 Outliers from the data cluster

Due to the formulation of the hypothesis, the  $H_0$  is one-tailed.

$H_0$ : There is a positive correlation between stock performance and a lower ESG rating

$H_1$ :  $\rho < 0$ , negative correlation could exist

Table 5 Correlation of Variables

		Rating	RoR	EPS	P/E
Rating	Pearson Correlation	1	,159*	,066	-,076
	Sig. (1-tailed)		,014	,155	,126
	N	242	193	240	229
RoR	Pearson Correlation	,159*	1	,333**	-,339**
	Sig. (1-tailed)	,014		,000	,000
	N	193	193	192	181
EPS	Pearson Correlation	,066	,333**	1	-,070
	Sig. (1-tailed)	,155	,000		,145
	N	240	192	240	228
P/E	Pearson Correlation	-,076	-,339**	-,070	1

Sig. (1-tailed)	,126	,000	,145	
N	229	181	228	229

\*. Correlation is significant at the 0.05 level (1-tailed).

\*\*. Correlation is significant at the 0.01 level (1-tailed).

The data shows a possible low positive correlation between the ESG rating and the rate of return, but not for earnings per share or the P/E ratio. The hypothesis seems to hold only valid for that one variable.

The standard Q-Q plot from RoR and Rating value are typically distributed straight lines. Although they deviate at the end from that line, it is safe to conclude that both have a normal symmetric distribution. Showing the same curvature Barnett and Salomon (2006) found, indicating the most significant financial success occurring at the lowest and highest levels of social responsibility.

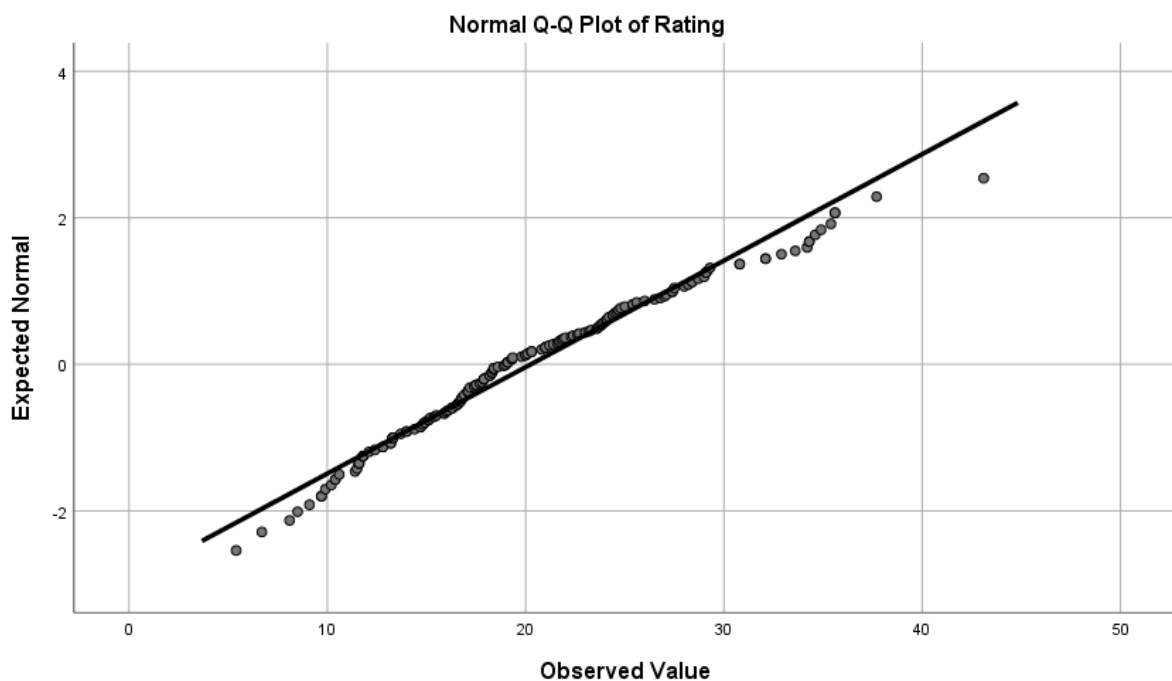


Figure 3 Normal symmetric Q-Q Plot of Rating variable

## Industry

A total of 39 different categories for types of industry were created for possible links between stock performance and ESG based on them. However, fewer than five companies were excluded due to statistical significance. A complete list of different categories and numbers of companies can be viewed in the appendix (Appendix 2). The top 5 populated categories are Software & Services (33), Pharmaceuticals (19), Semiconductors (18), Food Products (14), and Retailing (11). Considering the five-point cut-off, a total of 20 distinct industrial sectors were qualified for statistical examination under this condition.

From these five main categories, Food Products had the highest average rate of return, 3.41%, followed by Pharmaceuticals with 2.69%, Retailing with 1.90%, Semiconductors with 1.62%, and Software & Services with the lowest average of 1.43%. The highest overall average return had the category of steel with 8.89%. However, this category included only one company in the UK.

Result of correlation between ROR and ESG for individual industry sectors:

- Software and service: weak negative correlation (-0.123) (see appendix 4)
- Pharmaceutical: weak positive correlation (0.224) (see appendix 5)
- Semiconductors: weak positive correlation (0.111) (see appendix 6)
- Food Products: low positive correlation (0.245) (see appendix 7)
- Retailing: strong negative correlation (-.915) (see appendix 8)

## Country

Categorised by countries, Germany has 40 different stocks included in the data, followed by the United Kingdom with 80 stocks, and the USA has the remaining stock data with 122.

After the first analysis of the data, it was clear that the UK had a noticeably higher average rate of return with 3.36%, followed by Germany's 2.72%, and the USA with 1.88%.

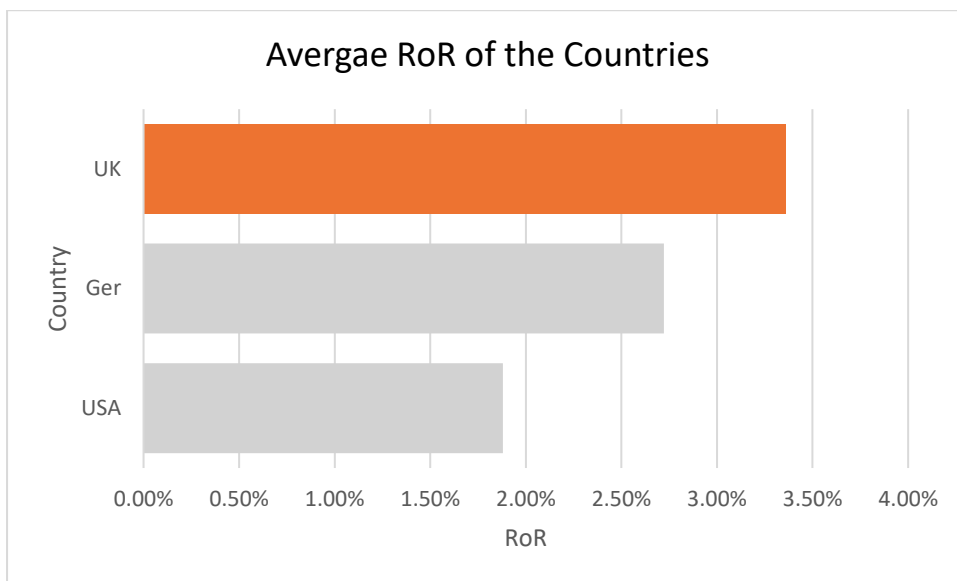


Figure 4 Average RoR sorted by Country

Based on the findings that only RoR may be statistically significant, further tests were done to show possible country-specific correlations. In the case of Germany, it showed no further correlation. This could be due to the low sample size. For the UK, the scatter plot revealed a low positive correlation between the rate of return and the ESG rating.

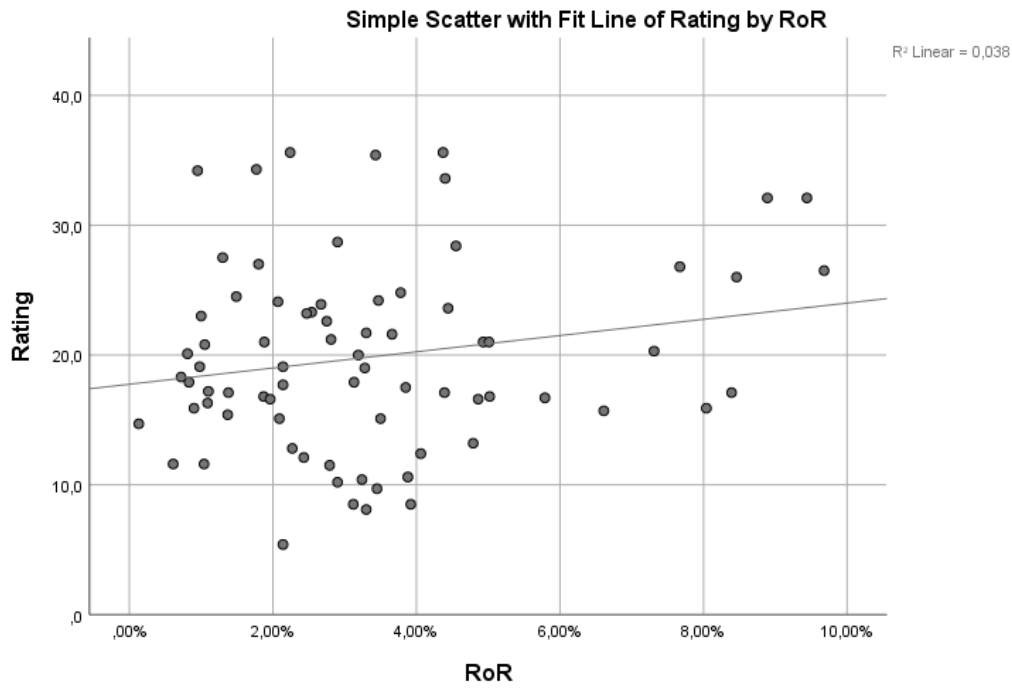


Figure 5 Scatter Plot between Rating score and RoR for British Stocks

The United States showcased the strongest positive correlation. A value of 0.342 (see appendix 3) is on the low positive value side and could be attributed to other factors not examined in the study.

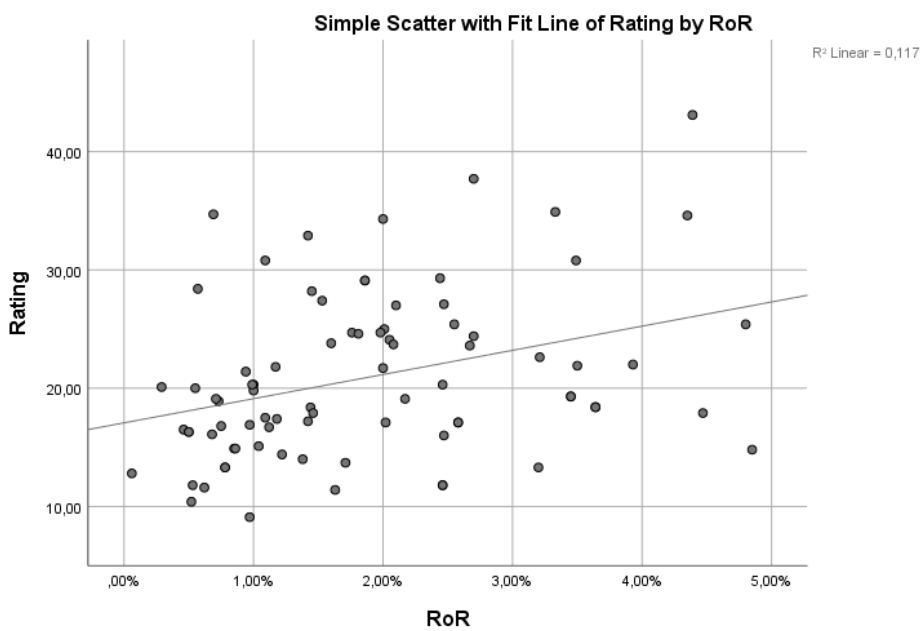


Figure 6 Scatter Plot between Rating score and RoR for American Stocks

The results and the findings will be discussed in the next chapter.

## Discussion

### Disclaimer

Due to the structure of the ESG ratings used in this dissertation, a lower score is more desirable since it indicates the company's overall better ESG mindset. This leads to the complication that a positive Pearson Correlation indicates a high ESG score (bad score) and a higher RoR of the stock. However, every industry category must be examined individually to determine the exact impact.

With the current structure of ESG ratings, a low score always results in a better RoR/score ratio, regardless of a particularly strong or weak performance.

For the following discussion, the literature review and the qualitative and the quantitative findings are considered and provide a foundation.

### Incorporating Objectives and Hypothesis into Findings

The research findings demonstrated the presence of a statistical link across nations and industrial sectors; nevertheless, it was not possible to demonstrate a strictly positive or negative association. The correlation varies depending on the industry, and the sample size used to calculate it. These results are consistent with the prior study done by Sandberg et al. (2008) and Bello (2005), which found no statistically significant difference between the two groups' performance.

The study participants offered consensus responses when asked about the causes that have driven historical, present, and future SRI; their customers' demand is one of them. Their

assertions are consistent with previous studies by Pasewark and Riley (2010), Jacquemain (2010), and Cowton, who indicated that SRI had reached the mainstream in 1999 and was no longer considered a fringe practice. Whether or not this is related to a shift in the educational level of investors and customers falls outside of the purview of this dissertation.

In both the research and investing communities, a more extensive range of definitions for SRI, ESG, and CSR are employed to describe these concepts. The United Nations have adopted international definitions, but like with so many elements of SRIs, they are voluntary and not uniformly used across the sector.

Taking a look back at the Oekom Research from 2010, there are some striking parallels between the responses provided, which indicate that funds predominantly invest under SRI criteria in big, publicly listed firms that are often multinational in nature. The impact of SRI investing practices is less noticeable on small and medium-sized businesses that are not funded via the capital market. SRI investment percentage statistics from specialists working in more famous international firms ranged from about 75% to 100%, with national enterprises investing a much smaller proportion on average than multinational corporations.

In light of the quantitative analysis's findings, one potential explanation for the divergence in investing strategies might be the amount of work and time required to make continually changing investment choices. In the form of annual reports, companies themselves often provide publicly accessible information (Kädtler, 2009). However, the information provided varies from country to country due to the lack of a universally accepted standard.

Corporations with more financial resources may establish in-house research teams that are continually updated on social responsibility problems and tactics, allowing them to make all

of their investments in an SR manner. Because of a scarcity of reliable, free information, SR intermediaries like rating agencies are essential for small and medium-sized businesses.

## Conclusion

According to the research and poll responses provided, the primary driving force for SR approaches seems to be the desire from customers to want investing strategies that are consistent with their own personal beliefs rather than a movement in corporate governance principles. Over the previous several decades, the market for socially responsible investments has rapidly expanded. This tendency will probably continue to expand as new economically and environmentally conscious generations (Schueth, 2003) enter the market as clients or investors.

As previously said, in order to stay up with lowering prediction times, a rise in demand will need an increase in rating agencies, research, and specialized internal departments in addition to an increase in screening.

According to the findings of this study, there are three types of industries: category one, where environmental, social, and governance (ESG) performance has a positive correlation with RoR performance; category two, where ESG has no correlation and no impact on performance; and category three, where ESG has a negative correlation with performance. Rather than looking for connections between SR funds and ESG ratings, the purpose of this research was to uncover correlations between individual stocks and ESG ratings. With the implementation of 39 distinct kinds of industries for this research, it is possible to argue that there will be 39 different connections between those industries and their respective RoR. Showcasing that there may not be a general relationship between environmental, social, and governance ratings and stock performance. As previously discovered, it is essential to emphasize that significant screening and research are required for individual investing procedures.

It is debatable whether the overall performance of specially created SRI funds is linked to the ESG ratings of its stocks and the ethical governance of their investors, or if it is instead a direct result of the increased demand for such funds, which is increasing the value of the funds with each passing year, as has been suggested. It is conceivable that this subject may be investigated further in the future.

It is possible that, rather than directly examining the profitability and performance of SR funds, an additional study should be conducted at a lower firm or industry level in order to make more solid conclusions.

Overall, this topic of study demonstrates the necessity for further research and the introduction of new angles in order to narrow down the issues now being investigated.

## Appendix

### Appendix 1 Questionnaire

#### Questionnaire

Name:

Company:

Job Title:

Years of Experience:

Q1: Describe the geographical location/key countries you operate in.

Q2: How does your company define sustainable investment? (Is it a general definition, or did your company come up with its own?)

Q3: What criteria does your company use to determine what investment aligns with its agenda of sustainable investment? (Have they internally created measurements, like the ethics code of the Norges Bank, or are they using external ones, e.g. from rating agencies?)

Q4: How often would you say are company policies regarding sustainable investments are reviewed and updated?

Q5: How much of the overall investments of your company are currently invested with sustainable methods in mind? (A rough percentage)

Q6: Is there an internal or external body in place to audit set sustainable investment goals, and if yes, how often are they reviewed?

Q7: Do you publish an external ESG/CSR/Sustainability report or a designated section in your annual accounts?

Q8: Have you noticed a shift in investment behaviour towards more sustainable investment methods in your company in recent years?

Q9: And if so, what would you say led to this shift? Can it be tributed to internal or external factors? Or a mix of both? (For example, a shift in the corporate mindset, new regulations or demand)

Q10: How important is the performance of sustainable investment options regarding possible investments? How much worse could a sustainable investment perform than a traditional one but still be chosen as a financially good investment (percentage points)?

Q11: Would the investment behaviour change if a positive correlation between the stock market performance and the sustainability rating were found?

*Appendix 2 Distribution of Companies in Industry Categories*

<b>Industry</b>	<b>Totalling Companies</b>	<b>Country Breakdown</b>
<b>Aerospace</b>	6	2 Ger; 1 USA; 3 UK
<b>Auto Components</b>	1	1 Ger
<b>Automobiles</b>	5	4 Ger; 1 USA
<b>Banks</b>	5	1 Ger; 1 USA; 3 UK
<b>Chemicals</b>	7	4 Ger; 1 USA; 2 UK
<b>Commercial Services</b>	6	3 USA; 3 UK
<b>Construction</b>	2	1 Ger; 1 UK
<b>Consumer Services</b>	4	3 USA; 1 UK
<b>Containers &amp; Packaging</b>	1	1 UK
<b>Diversified Metal</b>	5	5 UK
<b>Electrical Equipment</b>	1	1 Ger
<b>Financial Sector</b>	6	1 Ger; 2 USA; 3 UK
<b>Food Products</b>	14	1 Ger; 8 USA; 5 UK
<b>Food Retailers</b>	4	2 USA; 2 UK
<b>Healthcare</b>	9	2 Ger; 6 USA; 1 UK
<b>Homebuilders</b>	4	4 UK
<b>Household Products</b>	5	2 Ger; 1 USA; 2 UK
<b>Index</b>	4	1 Ger; 2 USA; 1 UK
<b>Industrial Conglomerates</b>	6	1 Ger; 3 USA; 2 UK

<b>Insurance</b>	9	2 Ger; 1 USA; 6 UK
<b>Machinery</b>	3	2 USA; 1 UK
<b>Media</b>	8	4 USA; 4 UK
<b>Oil &amp; Gas Producers</b>	3	1 USA; 2 UK
<b>Pharmaceuticals</b>	19	5 Ger; 11 USA; 3 UK
<b>Precious Metals</b>	2	2 UK
<b>Real Estate</b>	3	1 Ger; 2 UK
<b>Refiners &amp; Pipelines</b>	1	1 UK
<b>Retailing</b>	11	1 Ger; 7 USA; 3 UK
<b>Semiconductors</b>	18	1 Ger; 17 USA
<b>Software &amp; Services</b>	33	1 Ger; 28 USA; 4 UK
<b>Steel</b>	1	1 UK
<b>Technological Hardware</b>	6	5 USA; 1 UK
<b>Telecommunication</b>	7	1 Ger; 4 USA; 3 UK
<b>Textiles</b>	4	2 Ger; 1 USA; 1 UK
<b>Traders &amp; Distributors</b>	4	1 USA; 3 UK
<b>Transportation</b>	2	1 Ger; 1 USA
<b>Utilities</b>	9	2 Ger; 3 USA; 4 UK

## Appendix 3 Correlation between RoR and Rating for US Stocks

**Correlations**

		Rating	RoR
Rating	Pearson Correlation	1	,342**
	Sig. (1-tailed)		,001
	N	122	82
RoR	Pearson Correlation	,342**	1
	Sig. (1-tailed)	,001	
	N	82	82

\*\* . Correlation is significant at the 0.01 level (1-tailed).

## Appendix 4 Software &amp; Service Correlation (V1: Rating, V2: RoR)

**Correlations**

		V1	V2
V1	Pearson Correlation	1	-,123
	Sig. (2-tailed)		,627
	N	35	18
V2	Pearson Correlation	-,123	1
	Sig. (2-tailed)	,627	
	N	18	18

## Appendix 5 Pharmaceutical Correlation (V1: Rating, V2: RoR)

**Correlations**

		V1	V2
V1	Pearson Correlation	1	,242

	Sig. (1-tailed)		,224
	N	19	12
V2	Pearson Correlation	,242	1
	Sig. (1-tailed)	,224	
	N	12	12

Appendix 6 Semiconductors Correlation (V1: Rating, V2: RoR)

### Correlations

		V1	V2
V1	Pearson Correlation	1	,111
	Sig. (1-tailed)		,335
	N	18	17
V2	Pearson Correlation	,111	1
	Sig. (1-tailed)	,335	
	N	17	17

Appendix 7 Food Products Correlation (V1: Rating, V2: RoR)

### Correlations

		V1	V2
V1	Pearson Correlation	1	,221
	Sig. (1-tailed)		,245
	N	14	12
V2	Pearson Correlation	,221	1
	Sig. (1-tailed)	,245	
	N	12	12

## Appendix 8 Retailers Correlation (V1: Rating, V2: RoR)

**Correlations**

		V1	V2
V1	Pearson Correlation	1	-,915*
	Sig. (2-tailed)		,030
	N	11	5
V2	Pearson Correlation	-,915*	1
	Sig. (2-tailed)	,030	
	N	5	5

\*. Correlation is significant at the 0.01 level (1-tailed).

## References

'2007 Report on Socially Responsible Investing Trends in the United States (2007) *The GIIN*. Available at: <https://thegiin.org/research/publication/2007-report-on-socially-responsible-investing-trends-in-the-united-states> (Accessed: 1 January 2022).

Abbott, M.L. and McKinney, J. (2013) *Understanding and Applying Research Design*. John Wiley & Sons.

Adam, A. and Shavit, T. (2007) 'How Can a Ratings-based Method for Assessing Corporate Social Responsibility (CSR) Provide an Incentive to Firms Excluded from Socially Responsible Investment Indices to Invest in CSR?', *Journal of Business Ethics*, 82, pp. 899–905. doi:10.1007/s10551-007-9600-4.

*Agency Problems and the Theory of the Firm | Journal of Political Economy: Vol 88, No 2* (no date). Available at: <https://www.journals.uchicago.edu/doi/abs/10.1086/260866> (Accessed: 4 November 2021).

Allen, F., Carletti, E. and Marquez, R.S. (2009) 'Stakeholder Capitalism, Corporate Governance and Firm Value', *SSRN Electronic Journal* [Preprint]. doi:10.2139/ssrn.968141.

'a-short-introduction-to-the-gri-standards.pdf' (no date). Available at: <https://www.globalreporting.org/media/wtaf14tw/a-short-introduction-to-the-gri-standards.pdf> (Accessed: 4 November 2021).

Barnett, M.L. and Salomon, R.M. (2006) 'Beyond dichotomy: the curvilinear relationship between social responsibility and financial performance', *Strategic Management Journal*, 27(11), pp. 1101–1122. doi:10.1002/smj.557.

Bauer, R., Koedijk, K. and Otten, R. (2005) 'International evidence on ethical mutual fund performance and investment style', *Journal of Banking & Finance*, 29(7), pp. 1751–1767. doi:10.1016/j.jbankfin.2004.06.035.

Bell, E., Bryman, A. and Harley, B. (2018) *MBA9\_BRES\_SLIDES\_v17.5\_Class\_1a(1).pdf*, *Regenesis*. Available at: [https://portal.regenesys.net/course/discussions/editors/kcfinder/upload/files/MBA9\\_BRES\\_SLIDES\\_v17.5\\_Class\\_1a%281%29.pdf](https://portal.regenesys.net/course/discussions/editors/kcfinder/upload/files/MBA9_BRES_SLIDES_v17.5_Class_1a%281%29.pdf) (Accessed: 19 December 2021).

Bello, Z.Y. (2005) 'Socially Responsible Investing and Portfolio Diversification', *Journal of Financial Research*, 28(1), pp. 41–57. doi:10.1111/j.1475-6803.2005.00113.x.

Boyle, E.J., Higgins, M.M. and Rhee, G.S. (1997) 'STOCK MARKET REACTION TO ETHICAL INITIATIVES OF DEFENSE CONTRACTORS: THEORY AND EVIDENCE', *Critical Perspectives on Accounting*, 8(6), pp. 541–561. doi:10.1006/cpac.1997.0124.

Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3(2), pp. 77–101. doi:10.1191/1478088706qp063oa.

Bryman, A. (2016) *Social research methods*. Fifth Edition. Oxford ; New York: Oxford University Press.

- Bryman, A. and Bell (2016) *IJSRM4-9.pdf*, *International Journal of Sales, Retailing & Marketing*. Available at: <https://www.circleinternational.co.uk/wp-content/uploads/2021/01/IJSRM4-9.pdf#page=9> (Accessed: 19 December 2021).
- Cowton, C. (1999) 'Accounting and financial ethics: from margin to mainstream?', *Business Ethics: A European Review*, 8(2), pp. 99–107. doi:10.1111/1467-8608.00134.
- D'Antonio, L., Johnsen, T. and Hutton, R.B. (1997) 'Expanding Socially Screened Portfolios: An Attribution Analysis of Bond Performance', *The Journal of Investing*, 6(4), pp. 79–86. doi:10.3905/joi.1997.408434.
- Dasgupta, S., Laplante, B. and Mamingi, N. (2001) 'Pollution and Capital Markets in Developing Countries', *Journal of Environmental Economics and Management*, 42(3), pp. 310–335. doi:10.1006/jeem.2000.1161.
- David Diltz, J. (1995) 'The private cost of socially responsible investing', *Applied Financial Economics*, 5(2), pp. 69–77. doi:10.1080/758529174.
- Davis, G.F. (2009) *Managed by the Markets: How Finance Re-Shaped America*. OUP Oxford.
- Definition: Was bedeutet ESG (Environmental Social Governance)? | Erklärung im Fonds-Wiki | Glossar EURAMCO* (2021) EURAMCO. Available at: <https://www.euramco-asset.de/glossar/environmental-social-governance-esg/> (Accessed: 6 November 2021).
- Derwall, J., Koedijk, K. and Ter Horst, J. (2011) 'A tale of values-driven and profit-seeking social investors', *Journal of Banking & Finance*, 35(8), pp. 2137–2147. doi:10.1016/j.jbankfin.2011.01.009.
- Deutschmann, C. (2005) 'Ist globaler Kapitalismus mit politischer Demokratie vereinbar? Ein Kommentar zu dem Aufsatz von Dirk Meyer', *Leviathan*, 33(3), pp. 325–336.
- Deutschmann, C. (2008) *Der kollektive 'Buddenbrooks-Effekt': Die Finanzmärkte und die Mittelschichten*. Working Paper 08/5. MPIfG Working Paper. Available at: <https://www.econstor.eu/handle/10419/43888> (Accessed: 4 November 2021).
- Dorfleitner, G. and Utz, S. (2012) 'Safety first portfolio choice based on financial and sustainability returns', *European Journal of Operational Research*, 221(1), pp. 155–164. doi:10.1016/j.ejor.2012.02.034.
- Dowell, G., Hart, S. and Yeung, B. (2000) 'Do Corporate Global Environmental Standards Create or Destroy Market Value?', *Management Science*, 46(8), pp. 1059–1074. doi:10.1287/mnsc.46.8.1059.12030.
- Doyle, L., Brady, A.-M. and Byrne, G. (2009) 'An overview of mixed methods research', *Journal of Research in Nursing*, 14(2), pp. 175–185. doi:10.1177/1744987108093962.
- Epstein, G.A. (2005) *Financialization and the World Economy*. Edward Elgar Publishing.
- Epstein, M.J. and Schnietz, K.E. (2002) 'MEASURING THE COST OF ENVIRONMENTAL AND LABOR PROTESTS TO GLOBALIZATION: An Event Study of the Failed 1999 Seattle WTO Talks', *The International Trade Journal*, 16(2), pp. 129–160. doi:10.1080/08853900252901396.

- European SRI Study 2008* (2008). Available at: <https://www.acrc.go.kr/acrc/ethics/200812/11.pdf> (Accessed: 18 November 2021).
- Fombrun, C. and Shanley, M. (1990) 'What's in a Name? Reputation Building and Corporate Strategy', *Academy of Management Journal*, 33(2), pp. 233–258. doi:10.5465/256324.
- Forbes, K.J. and Rigobon, R. (2002) 'No Contagion, Only Interdependence: Measuring Stock Market Comovements', *The Journal of Finance*, 57(5), pp. 2223–2261. doi:10.1111/0022-1082.00494.
- Fowler, S.J. and Hope, C. (2007) 'A Critical Review of Sustainable Business Indices and their Impact', *Journal of Business Ethics*, 76(3), pp. 243–252. doi:10.1007/s10551-007-9590-2.
- Friedman, A.L. and Miles, S. (2001) 'Socially Responsible Investment and Corporate Social and Environmental Reporting in the UK: An Exploratory Study', *The British Accounting Review*, 33(4), pp. 523–548. doi:10.1006/bare.2001.0172.
- Friedman, M. (1970) 'A Theoretical Framework for Monetary Analysis', *Journal of Political Economy*, 78(2), pp. 193–238. doi:10.1086/259623.
- Fuchs, A. and Gehring, K. (2017a) 'The Home Bias in Sovereign Ratings', *Journal of the European Economic Association*, 15(6), pp. 1386–1423. doi:10.1093/jeea/jvx009.
- Fuchs, A. and Gehring, K. (2017b) 'The Home Bias in Sovereign Ratings', *Journal of the European Economic Association*, 15(6), pp. 1386–1423. doi:10.1093/jeea/jvx009.
- Galema, R., Plantinga, A. and Scholtens, B. (2008) 'The stocks at stake: Return and risk in socially responsible investment', *Journal of Banking & Finance*, 32(12), pp. 2646–2654. doi:10.1016/j.jbankfin.2008.06.002.
- Garcia-Castro, R., Ariño, M.A. and Canela, M.A. (2010) 'Does Social Performance Really Lead to Financial Performance? Accounting for Endogeneity', *Journal of Business Ethics*, 92(1), pp. 107–126. doi:10.1007/s10551-009-0143-8.
- Gibson, C.B. (2017) 'Elaboration, Generalization, Triangulation, and Interpretation: On Enhancing the Value of Mixed Method Research', *Organizational Research Methods*, 20(2), pp. 193–223. doi:10.1177/1094428116639133.
- Gompers, P., Ishii, J. and Metrick, A. (2003) 'Corporate Governance and Equity Prices\*', *The Quarterly Journal of Economics*, 118(1), pp. 107–156. doi:10.1162/00335530360535162.
- Gough, D. (2015) 'Qualitative and mixed methods in systematic reviews', *Systematic Reviews*, 4(1), p. 181. doi:10.1186/s13643-015-0151-y.
- Gregory, A., Matatko, J. and Luther, R. (1997) 'Ethical Unit Trust Financial Performance: Small Company Effects and Fund Size Effects', *Journal of Business Finance & Accounting*, 24(5), pp. 705–725. doi:10.1111/1468-5957.00130.
- Grossman, B.R. and Sharpe, W.F. (1986) 'Financial Implications of South African Divestment', *Financial Analysts Journal*, 42(4), pp. 15–29. doi:10.2469/faj.v42.n4.15.

- Guerard, J.B. (1997) 'Is There a Cost to Being Socially Responsible in Investing?', *The Journal of Investing*, 6(2), pp. 11–18. doi:10.3905/joi.1997.408416.
- Hanson, W.E. *et al.* (2005) 'Mixed methods research designs in counseling psychology.', *Journal of Counseling Psychology*, 52(2), pp. 224–235. doi:10.1037/0022-0167.52.2.224.
- Hayek, F.A. (1945) 'The Use of Knowledge in Society', *The American Economic Review*, 35(4), pp. 519–530.
- Heinkel, R. and Kraus, A. (2001) 'The Effect of Green Investment on Corporate Behavior', *Journal of Finance and Quantitative Analysis* 36(4).
- Hill, R.P. *et al.* (2007) 'Corporate Social Responsibility and Socially Responsible Investing: A Global Perspective', *Journal of Business Ethics*, 70(2), pp. 165–174. doi:10.1007/s10551-006-9103-8.
- Hiß, S. (2011) 'Globale Finanzmärkte und nachhaltiges Investieren', in Groß, M. (ed.) *Handbuch Umweltsoziologie*. Wiesbaden: VS Verlag für Sozialwissenschaften, pp. 651–670. doi:10.1007/978-3-531-93097-8\_32.
- Hoepner, A. and McMillan, D. (2009) 'Research on "Responsible Investment": An Influential Literature Analysis Comprising a Rating, Characterisation, Categorisation and Investigation'. doi:10.2139/ssrn.1454793.
- Hong, H. and Kacperczyk, M. (2009) 'The price of sin: The effects of social norms on markets', *Journal of Financial Economics*, 93(1), pp. 15–36. doi:10.1016/j.jfineco.2008.09.001.
- Höpner, M. and Jackson, G. (2001) 'Entsteht ein Markt für Unternehmenskontrolle? Der Fall Mannesmann', *Leviathan*, 29(4), pp. 544–563. doi:10.1007/s11578-001-0034-6.
- Huffs Schmid, J. (2002) *Politische Ökonomie der Finanzmärkte*. Aktualisierte und erw. Neuaufl. Hamburg: VSA-Verl.
- Ivankova, N.V. and Plano Clark, V.L. (2018) 'Teaching mixed methods research: using a socio-ecological framework as a pedagogical approach for addressing the complexity of the field', *International Journal of Social Research Methodology*, 21(4), pp. 409–424. doi:10.1080/13645579.2018.1427604.
- Jacquemain, M. (2010) 'Ende eines Sonderwegs. Bistum Speyer übernimmt Richtlinien der Bischofskonferenz', 215, p. 4.
- Jamshed, S. (2014) 'Qualitative research method-interviewing and observation', *Journal of Basic and Clinical Pharmacy*, 5(4), pp. 87–88. doi:10.4103/0976-0105.141942.
- Jaramillo, L. and Tejada, M.M.M. (2011) *Sovereign Credit Ratings and Spreads in Emerging Markets: Does Investment Grade Matter?* International Monetary Fund.
- Jensen, M.C. and Meckling, W.H. (1976) 'Theory of the firm: Managerial behavior, agency costs and ownership structure', *Journal of Financial Economics*, 3(4), pp. 305–360. doi:10.1016/0304-405X(76)90026-X.

- Jon A. Krosnick and Stanley Presser (2010) *Question and Questionnaire Design*. (Handbook of Survey Research).
- Jürgens, U. (2008) 'Corporate Governance: Eine kritische Rekonstruktion der Grundlagen, Anwendungen und Entwicklungen aus soziologischer Sicht', in Maurer, A. and Schimank, U. (eds) *Die Gesellschaft der Unternehmen — Die Unternehmen der Gesellschaft: Gesellschaftstheoretische Zugänge zum Wirtschaftsgeschehen*. Wiesbaden: VS Verlag für Sozialwissenschaften, pp. 105–123. doi:10.1007/978-3-531-91199-1\_6.
- Kädtler, J. (2009) *Finanzialisierung und Finanzmarkttrationalität: zur Bedeutung konventioneller Handlungsorientierungen im gegenwärtigen Kapitalismus*. Göttingen: Soziologisches Forschungsinstitut an der Universität Göttingen e.V. (SOFI) (SOFI Working Paper).
- Kahn, R.N., Lekander, C. and Leimkuhler, T. (1997) 'Just Say No? The Investment Implications of Tobacco Divestiture', *The Journal of Investing*, 6(4), pp. 62–70. doi:10.3905/joi.1997.62.
- Klassen, R.D. and McLaughlin, C.P. (1996) 'The Impact of Environmental Management on Firm Performance', *Management Science*, 42(8), pp. 1199–1214. doi:10.1287/mnsc.42.8.1199.
- Konar, S. and Cohen, M.A. (2001) 'Does the Market Value Environmental Performance?', *The Review of Economics and Statistics*, 83(2), pp. 281–289. doi:10.1162/00346530151143815.
- Krippner, G.R. (2005) 'The financialization of the American economy', *Socio-Economic Review*, 3(2), pp. 173–208. doi:10.1093/SER/mwi008.
- Kurtz, L. (1997) 'No Effect, or No Net Effect? Studies on Socially Responsible Investing', *The Journal of Investing*, 6(4), pp. 37–49. doi:10.3905/joi.1997.37.
- Kurtz, L., Sullivan, H.B. and Francisco, S. (1999) 'Managing Risk Exposures of Socially Screened Portfolios', p. 17.
- Lin-Hi, P.D.N. (2021) *Definition: Corporate Social Responsibility*, <https://wirtschaftslexikon.gabler.de/definition/corporate-social-responsibility-51589>. Springer Fachmedien Wiesbaden GmbH. Available at: <https://wirtschaftslexikon.gabler.de/definition/corporate-social-responsibility-51589> (Accessed: 4 November 2021).
- Louche, C. and Lydenberg, S. (2006) 'Socially Responsible Investment: Differences Between Europe and the United States', *Proceedings of the International Association for Business and Society*, 17, pp. 112–117.
- Lounsbury, M. and Hirsch, P.M. (2010) 'Markets on trial: toward a policy-oriented economic sociology', in Lounsbury, M. and Hirsch, P.M. (eds) *Research in the Sociology of Organizations*. Emerald Group Publishing Limited, pp. 5–26. doi:10.1108/S0733-558X(2010)000030A005.

- Luther, R.G., Matatko, J. and Corner, D.C. (1992) ‘The Investment Performance of UK “Ethical” Unit Trusts’, *Accounting, Auditing & Accountability Journal*, 5(4). doi:10.1108/09513579210019521.
- Lütz, S. (2008) ‘Finanzmärkte’, in Maurer, A. (ed.) *Handbuch der Wirtschaftssoziologie*. Wiesbaden: VS Verlag für Sozialwissenschaften, pp. 341–360. doi:10.1007/978-3-531-90905-9\_17.
- Mackey, A., Mackey, T.B. and Barney, J.B. (2007) ‘Corporate social responsibility and firm performance: Investor preferences and corporate strategies’, *Academy of Management Review*, 32(3), pp. 817–835. doi:10.5465/amr.2007.25275676.
- Maignan, I. and Ralston, D.A. (2002) ‘Corporate Social Responsibility in Europe and the U.S.: Insights from Businesses’ Self-presentations’, *Journal of International Business Studies*, 33(3), pp. 497–514. doi:10.1057/palgrave.jibs.8491028.
- Malkiel, B.G. (2003) ‘The Efficient Market Hypothesis and Its Critics’, *Journal of Economic Perspectives*, 17(1), pp. 59–82. doi:10.1257/089533003321164958.
- Mallin, C. a., Saadouni, B. and Briston, R. j. (1995) ‘The Financial Performance of Ethical Investment Funds’, *Journal of Business Finance & Accounting*, 22(4), pp. 483–496. doi:10.1111/j.1468-5957.1995.tb00373.x.
- Margolis, J.D. and Walsh, J.P. (2003) ‘Misery Loves Companies: Rethinking Social Initiatives by Business’, *Administrative Science Quarterly*, 48(2), pp. 268–305. doi:10.2307/3556659.
- Mayring, P. (2014) ‘Qualitative Content Analysis’, p. 144.
- McCann, T.V. and Clark, E. (2004) ‘Grounded theory in nursing research: Part 1 – Methodology’, *Nurse Researcher*, 11(2), pp. 7–18. doi:10.7748/nr2004.01.11.2.7.c5918.
- McGivern, Y. (2009a) *The Practice of Market Research: An Introduction*. Pearson Education.
- McGivern, Y. (2009b) *The Practice of Market Research: An Introduction*. Pearson Education.
- Michelson, G. et al. (2004) ‘Ethical Investment Processes and Outcomes’, *Journal of Business Ethics*, 52, pp. 1–10. doi:10.1023/B:BUSI.0000033103.12560.be.
- Mill, G.A. (2006) ‘The Financial Performance of a Socially Responsible Investment Over Time and a Possible Link with Corporate Social Responsibility’, *Journal of Business Ethics*, 63(2), p. 131. doi:10.1007/s10551-005-2410-7.
- Moskowitz, M. (1997) ‘Social Investing: The Moral Foundation’, *The Journal of Investing*, 6(4), pp. 9–11. doi:10.3905/joi.1997.408442.
- Mueller, S.A. (1991) ‘The Opportunity Cost of Discipleship: Ethical Mutual Funds and Their Returns’, *Sociology of Religion*, 52(1), pp. 111–124. doi:10.2307/3710719.
- Natur-Aktien-Index - Die NAI-Kriterien - Langfassung* (2021). Available at: [https://www.nai-index.de/seiten/kriterien\\_lang.html](https://www.nai-index.de/seiten/kriterien_lang.html) (Accessed: 30 December 2021).

- Nyborg, K. and Brekke, K.A. (2004) 'Moral Hazard and Moral Motivation: Corporate Social Responsibility as Labor Market Screening', *SSRN Electronic Journal* [Preprint]. doi:10.2139/ssrn.645741.
- Orlitzky, M., Schmidt, F.L. and Rynes, S.L. (2003) 'Corporate Social and Financial Performance: A Meta-Analysis', *Organization Studies*, 24(3), pp. 403–441. doi:10.1177/0170840603024003910.
- Overbeek, H., Apeldoorn, B. van and Nölke, A. (2007) *The Transnational Politics of Corporate Governance Regulation*. Routledge.
- Pasewark, W.R. and Riley, M.E. (2010) 'It's a Matter of Principle: The Role of Personal Values in Investment Decisions', *Journal of Business Ethics*, 93(2), pp. 237–253. doi:10.1007/s10551-009-0218-6.
- Pava, M.L. and Krausz, J. (1996) 'The association between corporate social-responsibility and financial performance: The paradox of social cost', *Journal of Business Ethics*, 15(3), pp. 321–357. doi:10.1007/BF00382958.
- Rädiker, S. and Kuckartz, U. (2019) *Analyse qualitativer Daten mit MAXQDA: Text, Audio und Video*. Wiesbaden: Springer Fachmedien Wiesbaden. doi:10.1007/978-3-658-22095-2.
- Ramaswami, V.K. (1967) 'Andrew Shonfield: Modern Capitalism — The Changing Balance of Public & Private Power. Oxford University Press, 1965, 55 Sh', *The Indian Economic & Social History Review*, 4(1), pp. 94–97. doi:10.1177/001946466700400106.
- Ramsköld, D. *et al.* (2009) 'An Abundance of Ubiquitously Expressed Genes Revealed by Tissue Transcriptome Sequence Data', *PLoS Computational Biology*. Edited by L.J. Jensen, 5(12), p. e1000598. doi:10.1371/journal.pcbi.1000598.
- Rivoli, P. (2003) 'Making a Difference or Making a Statement? Finance Research and Socially Responsible Investment', *Business Ethics Quarterly*, 13(3), pp. 271–287. doi:10.5840/beq200313323.
- Rose, N. (1991) 'Experts of the Soul', *Psychologie und Geschichte*, 3(1/2). Available at: <https://www.psycharchives.org/en/item/c12a9571-8135-4a47-9853-fde94baf3b71> (Accessed: 31 December 2021).
- Rudd, A. (1981) 'Social Responsibility and Portfolio Performance', *California Management Review*, 23(4), pp. 55–61. doi:10.2307/41164931.
- Salzmann, O., Ionescu-somers, A. and Steger, U. (2005) 'The Business Case for Corporate Sustainability:: Literature Review and Research Options', *European Management Journal*, 23(1), pp. 27–36. doi:10.1016/j.emj.2004.12.007.
- Sandberg, J. *et al.* (2008) 'The Heterogeneity of Socially Responsible Investment', *Journal of Business Ethics*, 87(4), p. 519. doi:10.1007/s10551-008-9956-0.
- Saunders, M. *et al.* (2019) "Research Methods for Business Students" Chapter 4: Understanding research philosophy and approaches to theory development', in, pp. 128–171.

- Schröder, M. (2004) 'The performance of socially responsible investments: Investment funds and indices', *Financial Markets and Portfolio Management*, 18(2), pp. 122–142. doi:10.1007/s11408-004-0202-1.
- Schueth, S. (2003) 'Socially Responsible Investing in the United States', *Journal of Business Ethics*, 43(3), pp. 189–194. doi:10.1023/A:1022981828869.
- Schwartz, M.S. (2003) 'The "Ethics" of Ethical Investing', *Journal of Business Ethics*, 43(3), pp. 195–213. doi:10.1023/A:1022933912939.
- Shrum, L.J., McCarty, J.A. and Lowrey, T.M. (1995) 'Buyer Characteristics of the Green Consumer and Their Implications for Advertising Strategy', *Journal of Advertising*, 24(2), pp. 71–82. doi:10.1080/00913367.1995.10673477.
- Socially Responsible Investment (SRI) (2021) Investopedia*. Available at: <https://www.investopedia.com/terms/s/sri.asp> (Accessed: 4 November 2021).
- Sparkes, A.C. (2002) 'Fictional Representations: On Difference, Choice, and Risk', *Sociology of Sport Journal*, 19(1), pp. 1–24. doi:10.1123/ssj.19.1.1.
- Sparkes, R. (2001) 'Ethical investment: whose ethics, which investment?', *Business Ethics: A European Review*, 10(3), pp. 194–205. doi:10.1111/1467-8608.00233.
- Sparkes, R. (2003) *Socially Responsible Investment: A Global Revolution*. John Wiley & Sons.
- Szilagyi, L. et al. (2008) 'Corporate Restructuring and Bondholder Wealth, in', *European Financial Management*, p. 819.
- Talan, G. and Sharma, G.D. (2019) 'Doing Well by Doing Good: A Systematic Review and Research Agenda for Sustainable Investment', *Sustainability*, 11(2), p. 353. doi:10.3390/su11020353.
- Tashakkori, A. and Creswell, J.W. (2007) 'Editorial: The New Era of Mixed Methods', *Journal of Mixed Methods Research*, 1(1), pp. 3–7. doi:10.1177/2345678906293042.
- Tectonic shift to sustainable investing – Institutional (2021) BlackRock*. Available at: <https://www.blackrock.com/institutions/en-us/insights/investment-actions/sustainable-investing-shift> (Accessed: 19 November 2021).
- Tippet, J. (2001) 'Performance of Australia's Ethical Funds', *Australian Economic Review*, 34(2), pp. 170–178. doi:10.1111/1467-8462.00186.
- Travers, F.J. (1997) 'Socially Responsible Investing on a Global Basis: Mixing Money and Morality Outside the U.S.', *The Journal of Investing*, 6(4), pp. 50–56. doi:10.3905/joi.1997.408437.
- Urša Reja et al. (2007) 'Developments in Applied Statistics Anuška Ferligoj and Andrej Mrvar (Editors) Metodološki zvezki, 19, Ljubljana: FDV, 2003'. Available at: [https://begrijpelijkeformulieren.org/sites/begrijpelijkeformulieren/files/Reja\\_e.a.\\_Open-ended\\_vs.\\_Close-ended\\_Questions\\_in\\_Web.pdf](https://begrijpelijkeformulieren.org/sites/begrijpelijkeformulieren/files/Reja_e.a._Open-ended_vs._Close-ended_Questions_in_Web.pdf).

von Wallis, M. and Klein, C. (2015) 'Ethical requirement and financial interest: a literature review on socially responsible investing', *Business Research*, 8(1), pp. 61–98. doi:10.1007/s40685-014-0015-7.

Windolf, P. (2005) *Finanzmarkt-Kapitalismus: Analysen zum Wandel von Produktionsregiment*. Springer-Verlag.

Windolf, P. (2008) 'Eigentümer ohne Risiko / Owners without Risk: Die Dienstklasse des Finanzmarkt-Kapitalismus / The New Service Class of Financial Market Capitalism', *Zeitschrift für Soziologie*, 37(6), pp. 516–535. doi:10.1515/zfsoz-2008-0606.

Wood, D.J. and Jones, R.E. (1995) 'STAKEHOLDER MISMATCHING: A THEORETICAL PROBLEM IN EMPIRICAL RESEARCH ON CORPORATE SOCIAL PERFORMANCE', *The International Journal of Organizational Analysis*, 3(3), pp. 229–267. doi:10.1108/eb028831.

Yelin, R. *et al.* (2003) 'Widespread occurrence of antisense transcription in the human genome', *Nature Biotechnology*, 21(4), pp. 379–386. doi:10.1038/nbt808.

Zikmund, W.G. *et al.* (2013) *Business Research Methods*. Cengage Learning.