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Corporate Social Performance and Financial Performance:
To what extent does CSP in terms of ESG-actions influence financial performance?
A study across the American and European market.

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ABSTRACT

The relationship between Corporate Social Performance (CSP), as measured through Environmental, Social, and Governance (ESG) scores, and Corporate Financial Performance (CFP) remains a topic of considerable debate in academic literature. The findings in this area are diverse, with studies reporting positive, negative, or no correlation between CSP and CFP. This study addresses these inconsistencies by examining the impact of CSP on financial outcomes within two major economic areas: the United States and Europe. Using data from the S&P 500 and Stoxx Europe 600 indices from 2017 to 2023, the analysis includes overall ESG scores as well as Single Pillar Scores to assess their influence on financial performance indicators, including stock closing prices, Tobin's Q, and return on assets (ROA).

The results reveal no significant or consistent correlations between CSP and CFP across the regions or within individual industries. This is despite the existence of minor weak correlations in isolated contexts. This lack of alignment challenges established theories such as stakeholder theory and instrumental stakeholder theory, which posit that addressing stakeholder interests positively impacts financial performance. By comparing two distinct economic regions and evaluating individual ESG components, this research highlights the complexity of the CSP-CFP relationship and emphasizes the need for further investigation into contextual and methodological factors influencing this dynamic.

ABSTRACT (GERMAN)

Die Beziehung zwischen der sozialen Unternehmensleistung (Corporate Social Performance, CSP), die anhand von Umwelt-, Sozial- und Governance-Scores (ESG) gemessen wird, und der finanziellen Unternehmensleistung (Corporate Financial Performance, CFP) wird in der wissenschaftlichen Literatur nach wie vor heftig diskutiert. Die Ergebnisse in diesem Bereich sind sehr unterschiedlich: Studien berichten über positive, negative oder gar keine Korrelation zwischen CSP und CFP. Die vorliegende Studie befasst sich mit diesen Unstimmigkeiten, indem sie die Auswirkungen von CSP auf die finanziellen Ergebnisse in zwei großen Wirtschaftsräumen untersucht: den Vereinigten Staaten und Europa. Unter Verwendung von Daten der Indizes S&P 500 und Stoxx Europe 600 aus den Jahren 2017 bis 2023 umfasst die Analyse sowohl ESG-Gesamtbewertungen als auch Single Pillar Scores, um deren Einfluss auf finanzielle Leistungsindikatoren wie Aktienschlusskurse, Tobin's Q und die Gesamtkapitalrendite (ROA) zu bewerten.

Die Ergebnisse zeigen keine signifikanten oder konsistenten Korrelationen zwischen CSP und CFP in den Regionen oder innerhalb einzelner Branchen. Dies gilt trotz des Vorhandenseins kleinerer schwacher Korrelationen in einzelnen Zusammenhängen. Diese fehlende Übereinstimmung stellt etablierte Theorien wie die Stakeholder-Theorie und die instrumentelle Stakeholder-Theorie in Frage, die davon ausgehen, dass sich die Berücksichtigung von Stakeholder-Interessen positiv auf die finanzielle Leistungsfähigkeit auswirkt. Durch den Vergleich zweier unterschiedlicher Wirtschaftsregionen und die Bewertung einzelner ESG-Komponenten unterstreicht diese Studie die Komplexität der CSP-CFP-Beziehung und betont die Notwendigkeit weiterer Untersuchungen zu kontextuellen und methodischen Faktoren, die diese Dynamik beeinflussen.

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LIST OF ABBREVIATIONS

ESG	-	Environmental-Social-Governance
CSP	-	Corporate Social Performance
CFP	-	Corporate Financial Performance
KLD Index	-	Kinder-Lydenburg-Domini Index
RBV	-	Resource-based View
CSR	-	Corporate Social Responsibility
SEER	-	Social, Environmental, and Ethical Responsibility
CSRD	-	Corporate Sustainable Reporting Directive
SPX	-	S&P 500 (Stock market code)
Eurostoxx	-	Stoxx Europe 600

1. INTRODUCTION

Sustainability has emerged as one of the defining challenges of the 21st century, reshaping the way businesses operate and how their success is measured. No longer confined to the realms of environmentalism or corporate ethics, sustainability now permeates every aspect of modern life, influencing consumer behavior, regulatory landscapes, and global market dynamics. The growing emphasis on Environmental, Social, and Governance (ESG) issues reflects this shift, transforming ESG from a niche concern into a fundamental criterion by which companies are evaluated. In recent years, ESG has become not just a buzzword but a crucial element of corporate strategy, dictating how companies allocate resources, manage risks, and engage with stakeholders on a global scale.

The importance of ESG considerations is evident in the rising expectations placed on companies to not only achieve financial success but also to contribute positively to society and the environment. This dual mandate has added a layer of complexity to strategic decision-making, where traditional metrics of financial performance must now be balanced with broader societal goals. Companies are increasingly judged not only by their profitability but also by their ability to operate responsibly, sustainably, and ethically. This evolution in corporate evaluation underscores a shift in the society towards recognizing the interdependence between business success and broader societal expectations (Waddock and Graves, 1997a, p. 303).

The academic and practical landscapes are rife with varied terminologies and frameworks that attempt to capture the essence of corporate responsibility. Terms such as Corporate Social Responsibility (CSR), Corporate Social Performance (CSP), and Social, Environmental, and Ethical Responsibility (SEER) are frequently used, often interchangeably, yet each carries nuanced differences in focus and application. Among these, Carroll's (1979) multidimensional construct of CSP offers a particularly robust framework for understanding corporate responsibility. By encompassing economic, legal, ethical, and discretionary responsibilities, Carroll's model provides a comprehensive lens through which the multifaceted nature of corporate social performance can be examined. These dimensions are not merely theoretical constructs but are deeply intertwined with the practical realities of stakeholder management and corporate governance, areas that are increasingly seen as critical to long-term business success. The following chapters will delve deeper into this framework, providing a detailed exploration of its components and relevance in today's business environment.

Despite the growing consensus on the importance of CSP, the relationship between a company's CSP activities and its financial performance remains a subject of intense debate within the

academic community. The divergence in perspectives can be traced back to the foundational theories of corporate purpose. Friedman's (1970) shareholder theory argues that a company's primary responsibility is to maximize shareholder value, suggesting that any diversion of resources towards social or environmental initiatives may detract from this goal. According to this view, CSP activities are often seen as a cost—an obligation rather than an opportunity—that could potentially erode profitability and shareholder returns.

In contrast, Freeman's (1984) stakeholder theory presents a more inclusive view of corporate responsibility, advocating for the consideration of all stakeholders in the decision-making process. Freeman's approach posits that by addressing the needs and expectations of various stakeholders—ranging from customers and employees to suppliers and the broader community—a company can enhance its reputation, build stronger relationships, and ultimately improve its financial performance. This theory has gained traction in the context of a globalized economy, where the interconnectedness of markets and the growing power of consumers and civil society mean that companies can no longer afford to ignore their broader social and environmental impact.

Over the years, these theoretical debates have been enriched by empirical research, yet the findings remain inconclusive (Lee 2023, p.2797; Candio 2024, p.417). Studies conducted in the early 2000s or shortly before, such as those by Hillmann and Keim (2001), Margolis and Walsh (2003), Griffin and Mahon (1997), and Orlitzky et al. (2003), have produced mixed results, with some identifying positive correlations between CSP and Corporate Financial Performance (CFP), while others find no significant relationship or even negative impacts. The lack of consensus in the literature highlights the complexity of the relationship between ESG activities and financial outcomes—a complexity that is further compounded by differences in measurement approaches, industry-specific factors, and regional variations.

Recent studies continue to explore this relationship, offering new insights yet also introducing new contradictions. For instance, Flammer (2013) presents evidence that the social performance generates new, competitive resources for companies and states that behave their responsible acting toward the environment leads to a significant stock price increase, whereas firms that behave irresponsibly face a significant decrease. Conversely, Bannier et al. (2022) report findings that suggest a negative impact of ESG investments on corporate performance, particularly when these activities are viewed as peripheral to a company's core business. Brammer and Millington (2008) obtain an ambiguous result from their study mentioning that the companies with a medium or “normal” level of CSP experience the lowest CFP, claiming that the relationship of CSP to CFP is a u-shaped one with positive effects of low/high CSP on

CFP. These conflicting results underscore the need for further research that not only examines the general relationship between CSP and CFP but also considers the contextual factors that may influence this relationship. Furthermore, there is a wide range of measurements of CSP as some studies observe the social performance in terms of charity and donations (e.g. Brammer and Millington, 2008) while others use the Kinder-Lydenburg-Domini index (KLD index, which will be explained more in the Theory chapter) (e.g. Hillmann and Keim, 2001; Waddock and Graves, 1997) or consider announcements of eco-harmful or -helpful actions of the companies (Ambec and Lanoie, 2008; Flammer, 2013). Anyway, quite often there were only observed 1 or 2 aspects of CSP and not in further extent as with ESG scores. The introduction of mandatory sustainability reporting in Europe, initially through the Non-Financial Reporting Directive (NFRD, 2014) and subsequently through the Corporate Sustainable Reporting Directive (CSRD) for all listed companies in EU-regulated markets, has been a significant development in the field of corporate governance. The introduction of the European Commission's (2024) Corporate Sustainability Reporting Directive has resulted in a notable increase in the transparency, objectivity, and measurability of ESG scores. These ratings are now based on the same factors in sustainability reports, facilitating a logical comparison of CSPs across companies in terms of ESG scores. This approach will be employed in the present study.

The increasing relevance of ESG in the corporate world, combined with the ongoing debate in the literature, underscores the necessity for updated and nuanced analysis. This study responds to this need by focusing on the period from 2017 to 2023 a decade characterized by significant developments in sustainability reporting and corporate responsibility. Furthermore, this research period also includes the COVID-19 pandemic. This might show how ESG measures can contribute to the crisis resilience of companies and how the possible effect of ESG on CSP are strengthened or weakened.

Additionally, this research does not only observe the relationship of CSP and CFP in general but aims to differentiate the relationship of CSP and CFP within different two economic areas, the US and Europe, which are roughly the same on an economic level, but may have different mindsets on the subject of sustainability and CSP. This specification is analyzed because studies have so far paid little attention to the differences of respective characteristics of the individual economies but have focused mostly on a direct relationship of certain parts of CSP and CFP. Furthermore, the study tries to differentiate the results within different industries of the national economy. This happens because different industries might feel the social pressure of ESG conformity to varying degrees due to their different characteristics, such as high or low energy

consumption. Those different industries' characteristics have been labeled as possible key influence on CFP by McWilliams and Siegel (2000, p. 606).

The guiding research question of this analysis—"To what extent does CSP, in terms of ESG actions, influence financial performance of companies in the USA and Europe?"—addresses a critical gap in the current understanding of ESG impacts. Through a detailed examination of the stock market performance of companies in the S&P 500 and Stoxx Europe 600, this study seeks to provide new insights into the relationship between ESG engagement and financial success. By identifying which level of CSP in terms of ESG activities leads to the biggest benefit for the corporate financial performance and how this may vary across different economic contexts, the findings of this research could have significant implications for corporate decision-making and policy development in the years to come.

In conclusion, this study not only contributes to the academic debate on ESG and financial performance but also aims to offer practical insights for businesses navigating the complex and evolving landscape of corporate responsibility. As sustainability continues to shape the future of business, understanding the nuanced relationship between CSP and CFP will be crucial for companies seeking to thrive in a world where success is increasingly defined by the ability to balance profit with purpose.

2. LITERATURE REVIEW AND THEORETICAL FOUNDATIONS

This chapter outlines the theoretical underpinnings of this study by reviewing the existing literature and establishing the research framework. It is divided into three sections.

Section 2.1: Literature Review provides an overview of the key studies exploring the relationship between CSP and CFP. It highlights the different findings within the academic discourse, emphasizing the divergent views on how social performance influences financial outcomes. By critically assessing relevant studies, this section contextualizes the theoretical debate and identifies gaps that this research aims to address.

Section 2.2: Theoretical Foundations presents the conceptual foundations that inform the study's analysis. Subsection 2.2.1: Key Theories discusses the major theoretical perspectives which shape the discourse on CSP and CFP. Subsection 2.2.2: The Framework of CSP delves into Carroll's Corporate Social Performance model, explaining its structure and relevance for assessing social responsibility in a comprehensive and systematic manner. Section 2.3: Due to the conflicting fundamental theories involved, the hypotheses are not

formulated as such; rather, the potential effects are explained and illustrated graphically, and a separate assumption about the anticipated results is substantiated and formulated.

2.1 LITERATURE REVIEW

Over time, many studies have emphasized various aspects of the positive effects of CSP on CFP. For example, Brammer and Millington (2008) argue that a positive CSP can significantly enhance financial performance by fostering employee motivation and increasing productivity. This viewpoint is corroborated by Ambec and Lanoie (2008, p.314), who further emphasize that firms with high CSP can attract and retain highly skilled workers, thus improving overall organizational efficiency. Sen and Bhattacharya (2001) add that companies with strong social performance may also benefit from lower operational costs due to higher productivity levels and a larger pool of qualified labor. This aligns with Moskowitz's (1972) assertion that non-financial benefits, such as strong social performance, can reduce employees' demands for higher financial compensation, thereby lowering labor costs.

In addition to the internal benefits associated with CSP, Brammer and Millington (2008, p.1328) note that socially responsible firms are more attractive to investors who prioritize ethical considerations, often referred to as "responsible investors." Such investors may enhance a company's financial standing by contributing to capital inflows. Moreover, strong CSP can improve a company's market positioning by differentiating its products, which in turn can increase customer demand and reduce price sensitivity. Lee (2024, p.2800) also suggests that companies committed to CSP activities are less likely to incur fines related to environmental violations, further enhancing their financial performance. An additional advantage of good CSP lies in the improved relationships with external stakeholders. Positive CSP may reduce the likelihood of boycott campaigns, protests, and negative publicity from environmental groups, as well as increase societal acceptance of the firm's operations (Ambec and Lanoie, 2008, p.16). These factors align with Freeman's (1984, p.25) stakeholder theory, which posits that a firm's accountability extends to a broad range of agents in society who can either affect or be affected by the achievement of the firm's objectives. By addressing the concerns of a wide range of stakeholders, companies can foster goodwill and enhance their reputational capital, ultimately leading to improved financial outcomes.

However, in contrast to these optimistic perspectives, the neoclassical view holds that companies that do not prioritize social responsibility may enjoy a financial advantage by avoiding the additional costs associated with CSP initiatives. According to this perspective,

firms that remain unresponsive to societal and environmental pressures may, *ceteris paribus*, achieve higher profits by minimizing direct costs (Brammer and Millington, 2008; Ambec and Lanoie, 2008, p.6). Moreover, more recent studies, such as Yoon et al. (2018), argue that a high CSP performance can create a competitive disadvantage due to the increased expenses associated with sustainability initiatives. This is further supported by Waddock and Graves (1997a, p.311), who found a negative relationship between CSP and the debt-to-asset ratio, indicating that companies with higher CSP may face financial constraints that could hinder their competitiveness.

Additionally, Ambec and Lanoie (2008, p.8) suggest that while consumers may exhibit some awareness of sustainability when it comes to the offering of "green products," there is often less recognition of a company's overall CSP performance, especially in relation to broader ESG activities that impact the entire organization and its processes. This lack of consumer awareness may undermine the financial benefits that companies hope to gain from investing in ESG initiatives, thereby weakening the case for high CSP.

These arguments align closely with what Friedman (1970, p.126) asserted in his seminal work, where he argued that the sole responsibility of business is "to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game." Friedman's assertion reflects the core belief of the neoclassical view: that any diversion of resources towards social and environmental concerns detracts from a firm's primary obligation to maximize shareholder value.

However, there are also recent studies (Qiu, Shaukat and Tharyan, 2016; Jacobs, Singhal and Subramanian, 2010; Moneva and Cuellar, 2009) which find no statistically significant connection between CSP and CFP, adding further complexity to the existing debate. Furthermore, there are studies with mixed results as Velte (2017) finds no significant evidence in connection of CSP and market-based performance measures but with accounting-based measures. These findings prompt critical questions regarding the nature and direction of this relationship. Some researchers have shifted focus to whether CSP truly influences CFP, or whether, conversely, financial success drives companies to engage more actively in social responsibility efforts. Waddock and Graves (1997a, p.312-314) propose that the relationship is bidirectional, conceptualizing it as a "virtuous cycle." According to their slack-resource theory, firms with strong financial performance have the necessary resources to invest in responsible activities, which in turn improves their CSP. Simultaneously, their good-management theory

suggests that effective management of social performance positively influences financial performance, creating a reinforcing feedback loop between the two.

Flammer (2013, p.759) contributes to this discussion by emphasizing that only companies that actively pursue environmentally responsible practices experience significant stock price increases, while those that neglect such responsibilities tend to suffer declines in stock value. Her work points to an interesting development: the increasing societal expectation that companies adopt green practices. This emerging "norm of becoming a green company" (Flammer, 2013, p.759) suggests that as more firms engage in sustainability efforts, the additional value generated by further ESG investments diminishes, particularly for firms that already exhibit high levels of social responsibility. This phenomenon could partially explain the inconsistent results observed in various studies on CSP-CFP relationships.

Moreover, studies focusing on the stock market sometimes indicate a positive link between CSP and financial performance, particularly in times of economic crisis. For example, Moalla and Dammak (2022) observe that companies with high CSP tend to experience lower volatility in their stock prices during periods of instability. This finding suggests that a commitment to CSP activities signals a clear, long-term strategy that appeals to investors seeking stability. Similarly, Yoon et al. (2018) and Li et al. (2018) note that firms with higher CSP enjoy enhanced reputations in the capital markets, leading to improved operational efficiency and lower financial risks. Clarkson et al. (2008) add that transparent communication about CSP activities—through ESG reporting—provides companies with a competitive advantage that is difficult for lower-CSP firms to replicate. This further reinforces the notion that responsible corporate behavior can offer tangible financial benefits.

In addition to these perspectives, the literature highlights that the relationship between CSP and CFP is not uniform but rather contingent on several contextual factors. These include firm size, industry characteristics, and the competitive strategies employed. For instance, Kim, Kim & Qian (2018) argue that the level of competitive action taken by a company moderates the CSP-CFP relationship. They find that firms with highly competitive action levels see a positive relationship between CSP and financial performance, while those with lower levels of competitive action may actually experience a negative correlation, as less proactive firms derive fewer benefits from social initiatives. Similarly, Zahoor et al. (2023) explore the dynamics in international new ventures, finding that ownership concentration and the presence of returnee board members weaken the link between CSP and post-entry performance, suggesting that internal governance structures play a role in moderating this relationship. He and Chittor (2022)

further differentiate between competitive strategies, such as differentiation or cost leadership, showing that the importance of stakeholder management varies depending on the strategic orientation of the firm.

Firm size is another factor that has been examined extensively, with mixed results. While some scholars argue that larger firms with more resources are better positioned to implement effective CSP strategies, Shakil (2020) challenges this notion, finding no significant influence of firm size on the relationship between CSP and stock prices. This is somewhat contrary to Waddock and Graves' (1997a) "virtuous cycle" theory, as smaller firms, especially in their early stages, may lack the financial performance (CFP) needed to invest in significant ESG activities. Nevertheless, the varying impacts of size, industry, and strategy further complicate the ability to draw definitive conclusions about the CSP-CFP relationship.

Another key issue that contributes to the variation in findings across studies is the measurement of financial performance itself. Financial performance can be assessed in numerous ways, from stock price movements (Flammer, 2013; Bannier et al., 2021; Moalla and Dammak, 2022) to Market Value Added (Hillmann and Keim, 2001), and other accounting-based metrics such as leverage, profitability (Brammer and Millington, 2008), return on equity (ROE), or return on investment (ROI). Proponents of market-based performance measures, such as Market Value Added, argue that these are the most relevant for investors and shareholders, as they reflect market perceptions of firm value. Benston (1982) contends that accounting data can be subject to manipulation, making market-based indicators more objective. However, critics, including Shane and Spicer (1983), point out that market performance measures can be influenced by factors unrelated to a firm's core business activities, suggesting that accounting-based measures may provide a more stable and reliable gauge of financial performance. There is therefore no clear answer as to which measurement method is the right one, but it is clear that both types have strengths and weaknesses.

Upon reviewing the literature, it becomes clear that the majority of studies focus on the relationship between broad definitions of CSP and financial performance, often measured through profitability, market-based indicators, or both. Godfrey (2005) underscores the growing body of research that views corporate philanthropic donations as a strategic element of CSP. Brammer and Millington (2008) similarly adopt charitable giving as a proxy for social performance, while Flammer (2013) tracks CSP announcements and subsequent stock price fluctuations to assess market reactions. Nevertheless, a recurring issue in the literature is the

difficulty in measuring corporate social behavior. Waddock and Graves (1997) acknowledge this challenge, noting that survey instruments, social responsibility indices, and content analysis of corporate documents are common tools for assessing CSP, each with its own set of strengths and limitations.

This diversity in measurement approaches is likely a contributing factor to the inconsistent findings regarding the relationship between CSP and CFP. To move forward, there is a clear need for a more standardized, transparent, and scalable form of measuring CSP that can be consistently applied across studies and industries. Without such a framework, it remains difficult to fully understand the dynamics at play between corporate social initiatives and financial outcomes. As ESG reporting becomes increasingly mandatory within the EU, and with other economic regions adapting their reporting standards to enhance international transparency, the use of ESG scores may serve as the necessary consistent measurement tool for assessing CSP.

Finally, as highlighted in the introduction, the academic literature presents a wide array of findings regarding the relationship between CSP and CFP, with studies offering supporting, neutral or opposing views. This ongoing debate underscores the complexity of understanding how corporate social and sustainability efforts translate into financial outcomes. This study aims to contribute to the discussion by taking a detailed look at different economic areas and the individual components of CSP through the use of the individual ESG Pillar Scores.

Due to the numerous factors previously enumerated and the varied argumentation points of the individual studies, Table 1 offers a concise summary of the findings from multiple studies, which were used in this work, regarding a recognized correlation between CSP and CFP. When applicable, the supporting theories of the studies are also mentioned.

Table 1: Literature Review

Author	Year	Title	Journal	Key theories	Context - particular firms/Industry/country	Measurement of CSP/CFP	Findings about Correlation
Ambee and Lanoie	2008	Does it Pay to be green? A systematic overview	Academy of Management Perspectives	Shareholder Theory, Porter Hypothesis	-	literature review of other studies	Pro (higher CSP leads to higher CFP)
Bannier, Bofinger and Rock	2022	Doing Safe by Doing Good: Non-Financial Reporting and the Risk Effects of Corporate Social Responsibility	European Accounting Review	Goal Framing Theory	Study observes differences between USA and EU	CSP: ESG Score	Mixed results: In the EU, increased CSP-awareness leads to risk reduction, while in the U.S., it has the opposite effect.

Brammer and Millington	2008	Does it pay to be different? An analysis of the relationship between corporate social and financial performance	Strategic Management Journal	Instrumental Stakeholder Theory, Institutional Theory, Porter Hypothesis	UK: 56% manufacturers + rest mixed industries (1990-1999)	CSP: charity giving of companies CFP: stock market price-change	mixed results: mediocre CSP - lowest CFP; short-term: lowest CSP – highest CFP; long-term: high CSP – highest CFP
Donaldson and Preston	1995	The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications	Academy of Management	Stakeholder theory	Conceptual model	CSP in terms of cooperation with key stakeholder	Pro (defining Instrumental Stakeholder Theory)
Flammer	2013	Corporate Social Responsibility and Shareholder Reaction: The environmental awareness of investors	Academy of Management Journal	Stakeholder theory, Instrumental stakeholder theory, Resource-based view	USA: all traded companies (1980-2009)	CSP: eco-friendly/harmful announcements CFP: Stock market price-change	Pro (CSP announcements lead to stock price increases)
Friedmann	1970	The Social Responsibility of Business Is to Increase Its Profits	New York Times Magazine	Shareholder Theory	-	CFP: Shareholder value CSP: Resources used other than increasing profit	Con (Theoretical)
Hillmann and Keim	2001	Shareholder Value, Stakeholder Management, and Social Issues: What's the bottom line?	Strategic Management Journal	Stakeholder theory, Instrumental stakeholder theory	USA: Industry as control variable with SIC-Code (1994-96)	CFP: Shareholder value with MVA CSP: "Stakeholder Management" and "Social Issue Participation" with KLD Index	Mixed results - stakeholder management increases CFP -social issue participation can be negative to CFP
Jacobs, Singhal and Subramanian	2010	An empirical investigation of environmental performance and the market value of the firm	Journal of Operations Management	Shareholder Theory, Instrumental Stakeholder Theory	-	CSP: Announcements of environmental performance CFP: Stock market price change	No correlation: reaction of the stock market to environm. announcements. Some significance to subcategories of announcements
Jones	1995	Instrumental Stakeholder Theory: A synthesis of ethics and economics	Academy of Management	Stakeholder theory, Instrumental stakeholder theory	Conceptual paper	CSP: mutual trust, efficient contracting, number of suppliers	Pro (Theoretical)
Lee	2023	The relationship between green innovation and sustainable growth in Korean companies	Sustainable Development	value creation theory, value destruction theory	Industry: Positive CSP-effect on CFP higher in manufacturing than in non-manufacturing industries	CSP: ESG Score CFP: ROE, total assets, total liabilities Green Innovation: R&D expenditures	Pro: additionally, larger effect of CSP-CFP for larger companies

Moalla and Dammak	2022	Corporate ESG performance as good insurance in times of crisis: lessons from US stock market during COVID-19	Journal of Global Responsibility	Stakeholder Theory, Resource-based Theory	USA: S&P 500 during Covid-19 (2019-2020)	CSP: ESG performance CFP: Stock market price change Control Variable: Tobin's Q	not directly: High CSP leads to resilience of stock prices in crises
Moneva and Cuellar	2009	The Value Relevance of Financial and Non-Financial Environmental Reporting	Springer - Environmental and Resource Economics (Book)	Instrumental Stakeholder Theory,	Spain: 124 listed companies (1996-2004)	CSP: information about environm. policies, implementation of environm. management systems from firm reports	No correlation: market valuation of non-financial environm. Disclosure; partially for financial environm. disc.
Porter and van der Linde	1995	Toward a New Conception of the Environment-Competitiveness Relationship	Journal of Economic Perspectives		Conceptual paper	CSP in terms of environment-friendly operations and regulations	"Pro" (CSP as chance for innovation and competitive advantage)
Qiu, Shaikat and Tharyan	2016	Environmental and social disclosures: Link with corporate financial performance	The British Accounting Review	Resource-based view, Voluntary Disclosure Theory	Industry with FTSE/DJ-Code - no explanatory power	CSP: E,S Score CFP: ROA, ROE	Mixed results: No correlation between environm. disc. and profitability. Higher social disclosure have higher CFP
Ricci et al.	2024	ESG resilience in conflictual times	Research in international Business and Finance	-	European listed companies (2021-2022)	CSP: ESG Score CFP: Stock market price change, Fama-French model	not directly: High CSP in the E-Score leads to resilience of stock prices
Shin, Moon and Kang	2023	Where does ESG pay? The role of national culture in moderating the relationship between ESG performance and financial performance	International Business Review	Hofstede's six cultural dimensions, Shareholder Theory, Instrumental Stakeholder Theory, Legitimacy Theory	Comparison of companies with different cultures for different effects of CSP on CFP across 50 countries (2002-2018)	CSP: ESG Score CFP: ROA	Pro: CSP-CFP positive in countries with cultures of high individualism Con: CSP-CFP negative in countries with high power distance
Su	2019	Can green investment win the favor of investors in China? Evidence from the return performance of green investment stocks.	Emerging Markets Finance and Trade	-	China: investment stocks (2012-2017)	CSP: CSI Green investment index CFP: Jensen's Alpha with Fama-French model	Con: Green investment leads to financial underperformance and pose higher downside risks
Velte	2017	Does ESG performance have an impact on financial performance? Evidence from Germany	Journal of Global Responsibility	Stakeholder Theory	Germany: 412 DAX, TecDAX and MDAX companies (2010-2014)	CSP: ESG Score CFP: accounting-based (ROA) and market-based (Tobin's Q)	mixed results: no connection CSP - market-based performance but with accounting-based performance

							measures (G-Score strongest impact)
Waddock and Graves	1997a	THE CORPORATE SOCIAL PERFORMANCE–FINANCIAL PERFORMANCE LINK	Strategic Management Journal	Shareholder theory, Stakeholder theory	Industry as control variable with SIC-Code	CSP: KLD Index CFP: ROA, ROE, Return on sales	Mixed results: CSP positively associated with prior and future CFP; negative relationship CSP - debt-to-asset-ratio can lead to higher lower competitiveness
Yoon, Lee and Byun	2018	Does ESG Performance Enhance Firm Value? Evidence from Korea	Sustainability	Value-enhancing Theory	Korea: 705 firms of different Industries (environmental and non-environmental sensitive) (2010-2015)	CSP: ESG Score CFP: EPS and Equity Book Value	Mixed results: positive CSR effect on CFP is stronger in non-environm. sensitive industries; Governance has negative impact on CFP for environm. sensitive firms.
Zhang and Shuang	2020	Socially responsible investment and firm value: The role of institutions.	Finance Research Letters	-	listed companies in 17 countries (2005-2018)	CSP: Socially responsible investment CFP: Tobin's Q	Con: Under the influence of institutions CSP can reduce CFP

The subsequent subchapter will delve into the aforementioned key theories with greater depth.

2.2.1 KEY THEORIES

As introduced earlier, Freeman's stakeholder theory (1984) and Friedman's shareholder theory (1970) are pivotal in shaping the divergent perspectives on the relationship between Corporate Social Performance and Corporate Financial Performance and continue to form the basis of research in current studies. Historically, these two theories have been central to the dichotomy in the field and have contributed to the varied results found in empirical research. However, as the discourse on CSP and CFP has evolved, additional theoretical frameworks or extensions of existing ones have been developed to better capture the complexity of this relationship. In this chapter, the foundational theories are discussed in depth, along with a brief overview of other relevant theoretical perspectives present in the literature.

Friedman's shareholder approach (1970) centers on the interests of shareholders, as the name suggests. The theory asserts that a company's primary responsibility is to utilize its resources in the most efficient manner possible, with the ultimate goal of maximizing profits. In doing so, the company must operate "within the boundaries of societal rules and regulations" (Friedman, 1970, p. 126). Friedman's model posits that managers, as agents of the shareholders, are tasked with a clear and singular objective: profit maximization. The relationship between managers and shareholders is thus framed as a classic principal-agent dynamic, where the agent's actions must align with the financial interests of the principal.

From this perspective, any expenditure beyond what is legally required—such as costs related to reducing emissions or engaging in other socially responsible activities—is seen as misaligned with the shareholders' interests. Friedman argues that such expenditures are driven by a general concern for social welfare, but not by the financial objectives of the company's owners. As a result, these actions lack justification within the framework of shareholder theory (Friedman, 1970, p. 123).

Furthermore, Friedman raises important questions about the appropriateness and extent of corporate spending on social initiatives. He suggests that determining a "proper" share of profits for such purposes is problematic, as corporate managers are hired based on their expertise in business operations, not on their proficiency in social or ethical matters. According to Friedman, this division between business and social responsibility is essential to maintaining clarity in the manager's role within the company.

In essence, Friedman's shareholder theory contends that only individuals, not corporations, can bear moral responsibilities. While individual managers may have personal responsibilities, such as obligations to their families or their own moral beliefs, these do not extend to their professional roles within the company. When acting as representatives of the firm—an artificial legal entity—they are bound by their duty to the shareholders, which is solely focused on financial performance (Friedman, 1970, p. 122). Thus, any deviation from this objective, in the name of broader social goals, undermines the fundamental principle of the theory.

In contrast to Friedman's shareholder theory, Freeman's stakeholder theory (1984) presents a broader and more inclusive perspective on the role of a company. Freeman's approach acknowledges not only the diversity among stakeholders but also emphasizes the interdependence between stakeholders and the firm. He highlights that companies and their stakeholders exist in a symbiotic relationship, where each party depends on the other for success. The central objective in this theory is not solely the maximization of profit but rather

the maximization of value, with companies being encouraged to create long-term value for all stakeholders, not just shareholders. This shift in focus marks a significant departure from the shareholder-centric model.

Moreover, Freeman's theory redefines corporate responsibilities in opposition to Friedman's narrow view. While Friedman maintains that corporations, as artificial entities, cannot bear ethical responsibilities, Freeman contends that companies have ethical obligations not only to their shareholders but also to the broader society and various stakeholders. This perspective supports the idea that corporate sustainability—across multiple dimensions—can be achieved through meaningful stakeholder engagement. In this case, stakeholders encompass all groups or individuals who can influence or are influenced by a company's performance (Freeman and Mcvea, 2005, p. 183).

Over time, stakeholder theory has evolved, particularly through the development of the Instrumental Stakeholder Theory, primarily advanced by Jones (1995). This theory synthesizes Freeman's stakeholder perspective with elements from economic theories and behavioral science. Building on the ethical foundations laid by Freeman, Jones (1995, p. 404) argues that ethical principles such as trust, trustworthiness, and cooperation can provide firms with a competitive advantage. In Jones' view, the relationships between companies and their stakeholders are akin to contracts, which serve as metaphors for the trust that underpins these relationships. While some contracts are formal and highly specified—such as those between companies and employees—others may be less formal or more implicit, such as the relationship between a company and its surrounding community (Jones, 1995, pp. 409-411). Jones argues that efficient contracting, particularly those based on mutual trust, can lead to sustained competitive advantages.

However, unlike Freeman's original stakeholder theory, which broadly advocates improving relationships with all stakeholders, the instrumental stakeholder theory emphasizes the importance of focusing on key stakeholders. Scholars such as Jones (1995, p. 431), Donaldson and Preston (1995, p. 67), Hillmann and Keim (2001, p. 129) and Brammer and Millington (2008, p. 1328) suggest that companies should prioritize relationships with those stakeholders who are most critical to the firm's financial success. These key stakeholders are essential for securing vital resources that contribute to the firm's development and performance. For instance, maintaining a small number of trusted suppliers is often viewed as a sign of cooperative relationships built on mutual trust. Firms that cultivate such focused partnerships

are more likely to achieve long-term advantages compared to those that work with a larger, less cohesive network of suppliers (Jones, 1995, p. 426).

Jones extends this logic to the management of employees, arguing that long-term employee commitment is similarly advantageous. Trust-based relationships between employers and employees, where strict monitoring is minimized, tend to result in enhanced employee performance and efficiency (Jones, 1995, p. 428). Overall, Jones stresses that a company's reputation for trustworthiness must be earned over time, primarily by avoiding opportunistic behavior. Practices such as plant closures, job hopping, or hostile takeovers, which may be driven by short-term efficiency goals, often undermine trust and cooperation. These actions can create instability and uncertainty, which ultimately damages long-term relationships with stakeholders, outweighing any short-term financial gains (Jones, 1995, p. 431).

According to the Instrumental Stakeholder Theory, CSP initiatives can be viewed as efforts to build trust and cooperative relationships with key stakeholders, which in turn positively influences CFP (Jones, 1995, p. 430). Thus, stakeholder engagement and ethical business practices are not merely altruistic, but they serve as strategic tools that can enhance a company's financial standing over time. By fostering trust and collaboration with key stakeholders, companies can create a more stable and sustainable foundation for long-term success.

Indeed, even in the most recent studies, the stakeholder theory continues to be a prominent framework used to explain and analyze the positive relationship between CSP and CFP. Scholars such as Brooks and Oikonomou (2018), Aboud and Diab (2018), and Yoon et al. (2018) have employed this theory in their research to illustrate how a firm's attention to stakeholder needs can drive financial success. However, other theoretical frameworks have also been explored in this context. One such alternative is Porter's Five Forces framework, as well as his routes to competitive advantage (Porter, 1980).

Porter's model suggests that firms must choose between two broad strategies to achieve a competitive edge: becoming a cost leader, wherein the company strives to attain the lowest operational costs and thus sell its products at lower prices or differentiating its offerings from competitors through unique features or quality. In the context of CSP, this framework implies that a company's investments in social performance should align with its broader strategic goals. For example, firms pursuing a differentiation strategy might invest heavily in CSP to stand out from competitors and appeal to ethically conscious consumers, while firms focusing on cost leadership may invest minimally to maintain lower costs. Porter warns, however, that

companies with moderate levels of investment in CSP risk being "stuck in the middle," unable to capitalize on either low-cost leadership or product differentiation.

Nevertheless, a potential challenge to Porter's approach lies in the variability of consumer willingness to pay higher prices for socially responsible products. While some consumers may prioritize ethical considerations in their purchasing decisions, others may be unwilling or financially unable to do so, which could limit the effectiveness of a differentiation strategy based solely on CSP.

Another theoretical perspective that has been occasionally applied to this field is the resource-based view (RBV) of the firm (Li et al., 2018; Albitar et al., 2020). As a theory within strategic management, RBV posits that a firm's internal resources and capabilities serve as the primary drivers of its success and competitive advantage. According to RBV, in order to achieve and sustain a competitive edge, a company's resources must be valuable, rare, inimitable, and organized (commonly referred to as the VRIO framework). Moreover, firms must continually renew and adapt their resource base to maintain this advantage in the long term. In the context of CSP, the resource-based view suggests that companies can strategically allocate their resources to enhance their social performance, thereby gaining a competitive edge through sustainable and socially responsible products (Moalla and Dammak, 2022, p. 387). By developing resources that are both difficult to replicate and aligned with societal values, firms can differentiate themselves in the marketplace, potentially attracting customers, investors, and other stakeholders who prioritize corporate responsibility.

These theories, while not exhaustive, provide a broader extension of the possible explanations for the relationship between CSP and CFP. However, despite the potential value of frameworks like Porter's Five Forces and the RBV, the literature predominantly relies on the shareholder and stakeholder theories to explore this relationship, as discussed previously. These dominant theories share commonalities, particularly in their recognition of the broader social system in which organizations operate. Both frameworks suggest that companies are not isolated entities but are instead embedded within a complex network of societal expectations and stakeholder relationships, which in turn shape their strategic behavior and influence their financial outcomes.

2.2.2 THE FRAMEWORK OF CORPORATE SOCIAL PERFORMANCE

After discussing the key theories that may explain the motivations behind corporate investment in social initiatives—or lack thereof—and the potential link between CSP and CFP, it is now

essential to provide a more detailed explanation of the CSP concept itself. This framework, which was briefly introduced in the introductory section, serves as the foundation for evaluating a company's social and responsible efforts. The concept of CSP was first introduced by Carroll in 1979 and offers a comprehensive, multidimensional framework for understanding the social responsibilities of businesses within a structured context.

For this research, the CSP framework is chosen over Corporate Social Responsibility (CSR) and other related constructs for several important reasons. Firstly, CSR, as defined by Davis (1960, p.70), refers to business decisions and actions taken for reasons that extend beyond the firm's direct economic or technical interests. While this definition highlights the ethical dimension of corporate operations, it lacks the depth and structure needed to address the full spectrum of social issues that modern organizations face. Additionally, Manne and Wallich (1972, p.2) argue that CSR behavior must be voluntary, which introduces a degree of ambiguity and variability in how CSR is understood and practiced by different firms. This lack of clarity and consistency can undermine its effectiveness as a framework for evaluating corporate social initiatives.

In contrast, Carroll's CSP framework offers a more structured and comprehensive approach by integrating three critical components: the content of CSR, the social issues organizations must address, and the mode of social responsiveness (Carroll, 1979, p.497). This model provides a holistic view of corporate responsibility by not only considering whether businesses exceed their economic and legal obligations but also by identifying specific social areas—such as environmental protection, product safety, and anti-discrimination—where corporate responsibilities are most pertinent. Furthermore, Carroll's framework differentiates between reactive and proactive stances in corporate responses to social pressures, offering a more nuanced analysis of corporate behavior through the concept of social responsiveness.

Carroll's CSP framework is structured around three key pillars: the definition of CSR, the identification of social issues that organizations must address, and the philosophy of social responsiveness.

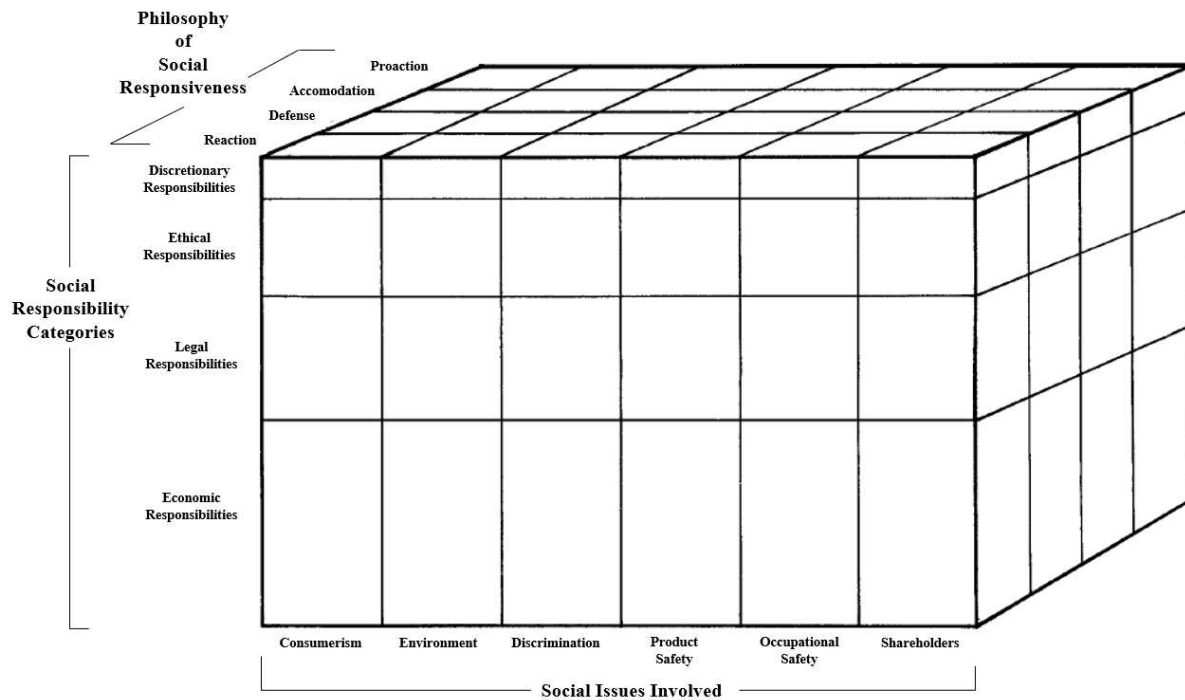
1. **Definition of CSR:** Carroll (1979, p. 500) defines CSR as encompassing the economic, legal, ethical, and discretionary expectations that society holds for organizations at any given time. This broad definition ensures that businesses consider a wide array of societal demands, not just those related to profit generation and legal compliance. By doing so, Carroll expands the scope of corporate responsibilities to include ethical

considerations, such as fairness and equity, as well as discretionary actions like philanthropy, which, while not required by law, are valued by society.

2. **Social Issues to Address:** The second component of the CSP framework outlines specific social issues that businesses are expected to address. These issues are not static and can change over time or vary across different industries. For example, banks may face less pressure regarding environmental issues compared to manufacturers, who are often more directly involved in recycling and waste management efforts. Meanwhile, industries like insurance might encounter greater scrutiny concerning consumer protection and transparency (Carroll, 1979, p. 501). This flexibility allows the CSP framework to adapt to evolving societal concerns and industry-specific challenges, making it highly relevant in a contemporary business context.
3. **Philosophy of Social Responsiveness:** The third pillar focuses on corporate social responsiveness, which is critical in evaluating how businesses respond to social pressures. According to Frederick (1978, p.154), corporate social responsiveness refers to a firm's capacity to respond to social demands, emphasizing both the ethical and practical dimensions of such responsiveness. This includes the company's stance—whether reactive, defensive, accommodative, or proactive—toward social issues. Carroll's CSP framework thus incorporates a continuum of responsiveness, ranging from a company merely complying with societal demands to one that actively anticipates and addresses emerging social concerns. This aspect of the model highlights the dynamic nature of corporate responsibility, recognizing that businesses can take varying approaches to the same social issue based on their strategic priorities and ethical values.

In sum, the CSP framework integrates these three key components—the definition of CSR, the range of social issues, and the philosophy of responsiveness—into a coherent model, as illustrated in Figure 1 below. This combination allows for a more nuanced and thorough evaluation of a company's social performance, considering both the motivations behind corporate actions and the tangible outcomes of these efforts. By structuring corporate social responsibility in this way, Carroll's model provides a robust tool for analyzing the ethical and practical dimensions of business operations, moving beyond the often vague and voluntary nature of CSR to provide a clearer framework for evaluating corporate social initiatives.

Figure 1: The Corporate Social Performance Model



Source: According to Carroll, 1979, p.503

In conclusion, Carroll's CSP framework offers a comprehensive and multidimensional approach to understanding and assessing corporate social performance. It provides a level of clarity and structure that is often lacking in more loosely defined concepts such as CSR, as it defines responsibilities, identifies key social issues, and outlines a detailed philosophy of responsiveness. This makes the CSP model particularly valuable for contemporary research on the relationship between CSP and CFP, as it offers both theoretical rigor and practical relevance. The chapter 3.2.1 – dependent variable - will describe the specific tools and methods this study uses to measure CSP in a way that aligns with the principles and structure of the CSP framework, ensuring that the findings are both reliable and valid.

2.3 EXPECTED EFFECTS

Based on the theoretical foundations set out in the previous chapters, which describe opposing effects, hypotheses are not formulated in this study. Instead, an exploratory approach is adopted. A brief summary and a graphical representation will illustrate which theory stands for which effect. Conclusively, the anticipated outcomes of this study are articulated.

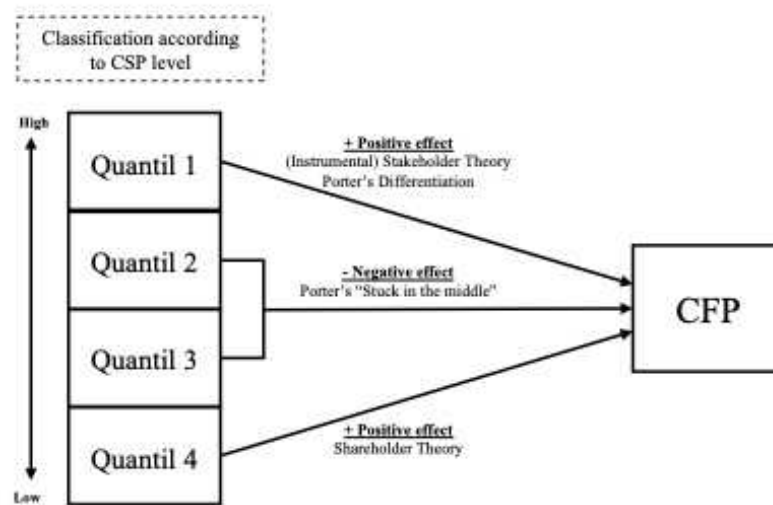
Freeman's stakeholder theory (1984) emphasizes that companies operate in a network of interdependent stakeholders and that long-term success is not achieved by maximizing profits alone, but by creating value for all stakeholders. Companies that cultivate relationships with key stakeholders and invest in CSP promote trust and cooperation, which in turn can have a positive impact on their financial performance. Jones' Instrumental Stakeholder Theory (1995) also emphasizes that companies that build trust-based relationships with key stakeholders can achieve long-term competitive advantage. Companies that take their social and environmental commitments seriously and have above-average CSP might benefit from improved stakeholder relations and increased financial performance.

Contrary to that, Friedman's (1970) shareholder theory places the maximization of shareholder value at the heart of corporate responsibility. Companies should focus on maximizing profits and avoid additional investments in CSP, as these do not bring any direct benefits for shareholders and only cause additional costs. Any social responsibility that goes beyond the legal minimum is seen as uneconomical and not in the interests of shareholders. Companies that focus on minimizing costs and maximizing profits without making significant investments in CSP could achieve higher financial results.

Porter (1980) argues that companies must choose between a strategy of cost leadership or differentiation in order to achieve a competitive advantage. A high CSP can be used as part of a differentiation strategy to positively differentiate from the competition, while a low CSP can support cost leadership by minimizing costs. However, companies that pursue neither clear differentiation nor strict cost leadership run the risk of being “stuck in the middle”, which can have a negative impact on their financial performance. In a similar manner, Brammer and Millington (2008) describe a 'U-shaped' connection between CSP and CFP. Companies with mediocre CSP and no clear strategic direction could achieve poorer financial performance as they do not achieve cost efficiency or a differentiated market position.

With regard to the modelling of this study, Figure 2 illustrates the possible theoretical effects described.

Figure 2: Theoretical Effects of CSP on CFP



Source: Author's graphic

The various theoretical perspectives show both positive and negative effects of CSP on CFP. In the literature to date, both older and more recent studies have repeatedly shown mixed results as demonstrated in chapter 2.1 in Table 1. Nevertheless, it is expected for this study that companies with high CSP tend to achieve better financial performance.

A key reason for this assumption is the increasing importance of global supply chains and the need to maintain stable relationships with suppliers and stakeholders. Companies today operate in complex, globally networked markets in which sustainability, ethical behavior and social responsibility are becoming increasingly important. A high CSP can help to build long-term and trusting partnerships with suppliers, which in turn leads to greater resilience to external shocks. Companies that actively strive for sustainable supply chains also benefit from more stable raw material and production conditions and a lower risk of reputational damage. Furthermore, CSP is becoming increasingly relevant in the wake of global warming. Stricter legal requirements, increasing public pressure and changing consumer behavior mean that companies with a strong CSP are better prepared for future challenges. They can implement sustainable innovations at an early stage, minimize regulatory risks and position themselves as pioneers in the market.

Freeman's Stakeholder Theory and Jones' Instrumental Stakeholder Theory underpin this assumption by emphasizing that companies that actively engage their stakeholders and build trust are more competitive in the long term. This is particularly true at a time when customers, investors and business partners are placing increasing value on ethical and sustainable business practices.

In summary, both current economic developments and long-term strategic considerations suggest that high CSP can have a positive impact on the financial performance of companies. Companies that respond to these trends at an early stage are likely to prevail over competitors with low CSP in the long term.

3. RESEARCH METHODOLOGY

This chapter outlines the methodological framework used to examine the relationship between CSP and CFP. It begins in section 3.1 Data and Sample Composition with a detailed description of the quantitative research design, including the datasets drawn from the S&P 500 and Stoxx Europe 600 indices, the rationale for selecting the study period, and the creation of CSP-based company portfolios. Following this, 3.2 Variables describes the variables central to the analysis: the independent variable, dependent variables and the control or grouping variable. By integrating these components, the methodology ensures a robust analysis capable of capturing variation across regions and ESG dimensions.

3.1 DATA AND SAMPLE COMPOSITION

In order to test the effects, put forth in the previous chapter regarding the impact of CSP on CFP, it is necessary to employ a quantitative research model. This enables a systematic investigation of a large number of companies across diverse industries, thereby facilitating the generation of reliable statistical results. A qualitative research approach, such as interviews with employees in marketing and sales or customers, could yield valuable insights into the reasons for purchasing decisions and the role of CSP in the sales process. However, this would likely result in an examination of the individual effects of CSP on consumers or employees, rather than a comprehensive understanding of the relationship between CSP and the overall performance of the company. This approach would be unsuitable for analyzing the comprehensive relationship between CSP and general corporate performance. Accordingly, a quantitative approach was selected here.

The analysis for this work was conducted using data of the S&P 500 American stock index and the Stoxx Europe 600 European stock index. Therefore, the analysis compares multinational, publicly traded companies of significant size. Additionally, the two indices, comprising approximately the number of companies included in the analysis, 500 and 600 in total (with slight variations in the number included in each index at reporting dates), allows for a relatively

large sample size. After adjusting for data sets with incomplete key figures over the entire research period, the resulting sample size is 441 data sets for the S&P 500 and 516 data sets from the Stoxx Europe 600. The investigation is conducted separately for each index, thus enabling the relationship between CSP and CFP to be compared in two economically advanced and market-oriented regions: the USA and Europe. This selection ensures that all examined companies are subject to the same reporting requirements and that they provide comparable ESG data. These ESG scores are of central importance to this study, as they facilitate a transparent and unified assessment of sustainable corporate governance. As previously outlined in the theoretical chapter, this study employs the CSP model developed by Carroll (1979), which offers a multidimensional perspective on social responsibility. While earlier studies often focused on a single dimension of CSP, the model proposed by Carroll requires a more comprehensive approach that encompasses economic, legal, ethical, and discretionary responsibilities. To gain an accurate understanding of the multifaceted nature of CSP, it is essential to measure these areas in a comprehensive manner, by using ESG Scores (more detailed explained in chapter 3.2.1).

The present study employed an ex-post longitudinal analysis with a fixed baseline, which entailed dividing the companies into quantiles based on their ESG score from 2017 (CSP, the independent variable) and subsequently comparing these with the development of the respective dependent variables (CFP, more detailed in chapter 3.2.2) over the period 2017-2023. This approach has two main advantages: Firstly, it enables a clear and unique classification of companies into quantiles that can be used directly for the analysis of high, medium, and low CSP. Secondly, it prevents companies from shifting within the quantiles over the period under investigation. The choice of the fixed consideration of CSP in 2017 is also based on the consideration of a possible 'virtuous cycle', i.e. a reciprocal relationship between CSP and CFP. It is acknowledged that financial success may influence ESG scores over time, and not the other way around. Therefore, it was decided that a dynamic adjustment of the ESG scores would be avoided. Moreover, such a dynamic adjustment would entail methodological challenges, as it would require additional assumptions about the drivers of ESG changes and their interactions with financial performance and lead to higher statistical and analytical complexity.

Subsequently, four portfolios were created for each of the two stock indices, based on the constituent company titles according. Each portfolio is constituted by a quartile of companies, based on their overall ESG Score on the first of January 2017. This implies that each portfolio comprises the upper 25% of companies with the highest ESG Score, the next portfolio includes

companies in the range of 26-50%, the third portfolio includes companies in the range of 51-75%, and the final portfolio includes the 25% of companies with the lowest ESG Score. It bears repeating that this process is conducted separately for the company values from the S&P 500 and the Stoxx Europe 600. This approach allows for not only the financial performance of companies with exceedingly high or low CSP to be tested, but also for the impact of varying CSP levels on market development to be investigated. The decision to use quantile portfolios instead of conducting four separate analyses was made to ensure comparability, reduce randomness in group selection, and provide a more structured way to analyze trends across different ESG performance levels. This method allows for clearer insights into whether financial performance varies systematically across ESG quartiles, rather than analyzing each group in isolation and due to the number of analyses performed in this study it helps to see effects on the different quantiles more direct. Moreover, quantile-based sorting is a widely accepted approach in financial research, ensuring the robustness and reproducibility of results. The respective portfolios are shown in the appendix.

The initial thought, which proposed the examination of a period preceding the advent of the SARS-CoV-2 pandemic to circumvent potential distortions caused by the crisis, was deliberately rejected. Instead, the period from 2017 to 2023 was selected for investigation of the impact of CSP on the resilience of companies in periods of crisis. As previously indicated in the literature, for example in the study by Ricci et al. (2024), CSP has the potential to positively influence the resilience of companies in periods of crisis. This results in an unusually protracted observation period, but on the one hand, resilience can be observed, as well as a 'normalization' after the years of crisis in the global economy.

In addition to the different economic regions the role of diverse industries was also considered as a control variable. This allows for a detailed analysis of the relationship between CSP and CFP in various industries, which in turn provides additional interpretative possibilities and potentially valuable indications for future research.

To obtain the necessary data for this analysis, including the indices, all key figures for the independent and dependent variables, as well as information such as industry affiliation, the software Refinitiv Eikon Datastream by Thomas Reuter was utilized. This data source is a leading source for business information (Tarmuji, Maelah and Tarmuji, 2016, p.67). This tool allowed for the efficient extraction and organization of large datasets, ensuring the accuracy and consistency of the information. One particular advantage of utilizing the same database

throughout the research period is the application of a consistent rating mechanism for the ESG score. This is important because the rating agencies and databases may employ different rating mechanisms. For the statistical analysis, including hypothesis testing and regression models, the software R was used for calculating correlations, regressions and ANOVAs, ensuring robust and reliable results. Through this methodological approach, the study is well-positioned to contribute to the growing body of research exploring the intersection of CSP and CFP.

3.2 VARIABLES

For the sake of greater clarity, this sub-section is subdivided once more into the categories of 'independent variables', 'dependent variables' and 'control variables or grouping variables'. Table 2 summarizes which variables are used for following various analyses. A more detailed description is then provided in the sub-sections.

Table 2: Variable definitions, measurement and sources

Type	Name	Definition	Time / Period	Data Source
1. Independent Variable	ESG Overall Score	Combined score of Environmental, Social and Governance Scores ranges from 0 to 100.	2017	Datastream
2. Independent Variable	Single E,S,G-Scores	Single Scores for each category from 0 to 100.	2017	Datastream
1. Dependent Variable	Closing Price (market-based measure)	Stock market closing price at 01.01. of each year.	development 2017-2023	Datastream
2. Dependent Variable	ROA (Accounting-based measure)	Ratio of Profit after tax to average total assets during tax period.	development 2017-2023	Datastream
3. Dependent Variable	Tobin's Q (market-based measure)	Ratio of Company's market value to book value.	development 2017-2024	Datastream
Grouping Variable	GICS Industry Groups	25 GICS Industry Group Codes categorized in 9 overarching Industry Groups.	2017	Datastream

3.2.1 INDEPENDENT VARIABLE

Previous studies have frequently employed the KLD Index¹, which has been particularly utilized in the United States for companies within the S&P 500. The index evaluated companies in nine different areas, including relations with communities, relations with employees, environmental performance, and product characteristics (Carroll, 1979; Waddock and Graves, 1997a). However, this index encompasses only a limited number of dimensions of corporate social action. Consequently, the ESG score has emerged as a widely used and comprehensive

¹ Kinder, Lydenberg, Domini & Co. Inc.

measurement tool. The ESG score considers a range of factors in the areas of environmental, social, and governance performance, enabling the comparison of corporate sustainability performance on a global scale. These ratings typically range from 0 to 100.

The environmental sector encompasses aspects such as carbon dioxide emissions, energy consumption, and environmental protection. In the social category, the evaluation encompasses labor conditions, diversity, inclusion, customer relations, and the handling of the community. The "Governance" category encompasses factors such as corporate ethics, organizational structure, and risk management (LSEG - ESG Score Guide, 2023). Despite the stricter regulatory requirements in Europe, such as the EU's Sustainable Finance Disclosure Regulation, there is also international effort as the Task force on Climate-related Financial Disclosures (TCFD), to harmonize reporting on ESG disclosure (Lee, 2023, p.2799-2800), as investors globally are increasingly focusing on ESG aspects and making corresponding investment decisions. This facilitates the development of internationally comparable ESG data. In summary, it can be stated that a company's ESG score most comprehensively represents the described framework of Corporate Social Performance due to the wide range of factors it includes and considers. Its three components—environmental, social, and governance—and their subcategories allow for a thorough evaluation of CSP's "Social Responsibility Categories" (Economic, Legal, and Ethical) and the "Social Issues Involved" (Consumerism, Environment, Discrimination, Product safety, Occupational safety, and Shareholders). While the ESG score may not directly measure the aspect of "Philosophy of Social Responsiveness," which indicates how companies respond to social issues (Reaction, Defense, Accommodation, or Proaction), the comparability of individual company scores provides valuable insights about their kind of philosophy. This comparability enables an assessment of each company's responsiveness to these issues by indicating whether their efforts may be regarded as comparatively strong or weak.

As in several other studies (Shin, Moon and Kang, 2023; Candio, 2024 or Lee 2023), CSP is measured here using ESG scores, which serve as the independent variable in this analysis. This approach offers an additional advantage, enabling a second layer of analysis; alongside a company's overall ESG score, the individual E-, S-, and G-pillar scores (also on basis of 2017) are also examined in further analyses. This allows for a more detailed view of any potential relationship between CSP and CFP.

As previously delineated, the overall ESG score of all companies (separate for both indices) was utilized to derive the four quantiles according to the magnitude of the scores.

3.2.2 DEPENDENT VARIABLE

In the existing literature, most studies measure financial performance using either accounting-based measures of profitability or market-based measures of firm stock market performance. Accounting-based measures, such as return on assets (ROA) or return on equity (ROE), are often lauded for providing a clear snapshot of a company's internal financial health, free from external market fluctuations. One key advantage of these measures is that they offer insights that are directly tied to a firm's operational performance. However, they are also subject to limitations regarding objectivity and comparability, particularly due to differences in accounting standards and practices across firms and regions.

On the other hand, market-based performance measures, such as stock price movements, reflect investor sentiment and broader market conditions, which can be influenced by a multitude of factors beyond the company's own actions. While this can introduce variability unrelated to the firm's specific performance, it also provides a more dynamic and forward-looking perspective. From the perspective of shareholders and investors, market-based performance is of paramount importance, as it represents the value creation—or destruction—of a firm in real time. Additionally, stock market performance offers a holistic view that incorporates a wide array of variables, including investor confidence, macroeconomic conditions, and industry trends.

The initial focus of this study is on market-based performance metrics. This decision is aligned with the broader interests of all stakeholders, not merely those of shareholders and investors. Stock market performance is frequently regarded as an indicator of a company's overall resilience, growth potential, and long-term sustainability. Moreover, the portfolio-based methodology employed in this study (which will be elucidated in greater detail subsequently) is conducive to the examination of stock market data over extended periods of time, thereby facilitating a comprehensive and nuanced understanding of the correlation between CSP and financial outcomes under diverse market conditions.

Accordingly, the dependent variable for the initial analysis is the closing price of the companies listed in the indices on the first of January of each year from 2017 to 2023. Consequently, the respective price development of the closing price in comparison to the previous year was calculated and analyzed in order to identify any potential correlations with the ESG scores of the companies. In a similar vein, Bramer and Millington (2008) employ the close-price methodology to measure CFP.

As previously stated, the results in the literature exhibit considerable variability, which is also attributable to the use of disparate methodologies for measuring financial performance. In addition to the measurement using the closing price, another market-based performance measure, Tobin's Q, is employed as a dependent variable for a second analysis to investigate the potential correlation between CSP and CFP. Tobin's Q is a measure of a company's market value relative to its book value or replacement value of assets. This data was also considered for each company in the indices for the first day of the years 2017-2023. The Tobin's Q ratio is also used as an important indicator for the CFP of companies in some other studies (i.e., Silva 2023 or Moalla and Damak, 2022) and has therefore also been used here as a dependent variable.

In order to circumvent the issue of disparate measurement techniques for CFP in this study, a third analysis utilizing a third dependent variable was conducted to investigate the correlation between CFP and CSP. To examine the likely impact of CSP, an accounting-based indicator was used for this third variable instead of market-based indicators. This approach was adopted due to the presence of divergent results concerning these different measurements in the extant literature, as evidenced by the work of Velte (2017). The average percentage return on assets of the companies in question was taken into account for the evaluation for the period of 2017-2023 as commonly used in other studies as (Hu, Hassan and Atif or Xu and Zhu 2024). In this case, the Datastream method was employed to calculate the percentage ROA, whereby profit after tax was divided by the average total assets during the tax period. This ensured the use of different measurement methods for CFP.

3.2.3 GROUPING VARIABLE

In order to examine the possible different effects of CSP on CFP within different sectors or industries, the industry was included as a control or grouping variable. To perform this analysis, it was first necessary to determine the GICS industry groups of the companies in question via Datastream. The utilization of industry codes is a pervasive and straightforward instrument. Nevertheless, the industry code employed may differ across geographical regions. For instance, Shin, Moon and Kang (2023) employed the SIC code. Given the necessity for comparability in the present context, the code that was accessible for the majority of companies in both markets were selected – the GICS Industry Code. Accordingly, the two indices included companies with a total of 25 different GICS Industry Group Codes each. To ensure that the sample size was not too small in relation to the industries, the 25 GICS Industry Group Codes were categorized into

nine overarching industry groups based on similarities between the groups. These are the following industries: Consumer Goods, Financial Services, Healthcare, Technology, Communications and Media, Industrials and Infrastructure, Real Estate, Energy and Natural Resources, and Utilities. The following Table 3: **GICS Industry Groups in the stock indices** lists the 25 different GICS industry groups together with their classification in the summarized groups and a brief description.

Table 3: GICS Industry Groups in the stock indices

GICS Industry Groups
1. Automobiles & Components
2. Banks
3. Capital Goods
4. Commercial & Professional Services
5. Consumer Discretionary Distribution & Retail
6. Consumer Durables & Apparel
7. Consumer Services
8. Consumer Staples Distribution & Retail
9. Energy
10. Equity Real Estate Investment Trusts (REITs)
11. Financial Services
12. Food, Beverage & Tobacco
13. Health Care Equipment & Services
14. Household & Personal Products
15. Insurance
16. Materials
17. Media & Entertainment
18. Pharmaceuticals, Biotechnology & Life Sciences
19. Real Estate Management & Development
20. Semiconductors & Semiconductor Equipment
21. Software & Services
22. Technology Hardware & Equipment
23. Telecommunication Services
24. Transportation
25. Utilities

Table 4: Grouping of the GICS Industry Groups

1. Consumer goods
Grouping: All industries directly related to consumer goods, whether discretionary or essential.
Consumer Discretionary Distribution & Retail
Consumer Durables & Apparel
Consumer Services
Consumer Staples Distribution & Retail
Food, Beverage & Tobacco
Household & Personal Products

2. Financial services

Grouping: Industries focusing on financial and insurance services.

Banks

Financial Services

Insurance

Equity Real Estate Investment Trusts (REITs)

3. Healthcare

Grouping: Industries focussing on medical and biological products and services.

Health Care Equipment & Services

Pharmaceuticals, Biotechnology & Life Sciences

4. Technology

Grouping: All industries associated with the development and production of technology products and services.

Semiconductors & Semiconductor Equipment

Software & Services

Technology Hardware & Equipment

5. Communication & Media

Grouping: Industries operating in the field of communication and entertainment.

Media & Entertainment

Telecommunication Services

6. Industry & Infrastructure

Grouping: Industries that focus on physical products and services for various sectors of the economy.

Automobiles & Components

Capital Goods

Commercial & Professional Services

Transportation

7. Real estate

Grouping: All activities related to property development, management, and financing.

Real Estate Management & Development

Equity Real Estate Investment Trusts (REITs) (if analyzed separately, otherwise Financial Services)

8. Energy & raw materials

Grouping: All industries that work with natural resources and energy production.

Energy

Materials

9. Utility companies

Grouping: Sectors focusing on the provision of essential services.

Utilities

4. RESULTS

The first step of the analysis involved the implementation of an ANOVA (Analysis of variance) with the data sets of companies from the S&P 500 and Stoxx Europe 600. This was conducted with a view to establishing any potential correlations between the classification of the industry and the closing price over the period of 2017-2023. From a purely logical economic standpoint, this is not a necessary consideration, as it seems obvious. However, from a statistical perspective, it is important to determine whether the industry grouping factor has an impact on the closing price variable. The results in Table 7 demonstrated a notable discrepancy between the industry groups for both data sets. The F-values indicate that the variation of the mean values between the sectors is 5.68 and 2.94 times greater than the variation within the sectors, indicating that the Closing Price variable may exhibit variation.

Table 5: ANOVA: Industry Effects on Closing Price

Dataset	Metric	F value	P Value
SPX	Industry Effect on Closing Prices	$F(8, 432) = 5.68$	$p < .001$.
Eurostoxx	Industry Effect on Closing Prices	$F(8, 507) = 2.94$	$p = .003$

To investigate whether this observed variation could be explained by the ESG score or its individual components, namely the Single pillar scores, a correlation analysis was subsequently performed. In order to more accurately represent trends and reduce the influence of extreme values, the data were logarithmized in accordance with scientific practice.

For the further analysis to shorten it S&P 500 was named “SPX” (referring to official Code at the stock market) and Stoxx Europe 600 as “Eurostoxx”. The sample size after adjustment for incomplete data records, for example due to the dissolution of companies, mergers or acquisitions over the period of 2017-2023, is $n=441$ for SPX and $n=516$ for Eurostoxx.

The first examination of the impact of CSP on CFP was carried out by analyzing the overall ESG score of 2017 of the companies in question, with a focus on the development of the closing price over the period of 2017-2023. This was calculated for the total values of the S&P 500 (“All” in the table), and then for the aforementioned portfolios, which were divided into quantiles. As can be observed in Table 6, there is no discernible correlation, irrespective of the classification into the respective quantile. With regard to the views presented, there is no connection in the first analysis.

The subsequent section presents the findings of the further analyses, which are then compared and reviewed with the key theories and expected results in chapter 5 “Discussion”.

Table 6: Correlation: ESG Overall Score – Closing Price for S&P 500

Dataset	Metric	Quantile	Correlation r-value	P Value
SPX	Overall ESG Score	All	-0.0147	0.7681
SPX	Overall ESG Score	Quantile 1	0.1017	0.3117
SPX	Overall ESG Score	Quantile 2	0.0868	0.3903
SPX	Overall ESG Score	Quantile 3	-0.1004	0.3202
SPX	Overall ESG Score	Quantile 4	-0.0062	0.9507

*** p < 0.001; ** p < 0.05; * p < 0.1

The previous analysis of the ESG Score 2017 and the development of the closing price between 2017-2023 was now repeated for the Stoxx Europe 600, again taking into account the entire index (“All”) and the quantiles. The results are shown in Table 7. This shows a positive significance for quantile 1 ($r=0.2029$; $p=0.0275$). However, the correlation value is so low that only around 4% ($R^2=0.0756$) of the variance of the closing price in the first quantile of the data can be explained by the ESG Overall Score. Although the correlation is statistically significant the strength of the correlation leads to the point that the relationship between ESG and Close Price in quantile 1 is weak and practically not meaningful. The same reasoning for the ambiguous relationship applies to the weak significance of the positive correlation in quantile 2 ($r=0.1564$; $p=0.0921$). No correlation can be determined for the other quantiles and the overall analysis.

Table 7: Correlation: ESG Overall Score – Closing Price for Stoxx Europe 600

Dataset	Metric	Quantile	Correlation r-value	P Value
Eurostoxx	Overall ESG Score	All	0.0517	0.2638
Eurostoxx	Overall ESG Score	Quantile 1	0.2029	0.0275 **
Eurostoxx	Overall ESG Score	Quantile 2	0.1564	0.0921 *
Eurostoxx	Overall ESG Score	Quantile 3	0.0641	0.4921
Eurostoxx	Overall ESG Score	Quantile 4	-0.1352	0.1463

*** p < 0.001; ** p < 0.05; * p < 0.1

The next analysis examined whether there are significant correlations between the Single ESG Pillar Scores from 2017 and the closing price development from 2017-2023. The correlation values shown in Table 8 are based on the S&P 500 data and relate to the individual quantiles. Only the Social Pillar Score in quantile 1 shows a significance ($p=0.0307$). However, the r-value is so low that it is not sufficient as a necessary explanation (assumption r-value at least > 0.3). As with the results for the overall ESG value, there is no significant correlation between the quantiles in the data for the Single Pillar Scores for the S&P 500.

Table 8: Correlation: Single ESG Pillar Score – Closing Price for S&P 500

Dataset	Metric	Quantile	Correlation r-value	P Value
SPX	Env	Quantile 1	0.1416	0.1599
SPX	Soc	Quantile 1	0.2152	0.0307 **
SPX	Gov	Quantile 1	-0.1511	0.1314
SPX	Env	Quantile 2	0.0620	0.5397
SPX	Soc	Quantile 2	0.0035	0.9724
SPX	Gov	Quantile 2	-0.1078	0.2859
SPX	Env	Quantile 3	-0.0374	0.7187
SPX	Soc	Quantile 3	0.0481	0.6343
SPX	Gov	Quantile 3	-0.1207	0.2318
SPX	Env	Quantile 4	0.0932	0.6219
SPX	Soc	Quantile 4	0.0868	0.3880
SPX	Gov	Quantile 4	-0.1501	0.1340

*** p < 0.001; ** p < 0.05; * p < 0.1

Table 9 shows the results for the data from the Stoxx Europe 600 for the individual ESG Scores. The results indicate a weak positive significance of the Social Pillar Score (p=0.0518). However, the r-value is only 0.1795, which does not allow for the identification of a clearly recognizable correlation. The situation is similar with the weak negative correlation of the Governance Pillar Score in quantile 4 (r=-0.1922; p=0.0379). Despite the statistically significant p-value, it does not provide any practical relevance due to the low negative correlation.

Table 9: Correlation: Single ESG Pillar Score – Closing Price for Stoxx Europe 600

Dataset	Metric	Quantile	Correlation r-value	P Value
Eurostoxx	Env	Quantile 1	0.0435	0.6402
Eurostoxx	Soc	Quantile 1	0.1795	0.0518 *
Eurostoxx	Gov	Quantile 1	0.0551	0.5536
Eurostoxx	Env	Quantile 2	0.0272	0.7712
Eurostoxx	Soc	Quantile 2	0.1085	0.2441
Eurostoxx	Gov	Quantile 2	0.0173	0.8530
Eurostoxx	Env	Quantile 3	-0.0393	0.6743
Eurostoxx	Soc	Quantile 3	0.0049	0.9582
Eurostoxx	Gov	Quantile 3	0.0862	0.3554
Eurostoxx	Env	Quantile 4	0.1134	0.2275
Eurostoxx	Soc	Quantile 4	-0.0787	0.3991
Eurostoxx	Gov	Quantile 4	-0.1922	0.0379 **

*** p < 0.001; ** p < 0.05; * p < 0.1

As the correlation calculations have not yet been able to establish a connection between CSP and CFP, a regression was also calculated for the effect of the Single ESG pillar scores on the

closing price for both share indices. Instead of just looking at simple correlations, a regression makes it possible to look at the effects of the three ESG pillars simultaneously and compare the relative influence of each component.

As shown in Table 10, the regression shows a significant negative impact of the “Governance component” on the cumulative stock price return ($\beta=-0.241$, $p=0.008$) for the S&P 500 values. The results of the regression analysis show that the components “Environment” and “Social” have no significant influence on the cumulative share price return. The model is significant overall ($p=0.048$) but explains only 2 % of the variance ($R^2=0.02$). Consequently, the regression calculation also only shows statistical significance, but with limited practical relevance.

Table 10: Regression: Single ESG Pillar Score - Closing Price for S&P 500

	β (Estimate)	Std. Error	t value	P Value
Cumulative Environmental log. Return	0.036	0.046	0.779	0.437
Cumulative Social log. Return	0.058	0.107	0.544	0.587
Cumulative Governmental log. Return	-0.241	0.090	-2.674	0.008 **
Residual standard error:	0.055			
Multiple R-squared:	0.021			
Adjusted R-squared	0.013			
F-statistic	2.659			
p-value	0.048			

*** $p < 0.001$; ** $p < 0.05$; * $p < 0.1$

The regressions for the Single ESG Pillar Scores and the Closing Price for the Stoxx Europe 600 stocks show no significance and indicate that there is no correlation between the named variables (Table 11). Consequently, also this regression calculations do not confirm any of the named theories either. The findings suggest an absence of correlation between CSP and CFP, thus contradicting the prevailing assumptions.

Table 11: Regression: Single ESG Pillar Score - Closing Price for Stoxx Europe 600

	β (Estimate)	Std. Error	t value	P Value
Cumulative Environmental log. Return	0.107	0.080	1.340	0.181
Cumulative Social log. Return	0.044	0.102	0.427	0.669
Cumulative Governmental log. Return	-0.009	0.072	-0.123	0.902
Residual standard error:	0.572			
Multiple R-squared:	0.006			
Adjusted R-squared	-0.000			
F-statistic	0.931			
p-value	0.426			

*** $p < 0.001$; ** $p < 0.05$; * $p < 0.1$

Since the results of the analyses between ESG and closing price showed no to very low significance, a further analysis of correlations was carried out using the market-based CFP indicator Tobin's Q for both data sets. In the same pattern, correlation analyses were carried out for the S&P 500 and Stoxx Europe 600 using the ESG Overall Score and the Single Pillar Scores.

Table 12 now presents the results of the analysis between the ESG Overall Score from 2017 and development of Tobin's Q for the total SPX values ("All") over the period of 2017-2023, as well as in the breakdown by quantiles. There is only a strong significance for quantile 2 ($p=0.0078$), but here too the correlation can only be classified as weak ($r=0.3374$), which means that only approximately 11% of the variance can be explained ($R^2=0.1138$). This result, therefore, also does not indicate a clear correlation in practical terms. Furthermore, the other quantiles and the overall view provide no indication of a significant correlation.

Table 12: Correlation: ESG Overall Score – Tobin's Q for S&P 500

Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
SPX	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	All	-0.0565	0.3844
SPX	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	Quantile 1	0.0569	0.6603
SPX	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	Quantile 2	0.3374	0.0078 **
SPX	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	Quantile 3	0.0467	0.7254
SPX	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	Quantile 4	-0.1886	0.1599

*** $p < 0.001$; ** $p < 0.05$; * $p < 0.1$

In Table 13 the results for the analysis of connection between the Single Pillar Scores and Tobin's Q of the companies in the S&P 500 are presented. This time, a greater number of points demonstrate a statistically significance or a weak significance according to their p-values. After analyzing the entire S&P 500 list with the Single Governance Score, a significance emerges with a p-value of 0.0438. Nevertheless, the correlation value is similarly weak and negative ($r=-0.1305$) that there is no meaningful significance. The same picture emerges when analyzing the individual quantiles. The Social Pillar Score in quantile 2 ($p=0.0392$), the Governance Pillar Score in quantile 3 ($p=0.0747$), and the Governance Pillar Score in quantile 4 ($p=0.0752$) show significance or weak significance. However, the associated correlation values are relatively low, indicating that they may not have practical relevance.

Table 13: Correlation: Single ESG Pillar Score – Tobin's Q for S&P 500

Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
SPX	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	All	-0.0344	0.5968
SPX	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	All	0.0179	0.7831
SPX	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	All	-0.1305	0.0438 **
SPX	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	Quantile 1	0.1181	0.3607
SPX	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 1	-0.0707	0.5848
SPX	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 1	0.0607	0.6393
SPX	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	Quantile 2	-0.2215	0.0863
SPX	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 2	0.2648	0.0392
SPX	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 2	-0.0595	0.6487
SPX	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	Quantile 3	0.2140	0.1037
SPX	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 3	0.0426	0.7484
SPX	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 3	-0.2338	0.0747
SPX	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	Quantile 4	-0.0118	0.9303
SPX	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 4	0.0907	0.5020
SPX	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 4	-0.2375	0.0752

*** p < 0.001; ** p < 0.05; * p < 0.1

The same steps as for Table 12 and Table 13 (analysis of Overall ESG Score / Single Pillar Scores of 2017 with the development of Tobin's Q from 2017-2023) were now taken for the Stoxx Europe 600. A correlation between the ESG Overall Score and Tobin's Q was therefore carried out and the results presented in Table 14. Here too, only one significant value was found for quantile 1. With a correlation value of $r=0.3222$ and $p=0.0078$, there is a weak positive correlation that can be classified as significant. As already explained in the results, this correlation cannot be classified as clear, as the low correlation can only explain 10.38% ($R^2=0.1038$) of the variance of Tobin's Q by the ESG Overall Score. There is no correlation in the other quantiles and the overall view of the Stoxx Europe 600 ("All").

Table 14: Table 5: Correlation: ESG Overall Score – Tobin's Q for Stoxx Europe 600

Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
Eurostoxx	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	All	-0.0437	0.4774
Eurostoxx	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	Quantile 1	0.3222	0.0078 **
Eurostoxx	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	Quantile 2	0.1600	0.1958
Eurostoxx	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	Quantile 3	0.1027	0.4117
Eurostoxx	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	Quantile 4	-0.0905	0.4696

*** p < 0.001; ** p < 0.05; * p < 0.1

Furthermore, a correlation calculation was carried out between the Single ESG Pillar Scores and Tobin's Q. As can be seen in Table 15, there are also significances with very weak correlations for the Social Pillar Score in quantile 1 ($r=0.2612$, $p=0.0328$) and the Governance Pillar Score in quantile 2 ($r=0.3122$, $p=0.0101$). However, it should again be noted that there is no clear correlation here due to the low explanatory value of the variance. All other single pillar scores in the other quantiles, as well as the review of the entire Stoxx Europe 600, show no correlation.

Table 15: Correlation: Single ESG Pillar Score – Tobin's Q for Stoxx Europe 600

Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	All	-0.0248	0.6878
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	All	-0.0899	0.1439
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	All	0.0244	0.6917
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	Quantile 1	-0.1013	0.4146
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 1	0.2612	0.0328 **
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 1	0.0681	0.5838
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	Quantile 2	0.0309	0.8041
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 2	-0.1979	0.1085
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 2	0.3122	0.0101 **
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	Quantile 3	0.0752	0.5485
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 3	-0.0924	0.4605
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 3	0.0929	0.4582
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Environmental Score log. Return	Quantile 4	0.0120	0.9237

Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 4	-0.1100	0.3792
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 4	-0.0710	0.5713

*** p < 0.001; ** p < 0.05; * p < 0.1

Finally, an analysis with the accounting-based indicator ROA was calculated due to the low or non-existent correlations between the audited CFP indicators and CSP. In Table 16, a correlation was calculated between the ESG Overall Score and the percentage ROA of the companies in the S&P 500 in the overall view and for the individual quantiles. No correlation was found for any value.

Table 16: Correlation: ESG Overall Score – ROA for S&P 500

Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
SPX	Cumulative ROA log. Return	ESG overall Score log. Return	All	0.0301	0.6434
SPX	Cumulative ROA log. Return	ESG overall Score log. Return	Quantile 1	0.0799	0.5368
SPX	Cumulative ROA log. Return	ESG overall Score log. Return	Quantile 2	0.0466	0.7212
SPX	Cumulative ROA log. Return	ESG overall Score log. Return	Quantile 3	0.0442	0.7393
SPX	Cumulative ROA log. Return	ESG overall Score log. Return	Quantile 4	-0.0531	0.6949

*** p < 0.001; ** p < 0.05; * p < 0.1

The analysis of the individual ESG Pillar Scores and the ROA from 2017-2023 for the S&P 500 also shows no correlation between the variables (Table 17). Consequently, this analysis also provides no evidence for any of the named assumptions.

Table 17: Correlation: Single ESG Pillar Score – ROA for S&P 500

Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
SPX	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	All	-0.0096	0.8822
SPX	Cumulative ROA log. Return	Cumulative Social Score log. Return	All	0.0539	0.4071
SPX	Cumulative ROA log. Return	Cumulative Governance Score log. Return	All	0.0184	0.7775
SPX	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	Quantile 1	0.1530	0.2353
SPX	Cumulative ROA log. Return	Cumulative Social Score log. Return	Quantile 1	0.1861	0.1475
SPX	Cumulative ROA log. Return	Cumulative Governance Score log. Return	Quantile 1	-0.1379	0.2850
SPX	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	Quantile 2	-0.0417	0.7498
SPX	Cumulative ROA log. Return	Cumulative Social Score log. Return	Quantile 2	0.0793	0.5434
SPX	Cumulative ROA log. Return	Cumulative Governance Score log. Return	Quantile 2	0.0146	0.9109

SPX	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	Quantile 3	0.0209	0.8753
SPX	Cumulative ROA log. Return	Cumulative Social Score log. Return	Quantile 3	0.1164	0.3800
SPX	Cumulative ROA log. Return	Cumulative Governance Score log. Return	Quantile 3	-0.0952	0.4733
SPX	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	Quantile 4	-0.1014	0.4531
SPX	Cumulative ROA log. Return	Cumulative Social Score log. Return	Quantile 4	-0.0793	0.5577
SPX	Cumulative ROA log. Return	Cumulative Governance Score log. Return	Quantile 4	0.1567	0.2445

*** p < 0.001; ** p < 0.05; * p < 0.1

Table 18 illustrates the correlation analysis of the ESG Overall Score with the ROA from 2017-2023 for the values from the European share index. However, the outcome is consistent with that observed for the American share index, as no statistically significant correlation is evident.

Table 18: Correlation: ESG Overall Score – ROA for Stoxx Europe 600

Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
Eurostoxx	Cumulative ROA log. Return	ESG overall Score log. Return	All	-0.0535	0.3850
Eurostoxx	Cumulative ROA log. Return	ESG overall Score log. Return	Quantile 1	0.1107	0.3723
Eurostoxx	Cumulative ROA log. Return	ESG overall Score log. Return	Quantile 2	0.0993	0.4241
Eurostoxx	Cumulative ROA log. Return	ESG overall Score log. Return	Quantile 3	-0.1391	0.2654
Eurostoxx	Cumulative ROA log. Return	ESG overall Score log. Return	Quantile 4	-0.0359	0.7745

*** p < 0.001; ** p < 0.05; * p < 0.1

Several statistically significant correlations can be observed in the correlation calculation of the Single ESG Pillar Scores with the ROA from 2017-2023 for the Stoxx Europe 600 in Table 19. For example, a very weak negative correlation with pronounced significance ($r=-0.1490$, $p=0.0150$) occurs in the overall analysis of the Eurostoxx. The Social Pillar Score in quantile 3 is also significant, albeit with a very weak positive correlation ($r=0.2693$, $p=0.0288$). The Environmental Pillar Score and the Governance Pillar Score in quantile 2 show strongly significant values. The Environmental Pillar Score shows a negative correlation ($r=-0.3870$), and the Governance Pillar Score a positive correlation ($r=0.3154$). However, due to the weak to medium correlation, no clear correlation can be derived for all values here either.

Table 19: Correlation: Single ESG Pillar Score – ROA for Stoxx Europe 600

Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
Eurostoxx	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	All	-0.1490	0.0150 **
Eurostoxx	Cumulative ROA log. Return	Cumulative Social Score log. Return	All	0.0229	0.7097
Eurostoxx	Cumulative ROA log. Return	Cumulative Governance Score log. Return	All	-0.0020	0.9737
Eurostoxx	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	Quantile 1	-0.0501	0.6875
Eurostoxx	Cumulative ROA log. Return	Cumulative Social Score log. Return	Quantile 1	0.1536	0.2145
Eurostoxx	Cumulative ROA log. Return	Cumulative Governance Score log. Return	Quantile 1	-0.0588	0.6363
Eurostoxx	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	Quantile 2	-0.3870	0.0012 ***
Eurostoxx	Cumulative ROA log. Return	Cumulative Social Score log. Return	Quantile 2	-0.1366	0.2704
Eurostoxx	Cumulative ROA log. Return	Cumulative Governance Score log. Return	Quantile 2	0.3154	0.0093 ***
Eurostoxx	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	Quantile 3	-0.1492	0.2319
Eurostoxx	Cumulative ROA log. Return	Cumulative Social Score log. Return	Quantile 3	0.2693	0.0288 **
Eurostoxx	Cumulative ROA log. Return	Cumulative Governance Score log. Return	Quantile 3	-0.0702	0.5755
Eurostoxx	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	Quantile 4	-0.1028	0.4115
Eurostoxx	Cumulative ROA log. Return	Cumulative Social Score log. Return	Quantile 4	0.0401	0.7490
Eurostoxx	Cumulative ROA log. Return	Cumulative Governance Score log. Return	Quantile 4	-0.0993	0.4274

*** p < 0.001; ** p < 0.05; * p < 0.1

Based on the results of the correlation analyses for closing price, Tobin's Q and ROA, no connection can be established, which is why no further regression calculation is performed. An in-depth investigation of the potentially different impact of ESG on the dependent variable between the various industries is also not expedient, as no clear correlations were identified that could be distributed differently across the industries. Furthermore, the results do not differentiate for the American and the European market as there was no significance found for neither of them.

5. DISCUSSION

The primary outcomes of the fourth chapter are presented below and compared with the theories presented and the findings from the literature review. To this end, a brief summary is provided initially: No clear correlations were identified in the various analyses. However, isolated, weak correlations were observed, which should be briefly mentioned at this point for both indices.

S&P 500

For the American stock index, a weak correlation with statistical significance was found between the Social Pillar Score and the Closing Price in quantile 1. However, the regression model for these variables no longer showed this correlation, but even did find a weak negative correlation between the Governance Pillar Score and the Closing Price. Overall, however, this model does not provide sufficiently meaningful results regarding the variance of the values. The correlation analysis of the ESG Overall Score with Tobin's Q for the S&P 500 shows a statistically significant but weak correlation for quantile 2. Upon examination of the Single Pillar Scores with Tobin's Q, statistical significance is observed, although with exceedingly weak correlations. This is evident in the case of the Governance Pillar Score in the calculation of the overall S&P 500, as well as in quantiles 3 and 4. Furthermore, a statistical significance with a weak correlation for the Social Score in quantile 2 was found. Nevertheless, even these values are inadequate for explaining the observed variance in the data, given the weak correlations. The correlation analysis for ESG as Overall Score and Single Scores, as well as for ROA, revealed no correlations or significance. The same can be said of the remaining values from the other analyses that have not been particularly mentioned.

The correlation between the Pillar Scores and the respective quantiles is very weak overall. Significance only manifests itself in specific areas, such as the Social Pillar Score in the upper quantiles or the Governance Pillar Score in the lower quantiles, but not in the Environmental Pillar Score. This suggests that certain ESG Pillar scores may play a role in specific contexts, but that there is no strong overall pattern.

In summary, none of the analyses conducted did demonstrate a robust correlation with significant statistical significance.

Table 20 gives the reader the significant results in a summary for a better overview.

Table 20: Summary of significant results for S&P 500

SPX: Single ESG Pillar Scores - Closing Price					
Dataset		Metric	Quantile	Correlation r-value	P Value
SPX		Social Score	Quantile 1	0.2152	0.0307 **
Regression SPX: Single ESG Pillar Scores - Closing Price					
		β (Estimate)	Std. Error	t value	P Value
Cumulative Governmental log. Return		-0.2410	0.0901	-2.674	0.0078 **
SPX: ESG Overall Score - Tobin's Q					
Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
SPX	Cumulative Tobin's Q log. Return	ESG overall Score log. Return	Quantile 2	0.3374	0.0078 **

SPX: Single ESG Pillar Scores - Tobin's Q

Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
SPX	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	All	-0.1305	0.0438 **
SPX	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 2	0.2648	0.0392 **
SPX	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 3	-0.2338	0.0747 *
SPX	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 4	-0.2375	0.0752 *

Eurstoxx Europe 600

As part of the analysis of European companies, a correlation calculation between ESG Overall Score and Closing price showed statistical significance with weak correlations for quantiles 1 and 2. The results for the analysis of the Single Pillar Scores and the closing price show a weak significance for the Social Pillar Score in quantile 1 and a significant p-value for the Governance Pillar Score in quantile 4. However, these values are also not meaningful due to the aforementioned weak correlation. Furthermore, no correlation between the Single Pillar Scores and the closing price could be established using the regression model.

The analysis of the ESG Overall Score and Tobin's Q shows statistical significance in quantile 1, although the correlation can also be classified as weak. Significance between the Single Pillar Scores and Tobin's Q are found for the Social Pillar Score in quantile 1 and for the Governance Pillar Score in quantile 2 but the correlation is too low to provide a statement about a connection.

The calculations for the Single Pillar Score and ROA show very significant values for the Governance Pillar Score in quantile 2 and the Social Pillar Score in quantile 3. In addition, for the first time, statistical significance appears for the Environmental Pillar Score in quantile 2 and in the overall analysis of the Eurostoxx. Although also all those values show very weak correlation and have therefore no practical relevance.

The analyses conducted for the European market do not demonstrate any statistically significant relationships with strong overall correlations, as well as for the US market. However, here too, the Single Pillar Scores only show significance in certain areas, for example that the Social Pillar Score tends to show statistical significance in the upper quantiles. As with the US market, this indicates that certain ESG Pillar Scores might play a role in certain contexts, but that there is no strong overall pattern.

A summarized Table 21 was also prepared for the Stoxx Europe 600.

Table 21: Summary of significant results Stoxx Europe 600

Eurostoxx: ESG Overall Score - Closing Price					
Dataset	Metric	Quantile	Correlation r-value	P Value	
Eurostoxx	Overall ESG Score	Quantile 1	0.2029	0.0275 **	
Eurostoxx	Overall ESG Score	Quantile 2	0.1564	0.0921 *	
Eurostoxx: Single ESG Pillar Scores - Closing Price					
Dataset	Metric	Quantile	Correlation r-value	P Value	
Eurostoxx	Social Score	Quantile 1	0.1795	0.0518 *	
Eurostoxx	Governance Score	Quantile 4	-0.1922	0.0379 **	
Eurostoxx: ESG Overall Score - Tobin's Q					
Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
Eurostoxx	Cumulative Tobin's log. Return	ESG overall Score log. Return	Quantile 1	0.3222	0.0078 **
Eurostoxx: Single ESG Pillar Scores - Tobin's Q					
Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Social Score log. Return	Quantile 1	0.2612	0.0328 **
Eurostoxx	Cumulative Tobin's Q log. Return	Cumulative Governance Score log. Return	Quantile 2	0.3122	0.0101 **
Eurostoxx: Single ESG Pillar Scores - ROA					
Dataset	Metric	Subscore	Quantile	Correlation r-value	P Value
Eurostoxx	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	All	-0,1490	0.0150 **
Eurostoxx	Cumulative ROA log. Return	Cumulative Environmental Score log. Return	Quantile 2	-0.3870	0.0012 ***
Eurostoxx	Cumulative ROA log. Return	Cumulative Governance Score log. Return	Quantile 2	2.1903	0.0093 ***
Eurostoxx	Cumulative ROA log. Return	Cumulative Social Score log. Return	Quantile 3	0.2693	0.0288 **

Comparison with theory and literature review

Since the existing literature review has demonstrated, the results of various studies have yielded inconsistent findings with regard to the relationship between CSP and CFP, exhibiting positive, negative, or no correlations. Consequently, the results of this study do not represent a complete departure from the broader literature on this subject. However, as the reputation of CSP in general is growing and is increasingly becoming the focus of corporate strategies, the results may come as something of a surprise to the reader and against the formulated expected effects of the author. Nevertheless, other studies also conclude that there is no correlation between CSP and CFP as for example Qiu et al. (2016) and Silva (2023). However, a comparison with the key theories is essential.

The Stakeholder Theory point to the interdependence of companies and stakeholders and, with the aim of long-term value creation for all, the centralization of shareholders should be abandoned. In general, it is assumed here that the ESG score, with its broad spectrum of factors, reflects the interests of stakeholders well. However, the results show that this theory does not apply in the present sample, since no strongly significant, positive correlation could be found between the consideration of stakeholder interests through a high ESG score (quantile 1) and value creation in the sense of CFP. This was not the case for any of the three dependent variables tested - neither for the ESG Overall Score nor for the Single Pillar Scores.

On further consideration of the missing link in the Instrumental Stakeholder Theory, which is based on the stakeholder theory, one could at most assume that the “focus on key stakeholders” may not be correctly represented by ESG scores, since this rather includes all stakeholders and not just the key stakeholders. However, since no meaningful significance could be found in the analyses with the individual ESG scores that could be regarded as individual parts of the stakeholder group, this attempt at an explanation is also only of limited validity.

Friedman's shareholder theory, with its goal of maximizing profits and thus avoiding “unnecessary” spending outside of the operating business in the sense of CSP, is not confirmed here either, since no significant positive correlation with CFP was found for the companies with the lowest ESG scores (quantile 4). However, it should be noted that even the lowest ESG scores involve spending on CSP, which contradicts the basic idea of Friedman (avoiding spending outside the company's core business).

The question arises as to whether these two opposing, scientifically based theories of shareholder and stakeholder could neutralize each other in their effects, so that no link can be established between the CSP and the CFP, either positive or negative.

Finally, Porter's statement of “stuck in the middle” is not confirmed in this context. Those companies that have neither an exceptionally high nor an exceptionally low ESG score and are therefore “stuck in the middle” in the quantiles 3 and 4, also show no evidence of a significant negative (or positive) effect on their CFP. However, as this theory originally refers to the business model or business strategy in relation to the company's product range, it obviously cannot be applied to the extended business strategy in relation to ESG compliance.

6. CONCLUSION

Overall, this study covers many different issues. First, an attempt was made to address the issue of ambiguity in CSP measurement raised in literature by using ESG scores. Furthermore, this provided an opportunity to explore this in more detail and also to consider the influence of the individual Pillar Scores. Thus, this paper contributes to the line of research in the area of ESG practices by attempting to close the gap in the literature, since many existing studies focus on or isolate a single dimension of ESG or only the overall score. The approach here was to identify possible implications as to which parts of the CSP are most important and profitable for future management decisions in relation to the individual pillars and which areas should be given lower priority. However, none of the various analyses found any significant relationship between CSP and CFP whether for the Single nor the Overall Score. It is therefore not possible to derive helpful implications for these aspects. Secondly, the issue of the different effects of market-based and accounting-based performance measurements on CFP was also considered. For example, previous studies such as Velte (2019) or Koundouri et al. (2022) show differences in significance between analyses using market-based and accounting-based measures. For this reason, the original analysis by stock price performance was extended to include by Tobin's Q and ROA. However, it was found that the result of the lack of correlation between CSP and CFP was the same for both types of CFP measures. Overall, isolated statistical significances were observed, particularly for Governance and Social Pillar Scores, but the correlations were too low to be of practical relevance. Finally, it should be noted that the study is able to reflect a comparison between the two economic areas of the US and Europe. However, even if the results show different statistical significances, the lack of a clear link between CSP and CFP remains for both areas. Therefore, none of the key theories can be confirmed with these results. A more in-depth investigation of industry effects could therefore no longer be carried out in this context.

These results are surprising in my estimation, since the topic of CSP became more and more present in the context of climate change, poverty, and inequality.

However, these results are not a completely new phenomenon in the literature. The question that arises from these findings is whether a more detailed analysis would yield different results.

7. MANAGERIAL AND THEORETICAL IMPLICATIONS

In principle, the conclusion that can be drawn from own results on the context between CSP and CFP is that companies' ESG efforts should not be pursued solely from the perspective of

improving their own financial performance. In times of clearly noticeable climate change with storms and droughts, social inequality and other ESG problems, there is rather a moral obligation to continue to improve CSP. In particular, international agreements such as the Paris Agreement, the United Nations' 2030 Agenda and the European Green Deal will force companies to focus even more on the issue of CSP, also for political reasons. The lack of a medium-term link between CSP and CFP does not necessarily mean that CSP is irrelevant in the long term. However, as a managerial implication, it can be deduced for this period of time that CSP should be viewed differently as a corporate strategy as there was no support for the assumption that high (or low) CSP lead to a competitive advantage. The results show that CSP does not automatically lead to financial benefits and that companies' ESG strategies may need to be reconsidered and possibly better tailored to their specific markets, industries, and stakeholders. Increasing regulatory requirements, such as the CSRD in Europe, make ESG reporting an unavoidable part of corporate governance. Managers should ensure that their CSP activities are aligned with, and can benefit from, reporting requirements and stakeholder expectations. This could be done through targeted communication about CSP, highlighting the benefits for specific stakeholder groups and thus creating a potential link between CSP and CFP in the long term.

This study contributes to the growing literature on the impact of CSP on financial performance. Several theoretical implications can be derived.

The results raise questions about the universal applicability of stakeholder theory. Although stakeholder theories suggest that taking into account a wide range of interests has a positive impact on financial performance, this could not be demonstrated in this study. This suggests that the theory may need to be industry-specific or culturally adapted and might become more visible on a more granular level.

Similarly, the shareholder theory is challenged in its assumption that spending should be entirely limited to the operating business, and thus lower CSP investments automatically lead to higher financial performance. It seems that optimizing for purely financial benefits is no longer sufficient in modern markets to ensure long-term competitive advantage. The lack of clear correlations may indicate that the opposing effects of stakeholder and shareholder theories neutralize each other. Future research could investigate this possible “neutralization effect”.

Furthermore, the lack of medium-term effects of CSP on CFP could indicate that existing theories such as stakeholder theory should be more strongly focused on long-term perspectives.

This could form the basis for an extension of stakeholder theory that focuses more on intertemporal effects.

Overall, the question arises as to whether the study of CSP should generally go beyond the management context by incorporating environmental and social theories to understand the broader implications of ESG initiatives.

8. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

First of all, it should be noted that all ESG data based on Datastream only includes publicly available data for listed companies. Consequently, this means that the results cannot be readily applied to not-listed big companies. The same is true of small companies, since only internationally operating companies were considered in this study. Furthermore, the current ESG reporting standards only apply to large companies, so future regulations in this area may have different implications for small and large companies.

Another limitation of this study is the problem of changing ESG scores of companies over time. However, the decision to use a fixed ESG score from 2017 rather than a dynamic measure over the period was methodologically justified. Using a single ESG score allows for a clearer classification of companies into quantiles and avoids potential endogeneity issues, where financial success could itself influence ESG ratings over time rather than vice versa. This approach is also common in empirical financial research, as it provides a more stable basis for comparison and interpretation. Additionally, dynamically adjusting the ESG scores over time would introduce further methodological complexities, requiring additional assumptions about the drivers of ESG changes and their interaction with financial performance.

Nevertheless, this methodological choice also introduces certain limitations. By relying on a fixed ESG score, the study does not account for potential shifts in companies' ESG performance over the observed period. A strong financial performance (CFP) could lead to increased investments in corporate social performance (CSP), which in turn might improve ESG scores. As a result, the initial quantile classification may not fully reflect the companies' evolving ESG strategies with its time-lagged effects. Furthermore, given the increasing societal focus on ESG issues in recent years, ESG scores may have changed significantly, potentially leading to biases in the results. Future research could address this by incorporating dynamic ESG scores and analyzing how their evolution interacts with financial performance over time.

The suitability of the ESG scores as an adequate measurement tool for the consideration of the

complex interaction of CSP and CFP could also be questioned. It may be that a more granular or more dynamic consideration of the indicators is required. In particular, with regard to the Instrumental Stakeholder Theory, it must be questioned whether the ESG score can be used to establish the relationship to the “key stakeholders” or whether it represents too strongly the totality of all stakeholders. A possible extension of the ESG score to include additional qualitative aspects would be a possible consequence.

It is also important to note that ESG ratings are primarily concerned with the evaluation of corporate activities, rather than the assessment of corporate products and services. Conversely, the evaluation of a company's social impact in relation to its own products and services presents a considerably more intricate challenge.

Furthermore, considering the individual pillar scores could lead to an optimized budget allocation to the different areas, although certain risks must also be taken into account. Since the ESG score is an aggregated indicator, it encompasses a wide range of issues in its entirety, as discussed in the context of the CSP model. This entirety covers non-financial areas that are not necessarily correlated with each other. Consequently, there is no compelling correlation between a company's CO₂ emissions and its ability to include or comply with occupational safety and labor law. Therefore, the presentation of the single pillar scores cannot adequately reflect this complex totality. Additionally, the individual consideration measures the potential risks that a company transfers to the environment and society as a whole.

A minor contribution to future research that could still be of interest is the fact that overall, there was no difference in the results between the US and Europe, which are at similar economic levels. Further studies could be conducted on the topic of comparing two very different economic regions in terms of development and prosperity and the possible differences in sensitivity to sustainability and responsibility issues that may arise from this.

In consideration of shareholder theory, it is important to acknowledge that even companies with a relatively low ESG score and consequently a low CSP still possess some CSP. In order to better verify the core message of shareholder theory, profit maximization, it would be necessary to create a fictitious company that has no existing CSP and therefore does not provide any services outside its core operating business. However, the implementation of this project and, in particular, the translation of possible implications that could arise from it, are questionable in terms of their real-world feasibility for a real company.

The overall picture indicates that no causal relationship can be established between the CSP and the financial performance. However, individual statistical significances can be observed, for example with regard to the Social Pillar Score, which is mostly found in the higher quantiles. This observation suggests that the CSP may be influenced by situational or contextual factors, but that these factors are not strong enough to identify a general pattern. Therefore, this aspect should be further investigated in more detailed analyses with possibly even more homogeneous companies.

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APPENDICES

GICS Industry Grouping distribution in quantiles S&P 500

Quantile	Group	Quantity in quantile	Average ESG Overall Score
Quantile 1	1	27	76,20
	2	11	75,02
	3	15	77,54
	4	16	76,76
	5	0	-
	6	18	75,58
	7	11	76,53
	8	14	77,56
	9	10	74,45
Quantile 2	1	29	60,85
	2	14	63,12
	3	10	60,13
	4	10	60,07
	5	9	61,00
	6	25	62,51
	7	5	62,41
	8	12	62,76
	9	10	61,60
Quantile 3	1	16	51,14
	2	28	49,13
	3	15	49,17
	4	17	49,56
	5	6	50,17
	6	16	47,55
	7	7	48,37
	8	14	47,34
	9	5	48,73
Quantile 4	1	26	30,30
	2	18	33,03
	3	16	32,83
	4	6	30,28
	5	14	30,01
	6	17	33,00
	7	8	34,05
	8	16	33,58
	9	3	38,36

Distribution of S&P 500 companies in quantiles

1. Quantile

Constituent RIC	Constituent Name	GICS Industry Grouping	ESG Overall Score 2017
MSFT.OQ	MICROSOFT-T	4	91,2886
JNJ.N	JOHNSON&JOHNSON	3	91,0595
INTC.OQ	INTEL-T	4	90,4159
PCG.N	PG&E	9	89,7395

BAX.N	BAXTER INTL	3	88,0249
CVS.N	CVS HEALTH CORP	3	87,6123
STT.N	STATE STREET	2	87,0340
MMM.N	3M	6	86,5141
CPB.N	CAMPBELL SOUP	1	86,4345
WY.N	WEYERHAEUSER REIT	7	86,3129
WM.N	WASTE MANAGEMENT	6	85,5641
GAP.N	THE GAP	1	85,4254
HUM.N	HUMANA	3	85,4162
JCI.N	JOHNSON CONTROLS INTERNATIONAL	6	85,2819
TXN.OQ	TEXAS INSTRUMENTS	4	84,7941
CSCO.OQ	CISCO-T	4	84,6713
HAS.OQ	HASBRO	1	84,5310
XOM.N	EXXON	8	83,5445
GE.N	GENERAL ELECTRIC	6	83,5218
MO.N	ALTRIA GROUP	1	83,2808
C.N	CITIGROUP	2	83,0302
CBRE.N	CBRE GROUP CL A	7	82,9076
SPLS.OQ^I17	STAPLES	1	82,8805
CL.N	COLGATE-PALMOLIVE CO	1	81,5265
IBM.N	INTL BUSINESS MACHINES CORP	4	80,8760
FCX.N	FREEPORT-MCMORAN INC	8	80,8087
BBY.N	BEST BUY	1	80,7493
AVB.N	AVALONBAY COMMUNITIES REIT	7	80,6886
ADSK.OQ	AUTODESK	4	80,6842
PLD.N	PROLOGIS REIT	7	80,6113
BKR.N	BAKER HUGHES	8	80,5956
BDX.N	BECTON DICKINSON	3	80,2821
ABT.N	ABBOTT LABS	3	80,1792
TGT.N	TARGET	1	80,0890
NEM.N	NEWMONT MINING	8	80,0365
WFC.N	WELLS FARGO	2	79,9450
MRK.N	MERCK	3	79,9200
CVX.N	CHEVRON TEXACO	8	79,6836
COP.N	CONOCOPHILLIPS	8	79,4399
APD.N	AIR PRODUCTS AND CHEMICALS	8	79,3974
F.N	FORD MOTOR	6	79,0639
MSI.N	MOTOROLA SOLUTIONS	4	79,0583
D.N	DOMINION RESOURCES	9	78,8719
WMT.N	WAL-MART STORES	1	78,8411
ACN.N	ACCENTURE PLC-A	4	78,8058
CCL.N	CARNIVAL	1	78,7784
BALL.N	BALL	8	78,3312
A.N	AGILENT TECHNOLOGIES	3	78,0949
JPM.N	JPMORGAN CHASE	2	77,8419
NRG.N	NRG ENERGY	9	77,7319
KSS.N	KOHL'S	1	77,2574
HES.N	HESS	8	77,2562
HAL.N	HALLIBURTON	8	77,1773
IFF.N	INTL FLAV & FRAG U	8	77,0553
ALL.N	ALLSTATE	2	77,0443
FDX.N	FEDEX	6	76,7445
HST.N	HOST HOTELS & RESORTS REIT	7	76,1902
HST.OQ	HOST HOTELS & RESORTS REIT	7	76,1902

DOC.N	HCP REIT	7	75,4098
LOW.N	LOWE'S COS INC	1	75,2303
DUK.N	DUKE ENERGY	9	75,1578
ADBE.OQ	ADOBE SYSTEM	4	75,0652
CAT.N	CATERPILLAR	6	75,0434
JWN.N	NORDSTROM	1	74,8845
SYN.N	SYSCO	1	74,6943
ADI.OQ	ANALOG DEVICES	4	74,5674
CAG.N	CONAGRA BRANDS INC	1	74,5156
NOC.N	NORTHROP GRUMMAN	6	74,5147
NVDA.OQ	NVIDIA	4	74,4623
CMI.N	CUMMINS	6	74,3876
NEE.N	NEXTERA ENERGY	9	74,3056
CTSH.OQ	COGNIZANT TECHNOLOGY SOLUTN CL A	4	74,2055
LMT.N	LOCKHEED MARTIN	6	74,2036
QCOM.OQ	QUALCOMM	4	73,8162
MOS.N	THE MOSAIC COMPANY	8	73,6257
PFE.N	PFIZER	3	73,5507
SBUX.OQ	STARBUCKS-T	1	73,5403
HWM.N	ARCONIC INC	6	73,3271
KO.N	COCA-COLA	1	73,2674
TMO.N	THERMO FISHER SCIENTIFIC	3	73,0078
IRM.N	IRON MOUNTAIN	7	72,8589
INTU.OQ	INTUIT	4	72,8356
PNC.N	PNC FINL SVC	2	72,6568
PEP.OQ	PEPSICO U	1	72,6471
HSY.N	HERSHEY FOODS	1	72,5989
K.N	KELLOGG	1	72,3559
UPS.N	UNITED PARCEL SERVICE-CL B	6	72,0567
GM.N	GENERAL MOTORS	6	72,0475
MDLZ.OQ	MONDELEZ INTERNATIONAL INC	1	71,5817
SPGI.N	S&P GLOBAL INC	2	71,2708
SRE.N	SEMPRA ENERGY	9	71,0335
GIS.N	GENERAL MILLS	1	70,9746
MAR.OQ	MARRIOTT INTL A	1	70,9663
RCL.N	ROYAL CARIBBEAN	1	70,8634
BMJ.N	BRISTOL-MYERS SQUIBB	3	70,8064
XRX.OQ	XEROX	4	70,7801
OXY.N	OCCIDENTAL U	8	70,7788
WELL.N	WELLTOWER INC	7	70,7486
DAL.N	DELTA AIR LINES	6	70,7259
HPQ.N	HP	4	70,4105
XEL.OQ	XCEL ENERGY	9	70,4065
HD.N	HOME DEPOT	1	70,4057
AAL.OQ	AMERICAN AIRLINES GROUP INC.	6	70,3817
XYL.N	XYLEM	6	70,3212
CMA.N	COMERICA	2	70,1420
HPE.N	HEWLETT PACKARD ENTERPRISE SHS WHEN ISSUED	4	70,1405
KIM.N	KIMCO REALTY REIT	7	70,0584
PVH.N	PVH	1	69,8574
MAC.N	THE MACERICH COMPANY REIT	7	69,8000
COF.N	CAPITAL ONE FINANCIAL	2	69,6528
ETR.N	ENTERGY	9	69,5664
GEN.OQ	SYMANTEC	4	69,3570

CI.N	CIGNA	3	69,3459
KR.N	KROGER	1	69,3281
AWK.N	AMERICAN WATER WORKS	9	68,8793
AMGN.OQ	AMGEN-T	3	68,7869
PNW.N	PINNACLE WEST	9	68,7852
DGX.N	QUEST DIAGNOSTICS	3	68,6277
CSX.OQ	CSX	6	68,4874
BAC.N	BK OF AMERICA CO	2	68,4327
GILD.OQ	GILEAD SCIENCES	3	68,3897
TT.N	INGERSOLL RAND	6	68,1612
KEY.N	KEYCORP	2	68,1170
ALB.N	ALBEMARLE	8	67,9956

2. Quantile

Constituent RIC	Constituent Name	GICS Industry Grouping	ESG Overall Score 2017
BBV.N	ABBVIE SHS	3	67,8629
GS.N	THE GOLDMAN SACHS GROUP	2	67,4288
MRO.N	MARATHON OIL	8	67,3048
FLR.N	FLUOR	6	67,2593
WEC.N	WEC ENERGY GROUP INC	9	67,2136
NDAQ.OQ	NASDAQ INC	2	67,1938
BK.N	BANK OF NEW YORK MELLON	2	67,1290
MS.N	MORGAN STANLEY	2	66,9054
LLY.N	LILLY	3	66,8854
VTR.N	VENTAS REIT	7	66,6603
BA.N	BOEING U	6	66,5586
WHR.N	WHIRLPOOL	1	66,4159
VFC.N	VF	1	66,3574
BFH.N	ALLIANCE DATA SYSTEMS	2	66,2643
MON.N^F18	MONSANTO	8	66,0362
ECL.N	ECOLAB	8	65,9540
ETN.N	EATON CORP PLC	6	65,8764
DOV.N	DOVER	6	65,7484
EQIX.OQ	EQUINIX INC COMMON STOCK REIT	7	65,6937
R.N	RYDER SYSTEM	6	65,6594
NKE.N	NIKE INC -CL B	1	65,4397
COL.N^K18	ROCKWELL COLLINS	6	65,3874
EMN.N	EASTMAN CHEMICAL	8	65,1868
PRU.N	PRUDENTIAL FINL	2	65,1726
LUV.N	SOUTHWEST AIRLS	6	65,0867
AVY.N	AVERY DENNISON	8	65,0120
YUM.N	YUM BRANDS	1	64,9256
ALK.N	ALASKA AIR GROUP	6	64,8623
AMAT.OQ	APPLIED MATERIAL	4	64,6696
ED.N	CONSOLIDATED EDISON	9	64,6221
T.N	AT&T	5	64,6000
TEL.N	TE CONNECTIVITY	4	64,5405
AET.N^K18	AETNA	2	64,5243
CTAS.OQ	CINTAS	6	64,5153
SIG.N	SIGNET JEWELERS	1	64,4780
DTE.N	DTE ENERGY	9	64,4469

PPG.N	PPG INDUSTRIES	8	64,3320
UNP.N	UNION PACIFIC U	6	63,9755
CLX.N	CLOROX	1	63,9167
NSC.N	NORFOLK SOUTHERN	6	63,8874
PM.N	PHILLIP MORRIS	1	63,8575
TXT.N	TEXTRON	6	63,8449
KMB.N	KIMBERLY CLARK	1	63,7902
AIG.N	AMERICAN INTERNATIONAL GROUP	2	63,6312
EXC.OQ	EXELON	9	63,6294
MCD.N	MCDONALD'S	1	63,5381
DIS.N	WALT DISNEY	5	63,5084
HON.OQ	HONEYWELL INTL	6	63,3317
MHK.N	MOHAWK INDUSTRIES	1	63,3209
MCHP.OQ	MICROCHIP TECHNOLOGY	4	63,2455
CA.OQ^K18	CA	4	63,1357
IP.N	INTL PAPER	8	62,9643
EMR.N	EMERSON ELECTRIC	6	62,8296
FLS.N	FLOWERVE	6	62,7731
M.N	MACYS	1	62,7720
SPG.N	SIMON PROPERTY GROUP REIT	7	62,7634
AEP.OQ	AMERICAN ELECTRIC POWER	9	62,7474
VRSK.OQ	VERISK ANALYTICS	6	62,6940
HBI.N	HANESBRANDS	1	62,6282
ELV.N	ANTHEM INC	3	62,4720
GOOG.OQ	ALPHABET INC-CL C	5	62,1599
GOOGL.OQ	ALPHABET INC-CL A	5	62,1599
EIX.N	EDISON INTERNATIONAL	9	62,0231
NUE.N	NUCOR	8	61,8573
AMP.N	AMERIPRISE FINANCE	2	61,8074
ICE.N	INTERCONTINENTAL EXCHANGE INC	2	61,7928
IPG.N	INTERPUBLIC GROUP OF COMPANIES	5	61,7488
DE.N	DEERE	6	61,6181
RTN.N^D20	RAYTHEON	6	61,4680
SHW.N	SHERWIN WILLIAMS	8	61,4248
WFM.OQ^H17	WHOLE FOODS MARKET	1	61,1634
RTX.N	UTD TECHNOLOG	6	61,1231
MDT.N	MEDTRONIC PLC	3	61,0365
TNL.N	WYNDHAM WORLDWIDE	1	61,0308
BFb.N	BROWN FORMAN CL B	1	60,9082
SJM.N	JM SMUCKER	1	60,8176
HIG.N	HARTFORD FINANCIAL SERVICES GRUP	2	60,5341
WBA.OQ	WALGREENS BOOTS ALLIANCE INC	1	60,4817
LUMN.N	CENTURYLINK	5	60,3652
BIIB.OQ	BIOMGEN INC	3	60,2044
ES.N	EVERSOURCE ENERGY	9	59,8967
VZ.N	VERIZON COMMUNICATIONS	5	59,8854
MPC.N	MARATHON PETROLEUM	8	59,8139
RSG.N	REPUBLIC SVCS	6	59,7165
MA.N	MASTERCARD	2	59,6105
BXP.N	BOSTON PROPERTIES REIT	7	59,6092
PRGO.N	PERRIGO CO PLC	3	59,2769
AES.N	AES	9	59,2166
PG.N	PROCTER&GAMBLE	1	59,1894
GWW.N	WW GRAINGER	6	58,9574

HRL.N	HORMEL FOODS	1	58,9272
TDC.N	TERADATA	4	58,8770
KLAC.OQ	KLA TENCOR	4	58,7780
KDP.OQ	DR PEPPER SNAPPLE GROUP	1	58,5505
NLSN.N^J22	NIELSEN HLDGS PLC	5	58,5092
AZO.N	AUTOZONE	1	58,2513
AKAM.OQ	AKAMAI TECHNOLOGIES	4	58,0587
JNPR.N	JUNIPER NTRKS	4	57,8354
WMB.N	WILLIAMS	8	57,7095
TJX.N	TJX	1	57,6553
PH.N	PARKER HANNIFIN	6	57,5976
MKC.N	MCCORMICK	1	57,5648
TAP.N	MOLSON COORS BREWING NONVTG CL B	1	57,4370
AMT.N	AMERICAN TOWER CL A REIT	7	57,3677
TIF.N^A21	TIFFANY	1	57,3629
DHR.N	DANAHER	3	57,1957
SO.N	SOUTHERN	9	56,8458
COST.OQ	COSTCO WHOLESALE	1	56,7094
TSN.N	TYSON FOODS	1	56,5094
STX.OQ	SEAGATE TECHNOLOGY	4	56,2262
GD.N	GENERAL DYNAMICS	6	56,2136
IVZ.N	INVESCO	2	56,1300
UAL.OQ	UNITED CONTINENTAL HOLDINGS	6	56,0769
J.N	JACOBS ENGINEERING GROUP	6	55,7619
HCA.N	HCA HOLDINGS	3	55,6527
OMC.N	OMNICOM	5	55,6500
PGR.N	PROGRESSIVE	2	55,5518
SLB.N	SCHLUMBERGER	8	55,5031
TSCO.OQ	TRACTOR SUPPLY	1	55,4555
MCK.N	MCKESSON	3	55,3952
NI.N	NISOURCE	9	55,3033
EW.N	EDWARDS LIFESCIENCES	3	55,3009
CHD.N	CHURCH AND DWIGHT	1	55,2853
VRSN.OQ	VERISIGN	4	55,2509

3. Quantile

Constituent RIC	Constituent Name	GICS Industry Grouping	ESG Overall Score 2017
PCAR.OQ	PACCAR	6	55,1936
ADM.N	ARCHER DANIELS	1	55,1718
MET.N	METLIFE	2	55,1214
NTRS.OQ	NORTHERN TRUST	2	55,0638
EL.N	ESTEE LAUDER CL A	1	55,0248
MAT.OQ	MATTEL	1	54,9751
DRI.N	DARDEN RESTAURANTS	1	54,9510
GRMN.N	GARMIN	1	54,8402
AAPL.OQ	APPLE	4	54,2147
O.N	REALTY INCOME REIT	7	54,0514
DVA.N	DAVITA INC	3	54,0025
BSX.N	BOSTON SCIENTIFIC	3	53,8561
SWN.N^J24	SOUTHWSTN ENER	8	53,6128
BBBY.OQ^E23	BED BATH AND BEYOND	1	53,4763
BBWL.N	L BRANDS INC	1	53,3269

MCO.N	MOODYS	2	53,3149
CELG.OQ^K19	CELGENE	3	53,2933
ROP.OQ	ROPER TECHNOLOGIES INC	4	53,2900
AIZ.N	ASSURANT	2	53,2510
RL.N	RALPH LAUREN CL A	1	53,2189
CME.OQ	CME GROUP CL A	2	53,0836
DNB.N^B19	DUN & BRADSTREET	4	53,0114
AFL.N	AFLAC	2	52,9672
PPL.N	PPL	9	52,9153
GT.OQ	GOODYEAR TIRE	6	52,8954
ATVI.OQ^J23	ACTIVISION BLIZZARD	5	52,8138
LRCX.OQ	LAM RESEARCH	4	52,7298
CMCSA.OQ	COMCAST	5	52,4206
LH.N	LABORATORY CORPRTN OF AMER HLDGS	3	52,3233
TWX.N^F18	TIME WARNER	5	52,2928
TSS.N^I19	TOTAL SYSTEM SERVICES	4	52,2527
PEG.N	PUBLIC SRVCE ENT	9	52,2347
DFS.N	DISCOVER FINANCIAL SERVICES	2	52,0045
AJG.N	ARTHUR J GALLAGHER	2	51,9520
NTAP.OQ	NETAPP	4	51,8553
V.N	VISA INCORPORATION	2	51,7802
PDCO.OQ	PATTERSON DENTAL	3	51,4575
AXP.N	AMERICAN EXPRESS	2	51,4350
TPR.N	COACH	1	51,3839
PBI.N	PITNEY BOWES	6	51,2247
MTD.N	METTLER TOLEDO	3	51,2223
FITB.OQ	FIFTH THIRD BANCORP	2	51,1099
VLO.N	VALERO ENERGY	8	51,0993
RF.N	REGIONS FINANCL	2	50,8486
BWA.N	BORGWARNER	6	50,8334
FSLR.OQ	FIRST SOLAR	4	50,7546
HSIC.OQ	HENRY SCHEIN	3	50,5586
CINF.OQ	CINCINNATI FINANCIAL	2	50,4662
GGP.N^H18	GENERAL GROWTH PROPERTIES REIT	7	50,4453
HAR.N^C17	HARMAN INTERNATIONAL	6	50,4360
STI.N^L19	SUNTRUST BANKS	2	50,4339
NBL.OQ^J20	NOBLE ENERGY	8	50,3423
AMZN.OQ	AMAZON.COM INC	1	50,3378
GLW.N	CORNING	4	50,3368
SLG.N	SL GREEN RLTY REIT	7	50,3047
WAT.N	WATERS	3	50,2905
TROW.OQ	T ROWE PRICE	2	50,1742
AABA.OQ^J19	YAHOO!	4	50,0498
VIAB.OQ^L19	VIACOM INC	5	50,0075
KMX.N	CARMAX	1	49,7626
LYB.N	LYONDELLBASELL INDUSTRIES CL A	8	49,6114
DLTR.OQ	DOLLAR TREE	1	49,5579
EXPD.N	EXPEDITORS INTERNATIONAL OF WASN	6	49,4924
COR.N	AMERISOURCEBERGEN	3	49,0436
EQT.N	EQT	8	49,0288
VAR.N^D21	VARIAN MEDICAL SYSTEMS	3	48,9601
FMC.N	FMC	8	48,9543
LNC.N	LINCOLN NATL	2	48,7880
OKE.N	ONEOK	8	48,7481

MJN.N^F17	MEAD JOHNSON	1	48,4065
VNO.N	VORNADO REALTY REIT	7	48,2511
BEN.N	FRANKLIN RSC	2	48,1429
LNT.OQ	ALLIANT ENERGY	9	47,8922
MU.OQ	MICRON TECHNOLOGY	4	47,8091
XLNX.OQ^B22	XILINX	4	47,8017
AON.N	AON	2	47,6720
PFG.OQ	PRINCIPAL FINL	2	47,6654
SWKS.OQ	SKYWORKS SOLUTIONS	4	47,5401
TGNA.N	TEGNA	5	47,4458
ADP.OQ	AUTOMATIC DATA PROCESSING	6	47,4366
CTXS.OQ^J22	CITRIX SYSTEMS	4	47,3169
RHT.N^G19	RED HAT	4	47,1504
FRT.N	FEDERAL REIT	7	47,1231
LHX.N	HARRIS	6	46,8613
ROST.OQ	ROSS STORES	1	46,8506
HBAN.OQ	HUNTINGTON BANCSHARES	2	46,8427
APTV.N	DELPHI AUTOMOTIVE	6	46,6065
TFC.N	BB AND T	2	46,5905
SCHW.N	CHARLES SCHWAB	2	46,5358
FFIV.OQ	F5 NETWORKS	4	46,2195
PARA.OQ	CBS CL B	5	46,0591
NFX.N^B19	NEWFIELD EXPLORATION	8	45,9613
SE.N^B17	SPECTRA ENG	8	45,8914
CRM.N	SALESFORCE.COM	4	45,7092
UHS.N	UNIVERSAL HEALTH SERVICES CL B	3	45,5415
RVTY.N	PERKINELMER	3	45,4617
AEE.N	AMEREN	9	45,4044
ITW.N	ILLINOIS TOOL	6	45,3190
SNA.N	SNAP ON	6	45,2856
ZTS.N	ZOETIS INC	3	45,2652
CMS.N	CMS ENERGY	9	45,2048
MTB.N	M&T BANK	2	45,1237
HOG.N	HARLEY DAVIDSON	6	45,0726
ANDV.N^J18	TESORO	7	44,9957
NOV.N	NTL OILWELL VARC	8	44,8415
UNM.N	UNUM	2	44,6300
RRC.N	RANGE RESOURCES	8	44,6190
ORCL.N	ORACLE SYS	4	44,4324
RAI.N^G17	REYNOLDS AMRICN	1	44,2656
MAS.N	MASCO	6	44,1666
RIG.N	TRANSOCEAN	8	44,1078
URI.N	UNITED RENTALS	6	43,8246
ISRG.OQ	INTUITIVE SURGICAL	3	43,4163
ESS.N	ESSEX PROPERTY REIT	7	43,4026
FBIN.N	FORTUNE BRANDS HOME AND SECURITY	6	43,0754
KSU.N^L21	KANSAS CITY SOUTHERN	6	43,0633
SEE.N	SEALED AIR	8	43,0587
DVN.N	DEVON ENERGY	8	42,8668
COO.OQ	COOPER	3	42,8082
XL.N^I18	XL GROUP	2	42,8071
ULTA.OQ	ULTA SALON COSMETICS FRAGRANCE	1	42,6848
GL.N	TORCHMARK	2	42,6625
USB.N	US	2	42,6088

TRV.N	TRAVELERS COS INC/THE	2	42,5594
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4. Quantile

Constituent RIC	Constituent Name	GICS Industry Grouping	ESG Overall Score 2017
EBAY.OQ	EBAY	1	42,4916
CF.N	CF INDUSTRIES HOLDINGS	8	42,4392
APC.N^H19	ANADARKO PETROLEUM	8	42,3726
NWL.OQ	NEWELL BRANDS INC	1	42,3587
PSA.N	PUBLIC STORAGE REIT	7	42,2274
SYK.N	STRYKER	3	42,2235
PSX.N	PHILLIPS 66	8	42,1847
WU.N	WESTERN UNION	2	42,0957
LEG.N	LEGGETT & PLATT	1	41,9861
EOG.N	EOG RESOURCES	8	41,7516
PNR.N	PENTAIR PLC	6	41,6989
DG.N	DOLLAR GENERAL	1	41,4530
VTRS.OQ	MYLAN NV	3	41,2719
FE.N	FIRSTENERGY	9	41,2621
JBHT.OQ	JB HUNT TRANSPORT SERVICES	6	41,2531
ROK.N	ROCKWELL AUTOMAT	6	41,2511
CMG.N	CHIPOTLE MEXICAN GRILL	1	41,2302
ETFC.OQ^J20	ETRADE FINANCIAL CORPORATION	2	41,0921
ZBH.N	ZIMMER BIOMET HOLDINGS INC	3	40,9651
TFCF.OQ^C19	TWENTY-FIRST CENTURY FOX INC CLASS B	5	40,7954
TFCFA.OQ^C19	TWENTY-FIRST CENTURY FOX INC CLASS A	5	40,7954
WDC.OQ	WESTERN DIGITAL	4	40,6227
PHM.N	PULTEGROUP	1	40,6026
CAH.N	CARDINAL HEALTH	3	40,3901
CPRI.N	MICHAEL KORS HOLDINGS	1	40,2999
AN.N	AUTONATION	1	40,1622
CHK.N^F20	CHESAPEAKE ENERGY	8	39,9390
SCG.N^A19	SCANA	9	39,8889
DLR.N	DIGITAL REALTY REIT	7	39,5523
MMC.N	MARSH AND MCLENNAN	2	39,5115
JEF.N	LEUCADIA	2	39,4992
REGN.OQ	REGENERON PHARMACEUTICALS	3	39,4057
VMC.N	VULCAN MATERIALS	8	39,2358
AIV.N	APARTMENT INVESTMENT MGT CL A REIT	7	38,9807
PBCT.OQ^D22	PEOPLES UNITED FINANCIAL	2	38,8025
APA.OQ	APACHE	8	38,5808
EQR.N	EQUITY RESIDENTIAL REIT	7	38,2667
RHI.N	ROBERT HALF	6	38,1354
FAST.OQ	FASTENAL	6	38,1213
AMG.N	AFFILIATED MANAGERS GROUP	2	38,0473
MLM.N	MARTIN MARIETTA	8	37,6336
CB.N	CHUBB LTD	2	37,5943
WTW.OQ	WILLIS TOWERS WATSON	2	37,5692
DHI.N	D R HORTON	1	37,2726
EA.OQ	ELECTRONIC ARTS	5	36,8787
CNC.N	CENTENE	3	36,6626
ZION.OQ	ZIONS	2	36,6219

SWK.N	STANLEY BLACK AND DECKER	6	36,3930
MUR.N	MURPHY OIL	8	36,2962
CFG.N	CITIZENS FINANCIAL GROUP SHS	2	36,2498
PWR.N	QUANTA SERVICES	6	35,6829
META.OQ	FACEBOOK CL A	5	35,6751
DISCK.OQ^D22	DISCOVERY COMMUNICATIONS SRS C	5	35,5900
WBD.OQ	DISCOVERY COMMUNICATIONS SRS A	5	35,5900
FTR.OQ^D20	FRONTIER COMMUNICATIONS	5	35,4673
STZ.N	CONSTELLATION BRANDS CL A	1	35,4123
SYF.N	SYNCHRONY FINANCIAL SHS	2	35,2460
MAA.N	MID AMERICA APARTMENT COMMUNITI REIT	7	34,9479
SNI.OQ^C18	SCRIPPS NETWORKS INTERACTIV CL A	5	34,7715
KMI.N	KINDER MORGAN	8	34,4562
CNP.N	CENTERPOINT ENERGY	9	33,9140
URBN.OQ	URBAN OUTFITTERS	1	33,7411
CHRW.OQ	CH ROBINSON WW	6	33,6563
AME.N	AMETEK	6	33,3809
BCR.N^L17	C R BARD	3	33,3070
UDR.N	UDR REIT	7	33,0588
HOLX.OQ	HOLOGIC	3	32,7072
XRAY.OQ	DENTSPLY SIRONA	3	32,1685
AVGO.OQ	BROADCOM LIMITED	4	32,1109
ALLE.N	ALLEGION PLC	6	32,0656
ESRX.OQ^L18	EXPRESS SCRIPTS HOLDING	3	31,6942
SRCL.OQ	STERICYCLE	6	31,1891
L.N	LOEWS	2	30,7958
CCI.N	CROWN CASTLE INTERNATIONAL	7	30,6524
NAVI.OQ	NAVIENT CORPORATION COM	2	30,6217
AYI.N	ACUITY BRANDS	6	30,5353
ORLY.OQ	O'REILLY AUTOMOTIVE	1	30,5308
FIS.N	FIDELITY NATIONAL INFORMATN SVCS	2	30,3128
QRVO.OQ	QORVO INC.	4	30,1842
PXD.N^E24	PIONEER NATIONAL RESOURCE	8	30,0689
AAP.N	ADVANCE AUTO PARTS	1	30,0158
FL.N	FOOT LOCKER	1	30,0125
ENDP.OQ^H22	ENDO INTERNATIONAL PLC	3	29,5965
CSRA.N^D18	CSRA	4	29,4429
NWS.OQ	NEWS CORP B	5	29,4090
NWSA.OQ	NEWS SHS CL A	5	29,4090
FI.N	FISERV	2	28,9958
PYPL.OQ	PAYPAL HOLDINGS SHS WHEN ISSUED	2	28,9746
WRK.N^G24	WESTROCK SHS WHEN ISSUED	8	28,8956
WYNN.OQ	WYNN RESORTS	1	28,7790
PAYX.OQ	PAYCHEX	6	28,6594
LLTC.OQ^C17	LINEAR TECHNOLOGY	6	27,9829
UA.N	UNDER ARMOUR C	1	27,7722
UAA.N	UNDER ARMOUR	1	27,7722
CTRA.N	CABOT OIL	8	27,3458
LVLT.N^K17	LEVEL 3 COMMUNICATIONS	5	26,9702
CERN.OQ^F22	CERNER	3	26,5602
EFX.N	EQUIFAX	6	26,5062
AGN.N^E20	ALLERGAN PLC	3	26,4928
FLIR.OQ^E21	FLIR SYSTEMS	4	26,3677
KHC.OQ	THE KRAFT HEINZ COMPANY	1	25,7059

VRTX.OQ	VERTEX PHARMACEUTICALS	3	25,2868
UNH.N	UNITEDHEALTH GRP	3	24,6362
HRB.N	H&R BLOCK	1	23,6699
LLL.N^G19	L-3 COMMUNICATIONS HOLDINGS	6	23,5982
APH.N	AMPHENOL CL A	4	22,9759
ILMN.OQ	ILLUMINA	3	22,0611
XEC.N^J21	CIMAREX ENERGY	8	21,9256
LEN.N	LENNAR CORPORATION	1	21,0397
GPC.N	GENUINE PARTS	1	20,9031
TDG.N	TRANSDIGM GROUP	6	20,6256
LKQ.OQ	LKQ	1	19,6540
HP.N	HELMERICH AND PAYNE	8	18,7060
COTY.N	COTY INC	1	18,4055
BKNG.OQ	THE PRICELINE GROUP INC	1	16,5946
CXO.N^A21	CONCHO RESOURCES	8	15,4193
MNST.OQ	MONSTER BEVERAGE	1	15,3285
NFLX.OQ	NETFLIX	5	15,0372
EXR.N	EXTRA SPACE STORAGE REIT	7	14,7484
EXPE.OQ	EXPEDIA	1	14,6796
CHTR.OQ	CHARTER COMMUNICATIONS INC(NEW)	5	13,0364
GPN.N	GLOBL PAYMNTS	2	11,9416
BRKb.N	BERKSHIRE HATHWAY CL B	2	10,9827
TRIP.OQ	TRIPADVISOR	5	10,7692

GICS Industry Grouping distribution in quantiles Stoxx Europe 600

Quantile	Group	Quantity in quantile	Average ESG Overall Score
Quantile 1	1	22	82,57
	2	19	82,43
	3	8	85,45
	4	5	86,50
	5	8	82,07
	6	35	81,69
	7	8	81,91
	8	33	82,77
	9	9	80,43
Quantile 2	1	26	69,51
	2	25	69,74
	3	11	68,30
	4	5	61,14
	5	10	66,66
	6	29	68,41
	7	7	70,04
	8	23	68,76
	9	11	67,67
Quantile 3	1	26	55,41
	2	31	54,87
	3	14	54,89
	4	7	54,84
	5	12	54,89
	6	41	55,35
	7	6	52,86
	8	11	56,68

	9	8	55,28
Quantile 4	1	22	35,17
	2	39	32,08
	3	10	34,35
	4	10	36,71
	5	17	32,39
	6	33	38,21
	7	9	32,27
	8	7	36,64
	9	0	-

Distribution of Stoxx Europe 600 companies in quantiles

1. Quantile

Constituent RIC	Constituent Name	GICS Industry Grouping	ESG Overall Score 2017
1COV.DE	COVESTRO	8	66,4016
A2.MI	A2A SPA	9	64,5068
AAL.L	ANGLO AMERICAN	8	79,8102
AALB.AS	AALBERTS	6	17,9640
ABBN.S	ABB	6	88,8992
ABDN.L	STANDARD LIFE	2	74,4242
ABE.MC^H18	ABERTIS	6	56,8078
ABF.L	ASSOCIATED BRITISH FOODS	1	70,1617
ABNd.AS	ABN AMRO GROUP NV	2	66,8947
ACCP.PA	ACCOR SA	1	75,0773
CCH.L	COCA-COLA HBC AG	1	93,5095
ACKB.BR	ACKERMANS V.HAAR	6	38,2254
ACS.MC	ACS CONS Y SERV	6	61,7311
ADEN.S	ADECCO	6	72,8974
ADML.L	ADMIRAL GROUP	2	57,0248
ADN.L^H17	ABERDEEN ASSET	2	63,1260
ADP.PA	AEROPORTS DE PARIS	6	72,1369
ENEL.MI	ENEL	9	90,0125
AZN.L	ASTRAZENECA	3	89,6915
ADSGn.DE	ADIDAS	1	93,5041
GSK.L	GLAXOSMITHKLINE	3	89,3789
AENA.MC	AENA SA	6	43,1629
AGES.BR	AGEAS(EX-FORTIS)	2	37,3984
AGGK.L^H21	AGGREKO	6	37,4404
AHT.L	ASHTREAD GROUP	6	41,0911
SHEL.AS	ROYAL DUTCH SHELL SH A	8	88,8689
SAN.MC	BANCO SANTANDER SA	2	88,7880
AIR.PA	AIRBUS GROUP SE	6	72,4060
AIRP.PA	AIR LIQUIDE	8	63,7420
AKE.PA	ARKEMA	8	69,8469
AKZO.AS	AKZO NOBEL	8	76,7619
ALFA.ST	ALFA LAVAL	6	79,4354
ALVG.DE	ALLIANZ SE	2	86,6479
AM.PA	DASSAULT AVIATI	6	36,4382
STLAM.MI	FIAT CHRYSLER AUTOMOBILES NV	6	87,6813

AMA.MC	AMADEUS IT GROUP SA	1	70,6357
BBVA.MC	BBVA	2	87,4075
NOKIA.HE	NOKIA	4	87,3219
AMEAS.HE^I19	AMER SPORTS	1	77,6063
AMS.S	AUSTRIAMICROSYSTEMS	4	36,6371
RELN.AS^I18	RELX NV	5	86,8529
ANDR.VI	ANDRITZ	6	57,4316
ANTO.L	ANTOFAGASTA	8	72,2048
ARLn.DE^K23	AAREAL BANK	2	60,6448
ARYN.S	ARYZTA	1	47,0114
ASMI.AS	ASM INTL	4	64,3301
CRH.I^I23	CRH PLC	8	86,1738
ASSAb.ST	ASSA ABLOY	6	61,6824
ALSO.PA	ALSTOM SA	6	86,1587
ATCA.AS^A21	ALTICE NV	5	12,2458
ATCOa.ST	ATLAS COPCO SR A	6	74,1298
ATKW.L^G17	ATKINS WS	6	47,8934
ATL.MI^L22	ATLANTIA	6	65,5347
ATLN.S^K17	ACTELION	3	59,2854
TEF.MC	TELEFONICA SA	5	85,4436
ATOS.PA	ATOS SE	4	68,6319
SASY.PA	SANOFI-AVENTIS	3	85,2903
AUTOA.L	AUTO TRAD/D	5	15,9896
AVOL.S	DUFREY	1	30,2708
AXAF.PA	AXA	2	82,3849
TTEF.PA	TOTAL	8	84,8954
BP.L	BP	8	84,8736
AZMT.MI	AZIMUT HOLDINGS SPA	2	12,0499
BAB.L	BABCOCK INTL	6	33,4287
REL.L	RELX PLC	6	84,6182
BAER.S	JULIUS BAER N	2	54,8432
BAES.L	BAE SYSTEMS	6	66,4469
BALDb.ST	FASTIGHETSBALDER	7	25,7655
BATS.L	BRITISH AMERICAN TOBACCO	1	83,7623
BALF.L	BALFOUR BEATTY	6	64,8334
BALN.S	BALOISE N	2	50,7018
ERICb.ST	ERICSSON TELEPHONE CL B	4	83,3230
BAMI.MI	BANCO POPOLARE	2	29,6659
BARN.S	BARRY CALLEBAUT	1	60,0342
BASFn.DE	BASF SE	8	87,8951
BAYGn.DE	BAYER AG	3	74,9507
NOVN.S	NOVARTIS	3	82,9886
BEIG.DE	BEIERSDORF	1	54,0533
BEZG.L	BEAZLEY PLC	2	33,6764
BHPB.L^A22	BILLITON	8	88,9052
BICP.PA	SOCIETE BIC	6	79,9932
LLOY.L	LLOYDS TSB GRP	2	82,5752
BILL.ST	BILLERUDKORSNAS AB	8	88,6600
BION.S	BIOTECH	3	4,8665
BIRG.I	BANK OF IRELANDGOVERNORANDCO OF	2	59,4038
BKGH.L	BERKELEY GRP UTS	1	48,0790
BKIA.MC^C21	BANKIA	2	79,1416
BKOM.PR	KOMERCNI BANKA	2	47,1636
BKT.MC	BANKINTER SA	2	72,4999

BLND.L	BRITISH LAND REIT	7	77,8103
ENI.MI	ENI	8	80,7670
VOD.L	VODAFONE GROUP	5	80,7533
BME.MC^I20	BOLSAS Y MERCADOS ESPANOL	2	60,0901
BMWG.DE	BMW AG	6	85,8359
BNPP.PA	BNP PARIBAS	2	91,2249
BNRGn.DE	BRENNTAG	6	42,0620
AV.L	AVIVA	2	80,0552
BOK.L^C18	BOOKER GROUP	1	54,3894
BOL.ST	BOLIDEN	8	80,2851
EQNR.OL	STATOILHYDRO	8	80,0125
BOLL.PA	BOLLORE	5	32,8583
BOSN.AS^K22	ROYAL BOSKALIS	6	46,4550
BOSSn.DE	HUGO BOSS	1	74,3126
BOUY.PA	BOUYGUES	6	61,6157
BPOST.BR	BPOST - PROMESSES SHS	6	64,2397
HSBA.L	HSBC HOLDINGS	2	79,7923
BRBY.L	BURBERRY GROUP	1	45,3617
BRSN.L^I17	DAVIS SERVICE GP	6	34,3893
BTG.L^H19	BTG	3	58,0184
BTRW.L	BARRATT DEVLPMNT	1	51,4632
BVI.PA	BUREAU VERITAS REGISTRE INTL	6	50,5748
BVIC.L	BRITVIC	1	54,8774
BWY.L	BELLWAY	1	48,6042
CABK.MC	CAIXABANK SA	2	71,3017
AMFW.L^J17	AMEC FOSTER WHEELER PLC	6	78,9367
CAGR.PA	CREDIT AGRICOLE	2	60,9251
CAPP.PA	CAP GEMINI	4	52,7531
CARLb.CO	CARLSBERG	1	69,3712
CARR.PA	CARREFOUR	1	66,3978
CASP.PA	CASINO	1	68,0319
CAST.ST	CASTELLUM	7	74,6347
CNHI.MI^A24	CNH INDUSTRIAL NV	6	77,9723
CBKG.DE	COMMERZBANK KONV	2	62,7912
CBRO.L	CLOSE BROTHERS	2	57,3788
CCL.L	CARNIVAL	1	69,0017
CECG.DE	METRO AG	1	73,2771
CEY.L	CENTAMIN	8	43,5417
CEZP.PR	CEZ	9	48,4393
CFR.S	CIE FINANCIERE RICHEMONT AG ZUG	1	60,9865
CHRH.CO^A24	CHRISTIAN HANSEN HOLDING	8	74,5529
CSGN.S^F23	CS GROUP	2	77,3162
CLN.S	CLARIANT	8	76,4989
CLNX.MC	CELLNEX TELECOM	5	38,8008
CMBN.S	CEMBRA MONEY BANK SHS	2	37,4098
CNA.L	CENTRICA	9	66,4530
TLIT.MI	TELECOM ITALIA	5	76,8436
CNAT.PA^G21	NATIXIS	2	54,4229
CNPP.PA^F22	CNP ASSURANCES	2	51,5334
ISP.MI	INTESA SANPAOLO	2	76,7809
COB.L^A20	COBHAM	6	53,7175
COFB.BR	COFINIMMO	7	67,3359
SHP.L^A19	SHIRE	3	76,6803
COLOb.CO	COLOPLAST	3	63,1347

COLR.BR	ETABLISSEMENTS COLRUYT	1	43,5026
CONG.DE	CONTINENTAL	6	80,6870
CPG.L	COMPASS GROUP	1	68,2385
CPI.L	CAPITA	6	75,2684
CPRI.MI	DAVIDE CAMPARI	1	36,4061

2. Quantile

Constituent RIC	Constituent Name	GICS Industry Grouping	ESG Overall Score 2017
REP.MC	REPSOL YPF SA	8	75,9901
CRDA.L	CRODA	8	70,3790
CRDI.MI	UNICREDIT SPA	2	83,6614
ELE.MC	ENDESA SA	9	75,4412
CURY.L	DIXONS CARPHONE PLC	1	28,0822
CVO.PA	FONCIERE DES REGIONS	7	72,6591
DANO.PA	GROUPE DANONE	1	85,0347
DANSKE.CO	DANSKE BANK	2	63,0003
DB11.DE^D17	DT BOERSE	2	69,3167
DBGn.DE	DEUTSCHE BANK	2	76,7297
NWG.L	ROYAL BANK OF SCOTLAND	2	74,9095
DCC.L	DCC PLC	6	54,0236
DEMANT.CO	WILLIAM DEMANT	3	39,0261
DEQn.DE	DT EUROSHOP	7	13,2034
DGE.L	DIAGEO	1	83,8073
INGA.AS	ING GROEP	2	74,4907
DHLn.DE	DEUTSCHE POST	6	82,8710
DIDA.MC	DISTRIBUIDORA INTERNACIONAL	1	43,9586
DIOR.PA	CHRISTIAN DIOR SE	1	51,5635
DKSH.S	DKSH N	6	21,7809
DLGD.L	DIRECT LINE INSURANCE SHS	2	39,7051
DLL.AS^F17	DELTALLOYD	2	39,9162
DLN.L	DERWENT VALLEY	7	59,0511
DMGOa.L^A22	DAILY MAIL TST A	5	43,9380
DNB.OL	DNBNOR	2	52,6890
DOKA.S	DORMAKABA HOLDING AG	6	42,2075
DOM.L	DOMINO'S PIZZA UK AND IRL	1	45,3339
DRX.L	DRAX GROUP	9	59,9230
DSMN.AS^E23	KONINKLIJKE DSM	8	76,0106
DSV.CO	DSV	6	55,9247
DTEGn.DE	DT TELEKOM N	5	79,3986
DUEG.DE	DUERR	6	30,8407
DWNG.DE	DT WOHNEN	7	53,4566
EDEN.PA	EDENRED	2	56,4305
PERSON.L	PEARSON	1	72,6156
EDF.PA^F23	ELECTRICITE DE FRANCE SA	9	60,2626
EDP.LS	ENERGIAS DE PORTUGAL	9	78,0412
EKTAa.ST	ELEKTRA B	3	71,4292
ELIOR.PA	ELIOR GROUP	1	59,6536
ELISA.HE	ELISA	5	48,8988
ELUXb.ST	ELECTROLUX	1	74,1663
EMEIS.PA	ORPEA	3	31,6487
EMG.L	MAN GROUP	2	52,1155

EMIL.MI	BPER BANCA	2	28,4524
EMSN.S	EMS-CHEMIE N	8	21,2009
ENAG.MC	ENAGAS	9	79,3227
ENGIE.PA	ENGIE	9	65,4353
ENT.L	GVC HOLDINGS	1	5,9771
BARC.L	BARCLAYS	2	71,3606
ENX.PA	EURONEXT	2	44,6368
EONGn.DE	E.ON	9	78,3539
ERST.VI	ERSTE GRP BANK	2	50,8244
ESLX.PA	ESSILOR INTERNATIONAL	3	65,0709
ESNT.L	ESSENTA PLC	8	51,0338
ETL.PA	EUTELSAT COMMUNICATIONS	5	57,0532
EUFI.PA	EUROFINS SCIENTIFIC	3	34,2667
EUR.A.PA	EURAZEO	2	43,7532
EVKn.DE	EVONIK INDUSTRIES AG	8	87,3081
EXHO.PA	SODEXO	1	81,6871
UCB.BR	UCB	3	70,3201
EXOR.MI^I22	EXOR SPA	2	7,6983
EXP.N.L	EXPERIAN	6	47,8740
EZJ.L	EASYJET	6	50,8064
FABG.ST	FABERGE AB	7	77,0381
FER.MC	GRUPO FERROVIAL	6	72,4747
FERG.L	WOLSELEY PLC	6	55,8554
NOVOb.CO	NOVO-NORDISK	3	69,6562
AEGN.AS	AEGON	2	69,4667
FGP.L	FIRSTGROUP PLC	6	55,6788
FHZ.N.S	FLUGHAFEN ZUERICH AG KLOTEN COMMON SH.	6	30,9814
FINGb.ST	FINGERPRINT	4	16,9025
FLTRF.I^A24	PADDY POWER BETFAIR PLC	1	29,6054
FMEG.DE	FRESENIUS MEDICAL CARE	3	72,7237
FNTGn.DE	FREENET	5	16,7240
FORTUM.HE	FORTUM	9	77,5832
FOUG.PA	EIFFAGE	6	70,5589
FPE3_p.DE	FUCHS PETROLUB PRF	8	32,2621
FRAG.DE	FRAPORT	6	86,2383
FRES.L	FRESNILLO PLC	8	83,6607
FRVIA.PA	FAURECIA SA	6	62,1478
G1AG.DE	GEA GROUP	6	49,2070
BT.L	BT GROUP	5	68,5621
GALP.LS	GALP ENERGIA SGPS	8	59,3180
GASI.MI	GENERALI	2	85,8506
GBFG.DE	BILFINGER SE	6	63,5691
GBLB.BR	GROUPE BRUXELLES LAMBERT	2	14,7027
GEBN.S	GEBERIT	6	80,7269
GETIb.ST	GETINGE	3	56,2624
AD.AS	KONINKLIJKE AHOLD DELHAIZE NV	1	68,0138
GETP.PA	GROUPE EUROTUNNEL SA	6	77,1694
HGGH.L^E17	HENDERSON GRP	2	67,8540
GF.S	GEORG FISCHER	6	76,5972
GFCP.PA	GECINA REIT	7	86,5463
GFS.L^E21	GRP 4 SECURICOR	6	62,5716
GIVN.S	GIVAUDAN	8	73,9442
GJFG.OL	GJENSIDIGE	2	53,4641
GKN.L^E18	GKN	6	51,5191

GL9.I	GLANBIA PLC	1	27,0277
WPP.L	WPP PLC	5	67,2699
GLEN.L	GLENCORE PLC	8	88,7418
GMAB.CO	GENMAB	3	54,1416
GN.CO	GN STORE NORD	1	59,1782
GNK.L^J19	GREENE KING	1	46,2449
GPEG.L	GT PORTLAND EST	7	64,6540
GRLS.MC	GRIFOLS SA BARCELONA	3	56,7294
GTO.AS^E19	GEMALTO	4	71,2827
GXIG.DE	GERRESHEIMER	3	52,9081
HAYS.L	HAYS	6	46,2264
HEIG.DE	HEIDELBGCEMENT	8	80,5528
HEIN.AS	HEINEKEN	1	65,7100
HEIO.AS	HEINEKEN HOLDING	1	61,3353
HELN.S	HELVETIA HOLDING	2	38,9229
HEXAb.ST	HEXAGON	4	33,9416
HIK.L	HIKMA PHARMACEUTICALS	3	61,2373
SN.L	SMITH&NEPHEW	3	66,2898
HLMA.L	HALMA PLC	4	46,2919
HMb.ST	HENNES AND MAURITZ	1	69,2924
HMSO.L	HAMMERSON REIT	7	79,4499
HNKG_p.DE	HENKEL & KGAA PRF	1	72,2584
HNRGn.DE	HANNOVER RUECKVERSICHERUNG	2	71,7157
HOLN.S	LAFARGEHOLCIM LTD	8	68,9020
HOTG.DE	HOCHTIEF	6	89,1536
HPOLb.ST	HEXPOL	8	46,6165
HRGV.L	HARGREAVES LS	2	41,5919
HRMS.PA	HERMES INTL	1	42,7034
HSX.L	HISCOX	2	53,0920
HUH1V.HE	HUHTAMAKI SR I	8	51,4063
HUSQb.ST	HUSQVARNA	6	70,8802
HWDN.L	HOWDEN JOINERY GROUP	6	38,5217
IBE.MC	IBERDROLA SA	9	84,9474
ICAA.ST^A22	ICA GRUPPEN AB	1	49,7318
ICAD.PA	ICADE REIT	7	45,0223
ICAG.L	INTL CONSOLIDATED AIRLINES GRP	6	69,0329
ICGIN.L	INTERMEDIATE CAPITAL	2	29,1974
IDS.L	ROYAL MAIL SHS	6	75,6584
IFXGn.DE	INFINEON TECHNOLOGIES	4	82,9913
IGG.L	IG GROUP	2	37,8036
NG.L	NATIONAL GRID	9	64,0243
IHG.L	INTERCONTL HOTELS	1	66,9158
III.L	3I GROUP	2	66,0307
ILD.PA^J21	ILIAD	5	43,2345
IMB.L	IMPERIAL BRANDS PLC	1	76,5443
ORAN.PA	ORANGE	5	63,5027
TEL2b.ST	TELE2	5	63,2995
IMFI.VI	IMMOFINANZ	7	30,9799
IMI.L	IMI PLC	6	60,7197
IMTP.PA	IMERYS	8	67,7270
PRU.L	PRUDENTIAL	2	63,0074

3. Quantile

Constituent RIC	Constituent Name	GICS Industry Grouping	ESG Overall Score 2017
INCH.L	INTRACOM CONST TECHN AND STEEL	1	24,1288
INDUa.ST	INDUSTRIVARDEN	2	23,0498
INF.L	INFORMA	5	51,6266
INGC.PA^K20	INGENICO GROUP	4	53,6302
INTRUM.ST	INTRUM JUSTITIA	6	46,8638
ASML.AS	ASML HOLDING	4	62,4774
INTUP.L^G20	INTU PROPERTIES PLC	7	66,2079
INVEb.ST	INVESTOR	2	35,8362
INVP.L	INVPLC	2	64,6935
IPN.PA	IPSEN PROMESSES	3	52,6209
ISA.L^L19	INMARSAT	5	34,4053
ISS.CO	ISS A/S	6	78,3365
ITRK.L	INTERTEK GROUP	6	58,8776
ITX.MC	INDUSTRIA DISENO TEXTIL	1	87,8560
IWG.L	IWG PLC	7	35,9038
JCDX.PA	JCDECAUX	5	60,8916
JE.L^C20	JUST EAT SHS	1	13,9197
JM.ST	JM	1	76,9630
SCOR.PA	SCOR SE	2	61,4175
JMAT.L	JOHNSON MATTHEY	8	60,7081
JMT.LS	JERONIMO MARTINS SGPS	1	76,7844
JUP.L	JUPITER FUND	2	31,7177
JYSK.CO	JYSKE BANK	2	42,9096
KBC.BR	KBC GROEP	2	61,8699
KESKOB.HE	KESKO	1	67,6372
KGF.L	KINGFISHER	1	77,4548
KGX.DE	KION GROUP	6	46,3182
KINDsdb.ST	KINDRED GROUP PLC GDR	1	33,4430
KINVb.ST	KINNEVIK STK B	2	43,1121
KNEBV.HE	KONE	6	57,0173
KNIN.S	KUEHNE NAGEL INTERNATIONAL	6	51,1680
KPN.AS	KPN-KON.NV	5	63,6112
KSP.I	KINGSPAN GROUP	6	62,1084
KYGa.I	KERRY GROUP	1	48,0610
LAGA.PA	LAGARDERE SCA	5	66,5398
LAND.L	LAND SECURITIES REIT	7	90,1773
LDOF.MI	LEONARDO-FINMECCANICA SPA	6	75,4183
LEGD.PA	LEGRAND	6	87,2605
LEGn.DE	LEG IMMOBILIEN AGD	7	45,1237
LGEn.L	LEGAL AND GENERAL GROUP	2	72,5772
LHAG.DE	LUFTHANSA	6	67,4013
LING.DE^D19	LINDE	8	85,4773
LISN.S	LINDT SPRUENGLI	1	52,0023
LOIM.PA	KLEPIERRE REIT	7	77,3510
LONN.S	LONZA GRP AG N	3	64,2200
LSEG.L	LONDON STOCK EXCHANGE GROUP	2	59,8042
LUN.CO^F22	H.LUNDBECK	3	46,7695
LUNDb.ST	LUNDBERGS B	2	13,3784
RTO.L	RENTOKIL INITIAL	6	59,0859
LVMH.PA	LVMH MOET HENNESSY LOUIS VUITT	1	61,4174
LXSG.DE	LANXESS	8	69,0762

MAERSKb.CO	MOELLER MAERSK B	6	56,5509
MANG.DE^I21	MAN	6	69,6854
MAP.MC	MAPFRE	2	74,9425
MBGn.DE	DAIMLER	6	92,2051
MDBI.MI	MEDIOBANCA	2	42,7399
MDCM.L^E23	MEDICLINIC INTERNATIONAL SHS	3	47,6191
MERL.L^K19	MERLIN ENTERTAINMENT GROUP SHS	1	41,4433
MFEB.MI	MEDIASET S.P.A	5	55,9717
MGGT.L^I22	MEGGITT PLC	6	39,9971
MICP.PA	MICHELIN	6	75,3867
MKS.L	MARKS AND SPENCER GROUP	1	88,5677
MNDI.L	MONDIPLCPRE	8	86,1645
MONY.L	MONEYSUPERMARKET.COM GROUP	5	27,2046
MOWI.OL	MARINE HARVEST	1	73,8598
MRCG.DE	MERCK	3	80,0193
DAST.PA	DASSAULT SYSTEMES	4	56,7771
MRL.MC	MERLIN PROPERTIES SHS	7	37,0532
MRON.L	MELROSE INDUSTRIES PLC	6	45,3110
MRW.L^J21	WM MORRISON SUPERMARKETS	1	62,8312
MT.AS	ARCELORMITTAL	8	84,7276
MTXGn.DE	MTU AERO ENGINES	6	78,1054
MUVGn.DE	MUNICH RE	2	69,9596
MWDP.PA	WENDEL	2	72,8234
INDV.L	INDIVIOR PLC	3	56,2145
NCCb.ST	NCC	6	45,6113
NDASE.ST	NORDEA BANK	2	65,2600
NELES.HE^D22	METSO	8	73,9945
NESN.S	NESTLE SA	1	85,3152
NESTE.HE	NESTE OYJ	8	77,5696
NHY.OL	NORSK HYDRO	8	89,0482
NIBEb.ST	NIBE INDUSTRIER	6	67,0643
NN.AS	NN GROUP SHS	2	41,6201
NSISb.CO	NOVOZYMES	8	78,6835
NTGY.MC	GAS NATURAL SGD	9	78,6974
NXGN.L^K18	NEX GROUP PLC	2	21,1462
NXT.L	NEXT	1	63,6063
O2Dn.DE^D24	TELEFONICA DEUTSCHLAND HOLDING	5	40,9858
OCDO.L	OCADO	1	54,8248
OERL.S	OC OERLIKON	6	47,7116
OMU.L	OLDMUTUAL	2	54,0663
OMVV.VI	OMV	8	79,6428
ONTEX.BR	ONTEX GRP NV	1	61,7276
OPM.PA	PLASTIC OMNIUM	6	49,9947
OREP.PA	L OREAL S.A.	1	83,2349
ORK.OL	ORKLA	1	76,4377
ORNBV.HE	ORION	3	52,6047
ITV.L	ITV	5	53,0311
ORRON.ST	LUNDIN PETROLEUM	9	56,6199
ORSTED.CO	DONG ENERGY A/S	9	66,6683
OSRn.DE^G21	OSRAM LICHT AG	6	66,4101
PARG.S^K20	PARGESA	2	11,5751
PAYS.L^L17	PAYSAFE GROUP	4	20,2675
PERP.PA	PERNOD-RICARD	1	58,8287
PEUP.PA^A21	PEUGEOT SA	6	82,1313

PFC.L	PETROFAC	8	61,8305
PGHN.S	PARTNERS GROUPAG	2	24,0375
PHG.AS	KONINKLIJKE PHILIPS NV	3	92,0645
PHNX.L	PHOENIX GROUP HOLDINGS	2	51,9878
PMIL.MI^A17	BANCA POPOLARE DI MILANO SCARL	2	49,4669
PNDORA.CO	PANDORA	1	53,9073
PNN.L	PENNON GROUP	9	59,5453
POLYP.L^H23	POLYMETAL	8	68,5902
POP.MC^F17	BK POPULAR	2	62,8301
PROX.BR	PROXIMUS	5	74,7343
PRTP.PA	KERING SA	1	76,8214
PRY.MI	PRYSMIAN	6	60,4933
PSHG_p.DE	PORSCHE SE VZ PRF	6	7,6092
PSMGn.DE	PROSIEBENSAT.1 MEDIA SE	5	59,2496
PSN.L	PERSIMMON	1	65,2011
PSPN.S	PSP SWISS PROPERTY	7	33,5631
PST.MI	POSTE ITALIANE SHS	2	36,7988
ABI.BR	ANHEUSER-BUSCH INBEV SA/NV	1	50,9668
PTEC.L	PLAYTECH PLC	1	43,6989
PTNL.AS	POSTNL	6	58,1593
PUBP.PA	PUBLICIS GROUPE	5	79,9023
QIA.DE	QIAGEN	3	61,6567
QQ.L	QINETIQ GRP	6	54,5082
RACE.MI	FERRARI N V/D	6	52,2808
RAND.AS	RANDSTAD	6	68,2620
RBIV.VI	RAIFFEISEN BANK INTL	2	42,2189
RECI.MI	RECORDATI	3	37,7746
REDE.MC	RED ELECTRICA CORPORACION	9	73,0778
RENA.PA	RENAULT PAR	6	84,3825
RHMG.DE	RHEINMETALL	6	45,6612
RIO.L	RIO TINTO	8	79,8914
RKT.L	RECKITT BNCSR GRP	1	76,5287
RMV.L	RIGHTMOVE	5	48,5324
ROG.S	ROCHE	3	87,4831
ROR.L	ROTORK PLC	6	50,2342
RPC.L^G19	RPC GROUP	6	43,4760
RR.L	ROLLS-ROYCE HOLDINGS	6	79,5428
RRS.L^A19	RANDGOLD RESRCS	8	68,2656
RRTL.DE	RTL	5	33,5990
RSA.L^F21	RSA INSURANCE GROUP	2	70,8721
RUBF.PA	RUBIS	9	51,2293
RWEG.DE	RWE ST A	9	70,9169
RXL.PA	REXEL	6	59,8509

4. Quantile

Constituent RIC	Constituent Name	GICS Industry Grouping	ESG Overall Score 2017
SAABb.ST	SAAB	6	67,8892
SABE.MC	BCO DE SABADELL	2	67,4204
SAF.PA	SAFRAN	6	40,2049
SAGA.L	SAGAINARY SHS WHEN ISSUED	2	25,6066
SAMPO.HE	SAMPO PLC	2	25,6724

SAND.ST	SANDVIK	6	70,3990
FREG.DE	FRESENIUS SE	3	46,4804
SAPG.DE	SAP SE	4	90,5546
SATG_p.DE	SARTORIUS PRF	3	66,7036
SBMO.AS	SBM OFFSHORE	8	61,9957
SBRY.L	SAINSBURYJ	1	64,9938
SCAb.ST	SVENSKA CELLULOSA	8	83,2999
SCHA.OL	SCHIBSTED	5	45,4239
SCHN.PA	SCHNEIDER ELECTRIC SE	6	66,4113
SCHP.S	SCHINDLER PS PAR	6	46,7978
SCMN.S	SWISSCOM	5	60,9878
SDFGn.DE	K+S	8	37,9230
SDR.L	SCHRODERS	2	44,7176
SEBa.ST	SKANDINAVISKA ENSKILDAANKEN	2	72,7604
SEBF.PA	SEB	1	69,2767
SECUb.ST	SECURITAS	6	52,6876
SESFd.PA	SES SA GDR	5	34,1677
SEVI.PA^B22	SUEZ	8	65,2488
SGE.L	SAGE GROUP	4	58,3975
SGEF.PA	VINCI	6	67,2011
SGOB.PA	SAINT-GOBAIN	6	85,1145
SGREN.MC^B23	GAMESA	6	79,9353
SGRO.L	SEGRO REIT	7	71,7498
SGSN.S	SGS SOC GEN DE SURVEILLANCE	6	79,0395
SHA_p.DE^J24	SCHAEFFLER PREF SHS	6	37,3745
LUX.MI^C19	LUXOTTICA	1	43,6270
SHB.L^C23	SHAFTESBURY REIT	7	73,0419
SHBa.ST	SVENSKA HANDELSBANKEN	2	54,5836
SHCS.L	CAPITAL&COUNTIES REIT	7	51,7788
SIEGn.DE	SIEMENS	6	82,4617
SIGSI.L^F21	BBA AVIATION	6	64,6169
SIKA.S	SIKA	8	60,3002
SIM.CO^J23	SIMCORP	4	46,0829
SJP.L	ST.JAMES'S PLACE	2	50,7713
SKAb.ST	SKANSKA	6	57,2667
SKFb.ST	SKF	6	73,9369
SKG.I^G24	SMURFIT KAPPA	8	83,2695
SKYB.L^K18	SKY PLC	5	68,5497
SLHN.S	SWISS LIFE	2	54,8944
SMDS.L	SMITH DS	8	64,0964
SMIN.L	SMITHS GROUP	6	55,0844
SMWH.L	WHSMITH	1	62,4177
DLGS.DE^I21	DIALOG SEMICONDUCTOR	4	41,9536
SNHG.DE^E22	STEINHOFF N.V	1	55,1267
SOBIV.ST	SWEDISH ORPHAN BIOVITRUM	3	33,8767
SOGN.PA	SOCIETE GENERALE	2	88,5041
SOLB.BR	SOLVAY	8	70,1915
SOON.S	SONOVA	3	66,7967
SOWGn.DE^B24	SOFTWARE	4	45,9381
MCRO.L^B23	MICRO FOCUS	4	41,0579
SPMI.MI	SAIPEM	8	85,8525
SPRGn.DE^D20	AXEL SPRINGER SE	5	45,7701
SPSN.S	SWISS PRIME SITE	7	48,0857
SPX.L	ML GLOBAL BHD	6	37,5682

SRCG.S^D21	SUNRISE COMMUNICATIONS AG	5	28,2354
SRENH.S	SWISS REINSURANCE	2	76,9471
SRG.MI	SNAM RETE GAS	9	81,5020
SSE.L	SSE	9	64,4074
STAGn.DE^K18	STADA ARZNEIMITTEL	3	23,6524
STAN.L	STNDRD CHART BK	2	72,7819
STB.OL	UNI STOREBRAND	2	48,7619
LOGN.S	LOGITECH	4	38,0635
STERV.HE	STORA ENSO R	8	82,6876
STMMI.MI	STMICROELECTRONICS	4	88,2856
STMN.S	STRAUMANN N	3	52,1213
SUBC.OL	SUBSEA	8	38,5642
SVT.L	SEVERN TRENT	9	59,1865
SWEDa.ST	SWEDBANK	2	80,0487
SWMA.ST^A23	SWEDISH MATCH	1	71,7193
SXS.L	SPECTRIS	4	74,1855
SY1G.DE	SYMRISE	8	66,6230
SYDB.CO	SYDBANK	2	16,4582
SYNN.S^A18	SYNGENTA	8	75,5958
TATE.L	TATE AND LYLE	1	60,1067
TCFP.PA	THALES	6	42,1092
TDC.CO^F18	TDC	5	58,7059
TECF.PA^A17	TECHNIP	6	86,5523
TEL.OL	TELENOR	5	64,5717
TELIA.ST	TELIA CO AB	5	81,5074
TEMN.S	THE TEMENOS GROUP	4	52,8281
TENR.MI	TENARIS	8	59,7866
TEPRF.PA	TELEPERFORMANCE	6	68,0826
TKAG.DE	THYSSEN-KRUPP	8	71,4260
TL5.MC^E23	MEDIASET ESPANA COMUNICACION	5	56,7287
TLW.L	TULLOW OIL	8	58,2808
TNET.BR^J23	TELENET GRP HLDG	5	65,9707
BNZL.L	BUNZL	6	33,7132
TOP.CO	TOPDANMARK	2	36,9566
TPK.L	TRAVIS PERKINS	6	65,6282
TRELb.ST	TRELLEBORG	6	54,5289
TRN.MI	TERNA RETE ELETTRICA NAZIONALE	9	70,4171
TRYG.CO	TRYGVESTA	2	44,2723
RYA.I	RYANAIR HOLDINGS	6	32,8983
TSCO.L	TESCO	1	74,5414
TUIT.L^F24	TUI AG N	1	83,7742
TW.L	TAYLOR WIMPEY	1	60,3833
TYRES.HE	NOKIAN RENKAAT	6	47,0215
UBL.MI^J20	UNIONE DI BANCHE ITALIANE	7	82,0213
UBIP.PA	UBISOFT	5	43,0011
UBM.L^F18	UTD BUSINESS MED	6	61,6182
UBSG.S	UBS GROUP AG	2	82,6199
UHR.S	SWATCH GROUP	1	25,2897
ULE.L^H22	ULTRA ELECTRONICS HOLDINGS	6	41,6238
ULVR.L	UNILEVER	1	86,2161
UMI.BR	UMICORE	8	69,4354
UNc.AS^G19	UNILEVER NV	1	87,7268
UPM.HE	UPM-KYMMENE OY	8	82,9174
URW.PA	UNIBAIL-RODAMCO S.A.	7	84,8479

US.MI^G24	UNIPOLSAI ASSICURAZIONI SPA	2	41,2503
UTDI.DE	UTD INTERNET	5	14,0252
UU.L	UNITED UTILITIES GROUP	9	68,6924
VANQ.L	PROVIDENT FINCL	2	47,9177
VANTI.PA	TECHNICOLOR	4	67,2763
VCTX.L	VICTREX	8	36,3692
VIE.PA	VEOLIA ENVIRONNEMENT VE	9	69,8050
VIFN.S^L22	GALENICA	3	45,0879
VIS.MC	VISCOFAN SA	1	39,4591
VIV.PA	VIVENDI	5	85,8933
VLOF.PA	VALEO	6	77,7556
VMUK.L^J24	CYBG PLC WI	2	37,4903
VNA _n .DE	VONOVIA SE	7	23,7781
VOES.VI	VOESTALPINE	8	67,8015
VOLV _b .ST	VOLVO CL B	6	81,3568
VOPA.AS	VOPAK	8	69,0936
VOWG_p.DE	VOLKSWAGEN PRF	6	80,1807
VWS.CO	VESTAS WIND SYSTEMS	6	58,2128
WBSV.VI	WIENERBERGER	8	63,2358
WDIG.DE^A21	WIRECARD	2	28,5677
WEHA.AS	WERELDHAVE REIT	7	57,7805
WEIR.L	WEIR GROUP	6	65,0061
WG.L	WOOD GRP JOHN	8	51,7744
WLSN _c .AS	WOLTERS KLUWERS	6	64,8505
WMH.L^D21	WILLIAM HILL	1	41,9681
WPG.L^A18	WORLDPAY GROUP SHS	2	23,3405
WRT1V.HE	WARTSILA	6	71,8497
WTB.L	WHITBREAD	1	77,3230
YAR.OL	YARA INTL	8	66,7906
ZALG.DE	ZALANDO SHS	1	42,2098
ZODC.PA^C18	ZODIAC	6	46,6373
ZURN.S	ZURICH INSURANCE	2	79,7112