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Retail investors' ESG-preferences: *Is there something to find under the blanket term of ESG?*

Abstract

Environment, Social and Governance factors within Socially Responsible Investing and sustainability have been widely discussed subjects. In light of an increasing amount of research and interest into capital allocation towards SRI and ESG, this study aims to fill the research gap on what drives investments in ESG in Sweden from retail investors. By conducting real-world research through a survey, this thesis investigates the subfactors of the very broad term ESG. The study finds significant evidence that there are certain subfactors of the respective ESG-factors that drive the interest into main factors. The survey also finds results that indicate that research conducted on the area should focus more on the subfactors. Additionally, we find evidence suggesting that retail investors place more importance on the Social and Governance factors if they have a preference for Financial, Moral and Reputational values, whereas for the environmental factor only the Financial and Moral value play a part, but not Reputational value.

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Glossary

ESG - Environment, Social, Governance

ESG-factors - In this paper ESG-factors refers to the main factors making up ESG:

Environment - Conservation of the natural world

Social - Consideration of people & relationships

Governance - Standards for running a company

ESG-subfactors - In this paper ESG-subfactors refers to the factors making up Environment, Social and Governance respectively. A full list of these can be found in [Appendix 1 - ESG sub-category definitions](#).

MPT - Modern Portfolio Theory

SRI - Socially Responsible Investing

CSR - Corporate Social Responsibility

Sin stocks - Shares in companies that are considered unethical

RDE - Random Device Engagement

1. Introduction

This chapter provides relevant background information, the research questions, the research gap and expected knowledge contribution, the main findings from the study and finally an outline for how the rest of the thesis is presented.

1.1. Background

ESG and SRI have been widely discussed subjects among investment professionals, corporate leaders, politicians, and citizens. In the past few years, the world has seen an immense growth in the interest of investing capital aimed at generating a financial return and in addition having a positive impact on environmental, social and governance issues (GIIN, 2019). Furthermore, the past few years has seen the growth of SRI, the combination of fundamental analysis with evaluating and integrating the themes of ESG in investing (Eurosif, 2018).

A growing trend can be seen of incorporating sustainability into institutional investors' investment decisions (Revelli & Viviani, 2015; Reverte 2016; Palacios-González & Chamorro-Mera, 2018; Utz, 2019; Mahoney & Roberts, 2007). This trend extends beyond the scope of investors, as ESG-related factors have become important for singular enterprises as well (Orsato et al. 2015). SRI has shown incredible growth from 2012 to 2020 with SRI assets under management by institutional investors growing from \$3.7 trillion to \$35.3 trillion (GSIA, 2014; GSIA, 2021).

With CSR beginning as a research topic in the 1950s, ESG as a concept is not a new notion (Carroll, 1999), but it has seen tremendous growth in the last few years. The idea of ESG came from SIF, which argued that investors embrace SRI strategies to manage risk and fulfil their fiduciary duties. The ESG criteria were adopted to assess qualities related to SRI, and the likelihood of resilience for companies in their portfolio when dealing with challenges in the future (Chen et al., 2021). The development of the ESG factors added measurability to the previously unclear definition of CSR. However, there are still considerable differences between different rating agencies and their view on how to measure the separate factors that make up ESG (Chatterji et al., 2016).

There has been previous research on how retail investors value the different factors that make up ESG (Riedl & Smeets, 2017; Lagerkvist et al., 2020) but this research has treated ESG as either a binary concept, an investor is either a sustainable investor or not (Riedl & Smeets, 2017), or measured the ESG-factors (Lagerkvist et al., 2020). Previous research on retail

investors' view on ESG has not looked at the subfactors that make up the different factors of ESG, which has left a gap in the research. This has left a question unanswered: why do retail-investors, for example, care about the environment (Lagerkvist et al., 2020)? Is it biodiversity, climate change or waste management those investors actually care about?

According to PWC (2020), there is evidence that organizations' Chief Financial Officers acknowledge that ESG factors and performance do have an impact on their cost of capital. This clearly makes all kinds of knowledge about the public's view on ESG-factors very important for corporate finance functions. Analyses have found that the relationship of cost of capital and ESG scores in the MSCI World and Emerging Market Indices show that companies with a high ESG score on average operate with a cost of capital that is 6% lower compared to the worst companies in terms of ESG-scores (PWC, 2020). From this perspective, it is interesting to see how retail investors consider the ESG-factors in their own investment decisions.

On the other hand, Berk and van Binsberger (2021) show that the impact on firms' cost of capital is too small to meaningfully have an impact on investment decisions when scrutinizing the quantitative impact of ESG divestitures. Divestment is widely defined by Berk and van Binsberger (2021) as the idea that when investors choose to not invest in companies that have a bad effect on society, society benefits. The debates around this question are many, and by filling out some research gaps, we hope to be able to contribute to solving these questions.

1.2. Research question

This study aims to fill the research gap on what drives investments in ESG from Sweden-based retail investors. More specifically, the study aims to examine if, and to what degree, retail investors consider the different subfactors of ESG important. The main question and sub-question of the paper can thus be formulated as

- **Main question:** How do investors value the different factors, Environmental, Social and Governance, within ESG when asked about their respective subfactors (Such as; *Climate change and carbon emissions, Customer satisfaction, and Board composition*) compared to when asked directly about the main factors?
- **Sub-question:** How does an investor's preference of Financial value, Reputational value and Moral value impact the importance placed on the different factors, Environmental, Social and Governance?

1.3. Research gap and expected knowledge contribution

The goal of this paper is in line with Riedl and Smeets (2017) and Lagerkvist et al. (2020); finding out how retail investors view the various components of ESG. However, there is an important difference between this study and the aforementioned studies. Instead of treating sustainability as a binary concept, an investor is either a sustainable investor or not, as Riedl and Smeets (2017), and instead of measuring which ESG-factor respondents prefer, as Lagerkvist et al. (2020), this study will instead aim at figuring out which ESG-subfactors that investors place the most importance on, then using that to estimate what subfactors, if any, in the broadly defined ESG-spectrum that are considered most important among retail investors.

There is a lack of research into the ESG-subfactors, which creates difficulties for researchers within sustainable finance. Establishing a consensus about which subfactors are most important to retail investors is difficult, which leads to assumptions having to be made. By examining this from the perspective of the ESG-subfactors, instead of the main factors, a more in-depth picture can be presented. Future research can use these viewpoints to better ask questions about how and why investors place an importance on ESG, and thus avoid asking too broad questions or having to make too general or too many assumptions. This can contribute with a unique look into retail investors' mindset regarding the ESG-factors and their respective subfactors.

This research is also important from a separate viewpoint, as research by Fama and French (2007) showcases that taste for assets can have long-term effects on asset prices. Understanding what parts of ESG that retail investors consider important can possibly give insight into how asset prices can be impacted by ESG and CSR-trends. There has been previous research into how the ESG-perspective can be added into classic asset pricing models, such as Pedersen et al. (2021). In contrast, this research will aim at providing a more detailed and explicit look into what subfactors of ESG that retail investors consider important, which will be done by treating the ESG-subfactors separately, instead of focusing on the ESG-factors (Environmental, Social, Governance). This could ultimately offer a more detailed look into the sub-factors that companies should focus on in terms of ESG, to get the most effect on the price of their capital.

Another aspect of the study is aimed at the value preferences of retail investors and how preferences relate to the importance that retail investors place on the different ESG-factors and ESG-subfactors. As previously mentioned, prosocial and financial motives have been examined in previous studies, such as Riedl and Smeets (2017). There is one clear research gap that the study aims at in regard to the preferences, and that is the relation of the answers to questions

regarding preferences (Financial value, Moral value, and Reputational value) to the scored importance that retail investors place on the Environmental, Social and Governance factors. This will help examine the relation of preferences and ESG-factors and will hopefully contribute to the knowledge about how prosocial and financial motivations relate to the importance placed on ESG-factors and ESG-subfactors.

1.4. Findings of the study

Regarding the first research gap, this study finds significant evidence that there are certain subfactors that are considered more important than other subfactors. Furthermore, the survey also finds results that indicate that research conducted on the area should focus more on the subfactors, as all ESG-factors had three subfactors that had a statistically significant positive relationship with the importance placed on the ESG factor, some subfactors that do not have a relationship and some that showcased a negative relationship.

Measuring the internal difference between how important retail investors consider each subfactor in the respective factors resulted in interesting results. The result indicates that the difference in importance between the environmental subfactors are not that big compared to the Social and Governance subfactors. This means that a person that cares about the Environmental factor generally considers the Environmental subfactors equally important. On the other hand, the internal difference between the subfactors in Social and Governance main factors are quite big, indicating the reverse; a person who considers these factors important consider their respective subfactors with different importance.

Regarding value preferences, the study finds that respondents that responded that they do think that they would outperform the market (Financial value) do believe that their investment have a positive impact on the world (Moral value) generally answered higher across all ESG-factors. However, the study also shows that while both Social and Governance main factors saw positive relations with the respondents' response regarding Reputational value, the Environmental main factor was the only factor that saw no relation to reputational preferences.

1.5. Thesis outline

The thesis will begin with reviewing previous literature within the field of ESG. Hypotheses tied to the previous research will be presented, and an overview of how the hypotheses will be tested and examined. Afterwards the results from the study will be presented and discussed tied to the hypotheses. Finally, the study's implications for research and practical purposes will be discussed, limitations of the study and suggestions on future research will then be presented.

2. Literature review

This section reviews some fundamental concepts and previous literature in the field. In this section we aim at providing a background and some theoretical understanding on which to build the rest of the thesis. It is divided into four parts. Firstly, describing and giving a background to ESG as it is used from an investment point of view. Secondly, giving a background on why investors choose to hold ESG and SRI funds and investments. Thirdly, some background on the preferences that potentially could impact importance placed on ESG-factors. As a fourth point we will include some review on how professional investors use ESG information.

2.1. What is ESG in investing

ESG is a concept that first grew out of other investment strategies and philosophies, such as SRI. However, ESG separates itself with a few key differences. ESG, when applied as a strategy, looks at finding values in companies, not just as a screening tool or to support a set of values (CFA Institute, 2021). ESG is used as an evaluation method to evaluate companies based on their positive or negative impact on different areas. The trend for companies reporting these has been increasing over the past few decades according to a report from KPMG (2020).

ESG encompasses three factors, Environmental, Social, and Governance. Each of the three factors of ESG also comprise several sub-factors (CFA Institute, 2021). The exact definition of what ESG encompasses is still unclear, for example Dorfleitner et al. (2015) found significant differences between different ESG rating concepts when it comes to distribution, level, and risk from rating approaches. This does however not have to indicate that the definitions are unclear, rather it could indicate that there is a problem of measurements.

2.2. Why investors choose to interact with, or choose to avoid, ESG

Numerous studies have indicated that SRI funds can outperform conventionally managed funds (Edmans, 2011; Kempf & Osthoff, 2007; Gil-Bazo, Ruiz-Verdu, & Santos, 2010). The decisions by investors to move away from so-called sin-stocks has been researched in the past, with varying conclusions. Fabozzi et al. (2008), Hong and Kacperczyk (2009), and Statman and Glushkov (2009) all reported significant positive abnormal returns for sin stocks after controlling for conventional asset pricing factors. A more recent study by Arouri et al. (2020) finds that there is inherent trade-off between risk-return profile and SRI investments. Contrary to this is an argument put forth by Erragragui and Lagoarde-Segot (2016), theorizing that the difference in returns between ethical and conventional indices is insignificant and due to the

‘mainstreaming’ of ethical investment. To further complicate the matter, one study found that stock prices sometimes have a negative reaction to positive news regarding a company’s CSR (Krüger, 2015).

This varying view of the financial returns from SRI, together with the studies indicating that SRI funds are more expensive compared to conventional counterparts (Bauer et al., 2005), highlight the question of why investors are attracted to SRI. Berry and Yeung (2013) also showcase that the ethical investor group varies in their willingness to sacrifice ethical investment for financial performance, and hence they display more heterogeneity than an all-encompassing ‘ethical investor’ label implies.

According to the CFA Institute (2015), one of the most fundamental views in the “value vs values” discussion is that all capital allocators essentially pursue the same economic value, but what differs is their moral values. Riedl and Smeets (2017) found that financial motives play a limited role in the decision to invest into an ESG fund, instead both social preferences and social signalling are important factors for these decisions. This is supported by Wins and Zwergel (2016) showing that even though private mutual fund investors believe that ethical funds will perform worse than conventional funds, they still chose to invest in them. A theoretical finding that builds on this was presented by Pástor et al. (2021), theorized that if all else remains equal between them, green assets have a lower expected return compared to other assets, partly because of the hedge against climate change risk, but also because investors simply enjoy holding them. Bauer and Smeets (2015) found related results, hypothesising that investors’ social identification affects their choice of investment strategy, and that this could mediate the effect of expected return.

Previous research has also found that sustainable investment preferences are linked to some other behaviour, outside of investment, such as charitable giving (Riedl & Smeets, 2017), religious activity (Gutsche, 2017) and political orientation (Hong & Kostovetsky, 2012; Gutsche et al., 2019). Furthermore, Lagerkvist et al. (2020) and Gutsche et al. (2019) both find that one of the key predictors of an ESG investment preference is an awareness of sustainability. In a study by Aich et al. (2021) one finding is that age can also impact ESG-investments, where younger people generally invest more in ESG.

2.3. Why certain ESG-factors are considered important

The different ESG-factors are often treated as one and the same, such as Riedl and Smeets (2017) measuring why investors choose to invest into sustainable finance alternatives and

Pástor et al (2021) theorizing about green vs conventional assets. Lagerkvist et al. (2020) conducted an experiment on private investors in Sweden to estimate preferences for sustainable and responsible investments and found that funds' sustainability strategies, and environmental focus, were more important than the funds' other characteristics. Friede et al. (2015) examined 2,200 individual studies on ESG-criteria's effect on Corporate Financial Performance and found that approximately 90% of studies showcased a nonnegative relation between ESG and Corporate Financial Performance. Furthermore, there was a small but positive return difference for environmental and governance categories, but none for socially focused investment.

When it comes to investors choosing to invest into SRI, the previous research is mixed regarding what ESG factors matter the most. Some previous papers lend support to the importance of social factors and issues, such as child labour, racism, and sexism (Wins & Zwergel, 2016). The choice between social issues and environmental is a debated one, with Pérez-Gladish et al. (2012) finding that investors focus on social issues over environmental ones, however, in the papers by Berry and Yeung (2013) and Lagerkvist et al (2020) the conclusion is the opposite.

Limkriangkrai et al. (2017) did a study in Australia on ESG-factors' effect on the internal structure of corporate finance within the firm. By comparing ESG ratings and the corporate finance structure of the firm they found that firms with a high rating within the Governance factor and a low rating within the Environmental factor tended to raise lower levels of debt. Furthermore, firms with high Governance ratings tended to hold less cash, and firms with a lower Governance rating tended to have a lower dividend pay-out. Interestingly, the study saw no impact of Social ratings on corporate finance decisions.

Looking towards the credit market, Kiesel and Lücke (2019) analysed credit rating reports from Moody's between 2004 until 2015 and found a small but consistent consideration of ESG in rating decisions, and within ESG they found that corporate governance plays the most important role.

2.4. Three types of value that guide investors

When discussing why retail investors consider ESG important, it is of utmost importance to establish what value means. In this study three main reasons why an investor would consider a company's ESG standards are established: financial value; the impact ESG has on a company's financial returns, moral value; the impact of a company's ESG on how an investor view themselves from a moral standpoint, and Reputational value; how an investor believes an

investment in a company with certain ESG-standards will impact their own reputation. In this section, a brief overview will be presented about what the three contain and a theoretical perspective on the separate factors.

2.4.1. Financial value

Halbritter and Dorfleitner (2015) presents the traditional view that most investors care about maximizing their profits first and foremost. Friedman (1970) presents a similar point, regarding corporations, stating that they are only responsible for maximizing shareholder value. Erhemjamtsa and Huang (2019) presents a classical view as well, that a firm's commitment towards CSR or ESG will mean that less resources can be put towards value-creation for shareholders. There are still reasons to believe that investors can consider ESG important from a financial standpoint. Freeman (1984) puts forth an argument that a firm's stakeholder approach will have an impact on long-term value creation, which in turn means that firms should take care of ESG related impacts, because of their impact on a firm's stakeholders, to achieve long-term value creation.

Giese et al. (2019) researched the transfer of ESG information onto companies' valuations and found that ESG information was transmitted to the companies' valuation and performance in two major ways. First were the companies' systemic risk profiles (through decreased cost of capital and increased valuations). The second impact was the companies' idiosyncratic risk profiles, meaning for example better profitability.

Furthermore, there exists little direct evidence if investors in ESG funds expect outperformance on the financial side compared to conventional funds (Bauer & Smeets, 2015; Nilsson, 2008). In addition, Renneboog et al. (2008) found that SRI investors, although not unambiguously, are willing to accept sub-optimal economic performance to be able to go after ethical or moral issues.

The choice to invest in an SRI-driven fund could be costly for asset managers as well. Studying funds in Germany, UK, and USA, Bauer et al. (2005) found that the average costs associated with the operation and management of SRI funds was higher compared to conventionally managed ones. Furthermore, the study did not find any evidence for a significant difference in risk-adjusted returns between conventional and ethical funds.

In summary, the literature to date provides ambiguous evidence on the financial results from including ESG-information into investment decisions. The mixed evidence might be a result of

the many different investment strategies that have emerged over the years (Amel-Zadeh & Serafeim, 2018). When comparing for example Brammer et al. (2006), that found that portfolios that are formed based on aggregated ESG-measures underperform their peers, with Khan et al. (2016) or Edmans (2011), one can see the contradictory evidence in the literature.

2.4.2. Moral value

Lotto et al. (2015) showed, through four practical experiments, that investors are not only interested in financial returns, but they also have non-financial goals as well. The result of their study empirically supports that investors' have two types of goals; financial, and expressive, also known as non-financial. In a real-world example, using a trading strategy optimized for socially responsible firms, Kempf and Osthoff (2007) found that it is possible to combine socially responsible investing with financial goals.

Similarly, Williams (2007) contributed some evidence from a cross-country study that a consequential portion of investors do indeed consider a company's social and environmental behaviour when they make decisions about their capital allocation. McLachlan and Gardner (2004) contributed with a similar result, stating that both socially responsible investors and otherwise traditional investors consider investment returns similarly important. The major difference was that the socially responsible investors ranked twelve out of twelve ethical issues as more important to their investment decisions in contrast to their counterparts of traditional investors' ranking of the ethical issues.

2.4.3. Reputational value

There have been several studies showing the importance for people to create a positive view of themselves among peers via social signalling. For example, Ariely et al. (2009) found that when it comes to prosocial behaviour, an important driver behind it is how others perceive the person. In other terms, a driver behind a person's motivation to do "good" is not only from a moral standpoint, but also from a standpoint of being liked and well regarded among peers. This could theoretically also impact investment decisions, investing in what is perceived as a good cause could lead to the person to be well regarded among peers.

Both the Reputational value and Moral value are driven by prosocial behaviour, but there is a significant difference between the motivation behind it. Either to feel like the person is doing something good, or that the person wants to be seen as doing well. Hong and Kacperczyk (2009) demonstrated that social norms do have an impact on sin stocks, as it is a concept that constrains

capital allocators from holding such stocks, which in turn have an impact on the firms and their prices on the capital markets.

As defined by Akerlof (1980), a social norm is an act whose value and utility to the agent depends to some degree on the beliefs of other members of the society. Durand et al. (2013) defines two types of investors, “saints” and “sinners”, the former being the ethical investors and the latter the investors in sin-stocks and found that “saints” are affected by social norms. The research by Durand et al. (2013) also finds that social norms do exert positive influence on both types of investors and firms, in the United States equity markets.

Furthermore, there could be positive reputational effects from holding ESG-assets and there are several papers highlighting the importance of creating a positive social image, both with empirical evidence (Ariely et al. 2009; Fehrler & Przepiorka, 2013; Cappelen et al. 2017) and from a theoretical perspective (Glazer & Konrad, 1996; Bénabou & Tirole, 2006; Ellingsen & Johannesson, 2008).

2.5. ESG-considerations among professional investors

In a highly relevant study, focused on professional investors, the CFA Institute surveyed 1,325 investment professionals, portfolio managers and research analysts. The study by the CFA Institute found several interesting results regarding how finance professionals use ESG data. Among professionals, 73% of respondents take the environmental, social and governance factors into consideration when investing, or a combination of the three (CFA Institute, 2015). Separating the ESG-factors, 64% of respondents answered that they take the factor of governance into consideration in investment analysis or decisions, while 50% said environmental and 49% said social.

In a similar study, Amel-Zadeh and Serafeim (2018), conducted a survey on professional investment managers and institutional investors in New York asking if and how they use ESG data in their investment decisions. A similar result was reached, where 82% of respondents answered that they use ESG information in their investment decisions, and the most stated reason (63%) as to why they use it was that “*ESG information is material to investment performance*”, indicating that professional investors do consider ESG for financial gain and economic value. Another 33% answered that the reason as to why they incorporate ESG-data was that they believe that such practices can bring about change in firms, indicating moral and ethical values to play a part in such decisions.

Another interesting aspect was that 33% answered that they see a growing client/stakeholder demand and 33% believe that an ESG policy is “*effective in bringing about a change in the world*” (Amel Zadeh and Serafeim, 2018). When asked the similar question by the CFA Institute (2015), “*Why do you take ESG issues into consideration in your investment analysis/decisions?*”, the most cited answer was to help manage investment risk (63%). This indicates an economic-return viewpoint and financial motivation. The second most cited answer was that clients demand that the professionals take ESG issues into consideration in their investment decisions (44%). The CFA Institute (2015) also asked its respondents to rate the sub-categories of ESG-issues from a scale of 1-5. In this question, the governance-factor of board accountability was the highest rated. Human capital was the second most important factor according to the investment professionals, and the sub-category climate change only received a 40% score, placing it as the ninth most popular factor. Executive compensation and otherwise environmental degradation were also considered important as sub-factors.

3. Hypotheses

The first three hypotheses are aimed at examining the main question of the study, the fourth hypothesis is aimed at examining the sub-question of the study.

3.1. Hypothesis 1

- **Respondents place the same importance on ESG-factors when asked directly about them as when asked about the ESG-subfactors**

Hypothesis 1 examines the relationship between the importance placed on the ESG-factors when asked directly about them and the importance placed on the ESG-factors when using the average importance-score of the respective ESG-subfactors as a proxy. For example, a person placing a high importance on the environmental factor should place a high importance on the environmental subfactors on average as well.

Hypothesis 1: There is a correlation between the importance investors place on the ESG-subfactors and their respective ESG-factor.

Null hypothesis: There is no correlation between the importance investors place on the ESG-subfactors and their respective ESG-factors.

3.2. Hypothesis 2

- **There is a difference in the importance placed on the ESG-subfactors**

Hypothesis 2 aims at examining the difference of how important retail investors consider all the ESG-subfactors to be. If there is a significant difference between the importance placed on all the various ESG-subfactors, this would indicate that not all ESG-subfactors are of equal importance to retail investors.

Hypothesis 2: There is a difference in the importance placed on the ESG-subfactors.

Null hypothesis: There is no difference in the importance placed on the ESG-subfactors.

3.3. Hypothesis 3

- **There is a difference in the importance placed on the ESG-subfactors within the factors (Environmental, Social, Governance)**

Hypothesis 3 investigates the importance of the ESG-subfactors amongst the respective ESG-factors. If there is a difference between the importance placed on subfactors, within for example

environmental, this would indicate that respondents do not value environmental as a factor, but certain subfactors might drive their interest in the environmental factor.

Hypothesis 3: There is a difference in the importance placed on the different ESG-subfactors within their respective ESG-factor.

Null hypothesis: There is no difference in the importance placed on the ESG-subfactors within their respective ESG-factor.

3.4. Hypothesis 4

- Retail investor preferences impact the importance placed on the ESG-factors

Hypothesis 4 assesses the impact of investor preferences on the importance placed on the ESG-factors. If this showcases a significant result, then it could indicate that investor preferences impact the importance placed on the ESG-factors. As an example, if respondents indicate a preference for financial value and this in turn impacts the importance placed on environmental factors in a negative way, compared to respondents that did not indicate a preference for financial value, this would indicate that respondents that care about financial value place less importance on the environmental factors.

Hypothesis 4: If an investor indicates a preference for Financial value, Moral value and or Reputational value then this affects the importance that this investor places on the ESG-factors.

Null hypothesis: If an investor indicates a preference for Financial value, Moral value and or Reputational value then this does not affect the importance that this investor places on the ESG-factors.

4. Methodology

This section discusses the research design of the study, design of the pre-study and the results and changes from it, survey design of the main study and how it was conducted, data quality and the reliability and validity of the study.

4.1. Research design

To examine the questions of the study, a quantitative approach has been chosen. To get the data for testing the hypothesis, a self-completion online survey will be used, which is the most common way to conduct quantitative research (Bryman & Bell, 2013). The relative sensitivity of asking respondents about their investment into ESG or non-ESG topics also makes anonymous surveys an attractive option, as an interview could entail an interviewer-effect on the answers that respondents give (Bryman, 2012). The interviewer-effect refers to an impact on an interviewee's answers from the interviewer (American Psychology Association, 2021). The goal of the survey design is to have a positivist approach, meaning that the goal is for the researcher to have low interference. Since the study takes a quantitative approach, with the survey being distributed online, the interference of the researchers is considered to be low.

An online survey is chosen for the collection of data, as the method allows the gathering of large amounts of data from a large geographical location with relative ease, which is an important part for the study. Being bound to a specific location could impact the kind of respondents the survey would get, for example an urban environment could impact the importance placed on certain ESG-parts. A problem with a self-completion online survey is that if a question is not clear from the respondent's perspective it is impossible for the researcher to assist in the understanding. This problem is effectively alleviated by a pre-study, to assure that the questions are understandable and that an acceptable quality of answers are reached.

The decision to do the study on the Swedish population is based primarily on three reasons. i) resources and time, by doing the study in Sweden a convenience sampling method could be used, which, due to constraints of resources and time, was seen as an attractive option. ii) because of the Swedish premium pension system, 100% of working aged Swedes have savings in various types of pension funds, which means that the working aged population or older do have a direct or indirect capital allocation strategy, which in turn means that everyone has some vested interest. And even outside of the Swedish premium pension system approximately 76% of the Swedish population between the ages 18-75 chose to save in a fund outside of their pension, which is considerably higher than the European average (Fondbolagen, 2018). Finally,

the Swedes invest, compared to the rest of Europe, a high amount of their savings into equity funds, almost 70%. Compared to the rest of Europe this is substantially higher, with Norway and Great Britain being the closest ones at around 50% (Fondbolagen, 2018). iii) based on the Environmental Performance Index, Sweden is seen as one of the most sustainable countries in the world, which in turn indicates that Sweden is engaged in sustainability and makes it a prime country to examine these questions (Environmental Performance Index, 2020).

4.2. Question types

Many of the questions in the survey are deemed best constructed as closed questions, meaning a question that gives the respondent a limited amount of answer choices. According to Bryman and Bell (2013), there are several advantages to using closed questions. First, it is easier to process the answers which entails that closed questions also enhance the comparability of the answers. Furthermore, since the survey was to be distributed online, closed questions offered the advantage of being able to direct a respondent in the meaning of the question and leave less information for the respondents' imagination (Bryman & Bell, 2013). Since the authors are not able to be physically present or make live questions on the survey, this is preferred. However, the disadvantages to using closed questions were also considered, for example a lack of allowance for spontaneity and to make the questions and answers mutually exclusive and exhaustive (Bryman & Bell, 2013). For the purpose of this study the authors believe that, compared to the advantages, the disadvantages of using closed questions are minor.

4.3. Pre-study

Before conducting the main survey, a pre-study is conducted to ensure that the questions asked are comprehensible and that the quality of responses are acceptable. Bryman and Bell (2013) present a pre-study to improve the main study in terms of both reliability and validity. Additionally, a pre-study is considered important for this study since the questions will try to delve into details of ESG, which could be a field where respondents have a limited previous experience. Assuring understanding among respondents is of utmost importance as the main-study would suffer in quality because of respondents having a hard time understanding certain questions.

4.3.1. Procedure of the pre-study

The pre-study is conducted with a goal of understanding if the respondents understood the questions and assessing if the quality of the responses gathered can be deemed high enough to answer the hypotheses previously stated. For distribution of the pre-study survey, a convenience

sampling method is used (Saunders, 2007). A convenience sampling method is one where the sample that is chosen is available to the researcher by virtue of accessibility (Bryman & Bell, 2013) Due to constraints to resources and time, the method of convenience sampling is chosen. To do this, the pre-study is distributed on workplaces and among followers on social media such as Facebook, Twitter, and LinkedIn. To use a convenience sample is considered a valid approach if the population from which the sample is chosen does not vary too much. It also fits into the general methodology, since the sampling is progressing until the point where enough answers are reached and a significant sample size has been acquired (Saunders, 2007). After this, the results are analysed to conclude what, if any, changes are needed to fulfil the demands on the main survey.

4.3.2. Contents of the survey for the pre-study

A brief overview of the survey will be presented here. The full survey as it was presented to the respondents can be found in [Appendix 2 - Pre-survey questionnaire](#).

In the introduction to the survey, the participants are given an overview of the survey's design, the key goals of the survey and the research, as well as an approximate time to complete it.

The second part of the survey focuses on demographic information regarding the respondents. This is not a core part of the study but is included to establish that the study had reached a representative sample when comparing socio-demographics to Sweden as a population.

The third part of the survey surrounds questions on how the important respondents view various subfactors of Environmental, Social and Governance. The parts of the different areas are based on an evaluation from the CFA Institute (2021). When defining ESG in terms of investing, CFA Institute offers a good outline of the many sub-factors that the broad expression is composed of. We decided to use the CFA Institute's definitions due to its considerable impact on finance professionals, educating the global finance professionals and thus likely impacting the global capital allocation. Furthermore, the definitions of the CFA are in line with how other academic papers have defined the ESG-subfactors (see for example; Ruggie & Middleton, 2019; Lagerkvist et al., 2020). A full list of the definitions can be seen in [Appendix 1 - ESG sub-category definitions](#).

The respondents are asked to answer according to a 7-point Likert scale based on whether they agree or disagree with the statement made. In the pre-study, the seven answer choices are; *Strongly Agree, Agree, Somewhat Agree, Neither Agree nor Disagree, Somewhat Disagree,*

Disagree, or *Strongly Disagree*. An eighth option is available for respondents who feel that they do not know how to respond to the statement; *I do not know*. The decision to add this is to assure that respondents that feel that they do not know how to respond avoid having to answer something for the sake of giving an answer, this would negatively impact the study's results. A Likert scale to question respondents about attitudes towards scenarios is one of the most frequently used response ratings (Bryman & Bell, 2013).

The statements that respondents are made to answer are purposely vague regarding whether the impact from a company engaging in the asked-about statement would be positive or negative. The reasoning behind this is that the researchers want to avoid any impact from the researchers' personal opinion in the framing of the question (Bryman & Bell, 2013).

The fourth part of the survey is aimed at figuring out the importance that respondents place on the Environmental, Social and Governance factors. The respondents are asked to rank the ESG-factors from what they *care most about* (1) to what they *care least about* (3).

The fifth part of the survey is aimed at figuring out why respondents care about the ESG-issues that they indicated that they cared about in the third part of the survey. This part of the study is aimed at figuring out what makes an investor care about the choices made, whether it is Financial, Moral, Reputational or a combination of all three that makes the investor care about ESG.

The pre-study survey was finished with an open comments box asking the respondents to return with feedback on the pre-study. This is an efficient way for the researchers to receive feedback on any thoughts about the survey design.

4.3.3. Sample of the pre-study

The sample consisted of 50 participants that answered the survey and another 16 that opened the survey but did not finish it, which corresponds to a completion frequency of about 76%. The requirements to participate in the study was to reside in Sweden and be above the age of 18. A more detailed breakdown on the participants in the pre-study can be found in [Appendix 3 - Pre-study survey socio demographics](#). The respondents were primarily within the age bracket 18-30 and this would be a problem in the main survey since Aich et al. (2021), for example, found that age is a factor that affects how much respondents generally care about ESG issues.

But for the pre-study this was determined to not be a major issue, as the main goal of it was to figure out if respondents understood the questions and that the quality of the answers were satisfactory. One example of bad quality would have been if everyone or almost everyone responded in a similar fashion to a question, this would lead to the resulting data not forming any interesting variable (Bryman & Bell, 2013).

4.3.4. Results from the pre-study

The pre-study concluded that some changes were needed to improve the reliability and validity. One such change that was needed was to add a better situational description of how the respondents were supposed to view the questions in the second section. Some respondents returned with the feedback that it was not clear in what way to view the questions; from an employee's point of view or an investor's point of view. This led to a clarification of the viewpoint that respondents should take when answering the survey. A large portion of the respondents saw no problem with the pre-study, and some returned with feedback that they understood it perfectly and are looking forward to reading the results from it.

A few changes were also made in relation to how the questions were presented. First and foremost, a decision was made to move the socio-demographic questions to the end of the survey due to the completion rate of the pre-study. The decision is in line with what Bryman and Bell (2013) recommend. Furthermore, the socio-demographic questions are of least importance and are the easiest for respondents to answer, making sure that the validity is kept high.

Secondly, the question asking respondents to rank the various aspects of ESG was moved before the block of 21 questions asking them to rank the subcategories. This decision was based on two factors, i) when moving the socio-demographic questions last, the questionnaire would have begun with a very time and thought intensive question, meaning that respondents could lose interest immediately if they felt the questionnaire was too advanced, ii) by moving the block of questions, the Financial, Moral and Reputational decision question were directly after the 21 questions about the subfactors, which meant that respondents had to rely less on their memory.

When analysing the data from the pre-study another realisation was made that respondents said that they cared, on average, about every single question presented. On a scale from 1-7, with a 1 representing the lowest level of caring and 7 the highest, the lowest average was 4.36. Which meant that retail investors neither agree nor disagree with whether they cared about the question

at hand, based on the 7-point Likert scale that was used, presented in [Question types](#). This could be due to the acquiescence response bias (Lavrakas, 2008), a tendency for survey respondents to agree with the statements regardless of their content.

Because of this, a choice was made to move from the previous way that the question was presented and instead go with a Likert scale based on the importance the retail investor placed on the specific subject. Furthermore, the decision to move to an importance scale brought with it a move to a 5-degree Likert scale, as this is more common for importance scale questions and easier for respondents to understand. The Likert scale that was chosen for the main survey is 5-levels and the levels are; *Very important*, *Important*, *Neutral*, *Low importance*, and *Not at all important*. As in the pre-study a sixth option was included of *I do not know*.

Finally, what was a ranking of environmental, social and governance in the pre-study, was changed to a Likert scale in line with the questions regarding the 21-subfactors, but without the option of *I do not know*. This was based on three things; i) it would allow respondents to not be forced into arbitrary ranking of the categories, ii) in the statistical analysis after the survey is sent out, a more thorough comparison can be made between the importance stated by respondents regarding the 21 questions on subfactors and the importance placed on the factors Environmental, Social and Governance, iii) presenting the scale system used in the questions about the 21 subfactors, before the 21 questions, gives respondents a chance to get accustomed to the importance Likert scale in an easier question setting.

4.4. Main study

4.4.1. Contents of the main study

The contents of the main survey are the same as [Contents of the survey for the pre-study](#) with the mentioned changes needed from the [Results from the pre-study](#). The full survey that was used in the main study can be seen in [Appendix 4 - Main- study Questionnaire](#). The only difference between the Qualtrics survey, which was used for the convenience sampling, and the survey from PollFish is that the socio-demographic questions were not included in the PollFish survey itself, as PollFish collects this from their respondents as a prerequisite for taking the survey at all.

4.4.2. Procedure of the main-study

For distribution of the survey, a convenience sampling method was chosen (Saunders, 2007). The main-study was conducted by distributing the pre-study survey on various workplaces and

among followers on social media such as LinkedIn, Facebook, and Twitter. This was due to constraints to resources and time, and it also fits into the general methodology, since the sampling was progressing until the point where enough answers were reached and a significant sample size had been acquired (Saunders, 2007).

After the survey had been distributed and sufficient responses had not been acquired, a decision was made to move to another way of distributing the survey. The external provider PollFish was selected for this purpose. PollFish is an online survey provider that uses Random Device Engagement (RDE) to distribute surveys. This has the advantage of engaging respondents in a natural environment, which in turn means that the respondents should feel that it is more natural to answer the survey which should improve ecological validity (Bryman & Bell, 2013).

4.4.3. Sample of the main-study

A calculation of the required sample size was conducted to decide the required sample size of the main study. The sample size calculation is built on the formulas presented in Cochran (1963) and is one of the most common ways to assess sample size calculations. Because of the size of the population of the study, working aged Sweden-based retail investors, the calculation was conducted based on an unlimited population size, as the sample size does not change a lot after the population is 20,000 or larger. The decision to use a confidence level of 90%, corresponding to a z-score of 1.645, was based primarily on two factors i) it is one of the more common choices, together with 99% and 95%, with 90% and 95% being the most common within social sciences. ii) the field of ESG-subfactors is relatively unexplored and the goal of this study is not to provide exact answers within the field, rather, the goal is to provide future research with new viewpoints and provide an exploratory paper.

The decision to go with the confidence level of 90% instead of 95% brings with it that the risk of a type 1 statistical error, rejecting a correct null hypothesis, increases and the risk of a type 2 statistical error, not rejecting an incorrect null hypothesis, decreases. This is in line with the goal of the study, promoting further research within the area and providing researchers with a first exploratory paper. The margin of error was set at 5%, which is a common choice. Because the standard deviation of the underlying population is unknown, a standard deviation of .5 was selected as this gives the largest sample size, which assures that the sample size will be large enough with any underlying standard deviation. The calculation of the necessary sample size is presented in equation 1.

Equation 1: Required sample size calculation for the main study

$$n_i = \frac{z^2 \times \hat{p}(1 - \hat{p})}{\varepsilon_i^2} = \frac{1.645^2 \times 0.5(1 - 0.5)}{0.05^2} = 271$$

The final sample of the study was 371 responses with 171 from the convenience sample and 200 from PollFish. Above our predetermined sample size but based on the completion rate in the pre-study this sample was large enough to be in line with the necessary sample size, if the response rate was in line with that of the pre-study.

4.5. Data quality

The data from the study was cleaned and looked at to assure the responses had a sufficient quality and that there were no missing answers. A choice was made to not clean data based only on answer choices, for example, there was one response that answered “I do not know” to 13 of the questions presented. This could be viewed as a problem from a research perspective but to remove it from the data set would mean that the researchers made a judgement about what a “normal” answer is which would impact the reliability of the study. A similar choice was made when it came to respondents answering with the same answer to the Likert scale questions. A choice to remove these answers would mean that the researchers used their own view of what constitutes a “normal” response to the questions and impact reliability.

There was a total of 171 responses to the Qualtrics survey, but since only 80 of these were finished, a decision was made to only include these in the final analysis. Furthermore, outliers within the data set were removed, based on the mean importance placed on the 21 ESG-subfactors. In total there were 2 outliers that were removed by this outlier analysis. No other responses were removed, and the final analysis was computed on the basis of 278 responses.

Furthermore, there is an inherent statistical issue in combining the two samples, but in lieu of time and resources a decision was made to merge the two samples. This brings with it an advantage in terms of avoiding the bias that is inherent in a convenience sample but there would be a problem merging the samples if they differed significantly compared to each other. To explore this, four boxplots were created, comparing the means of all the 21 subfactors and the means of the Environmental, Social, Governance in the two different samples. The boxplots showcased a small difference and the samples looked comparatively similar.

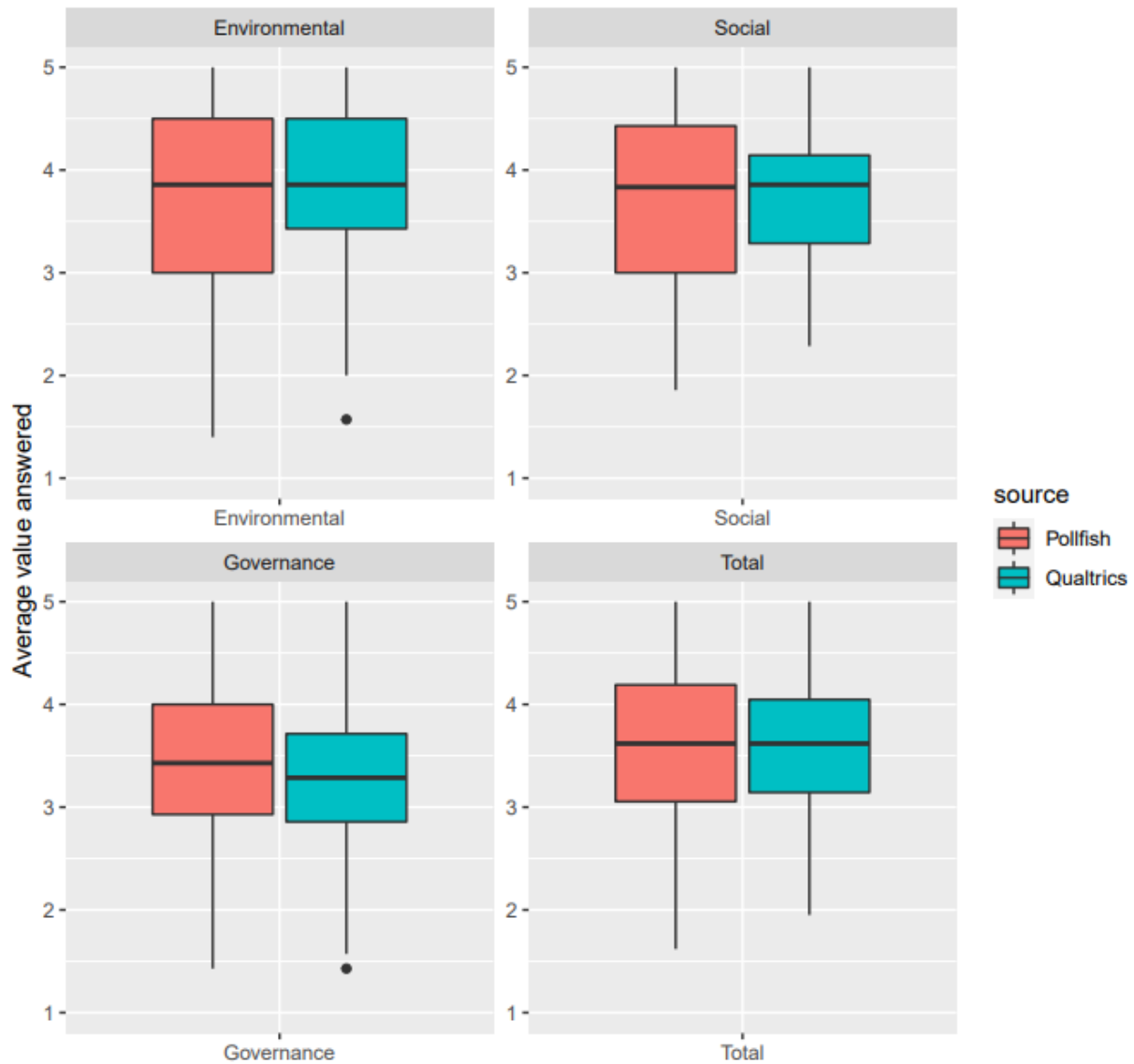


Figure 1: Boxplots showcasing the difference between the mean importance placed on the seven subfactors within the different ESG-factors and all 21-subfactors by respondents from the Pollfish sample and the Qualtrics sample.

To further explore the issue, the means of the samples were tested with a two-way Welch's TOST (Two one-sided test), also called an equivalence test. It is used to validate the equivalence between two sample means, the test was performed as described by Schuirmann (1981), Westlake (1981) as well as Walker and Nowacki (2011). Because of the difference in sample size and the fact that the variance was unknown, Welch's approach was chosen for handling the variances within the test. The test showed significant results for Environmental, Social, Governance and the means of the 21 subfactors. The full results can be found in [Appendix 7 – Results of TOST](#). Because the TOST showed significant results and rejected the null hypothesis of statistical difference between the means of the samples the samples were merged and treated as one.

4.6. Statistical methods

There were five separate goals of the statistical analysis,

- i) to assess the socio-demographics of the respondents to see if the sample was skewed towards a certain population characteristic and to describe the sample.
- ii) to assess the impact of ESG-subfactors on how investors view the ESG-factors three correlation tests were run with the mean importance of the respective ESG-subfactors and the respective ESG-factors. The test was conducted to see if there was a correlation between the scoring of ESG-subfactors and the ESG-factors. After this, three regressions were run with the ESG-factor importance as a dependent variable and the respective ESG-subfactors mean importance as independent variables to assess if there were certain ESG-subfactors that showcased a clear correlation with the importance placed on the specific ESG-factor.
- iii) a one-way ANOVA was used to assess if there was a statistically significant difference between the means of the importance placed on the questions, both between all 21 questions and within the three groups (Environmental, Social and Governance). Before conducting the ANOVA test, Bartlett's test was run to test for homogeneity of variance across groups. If Bartlett's test is statistically significant, Welch's ANOVA would have to be used instead of a normal ANOVA to deal with the homogeneity of variance.
- iv) to assess the impact of different value-preferences (Financial value, Moral value, or Reputational value) on what subfactors of ESG that investors consider important, a regression was run with the three preferences (Financial value, Moral value, and Reputational value) as independent dummy variables. This was done to assess if they were statistically significant in terms of their effect on the total scoring of how important investors consider the three ESG-factors (Environmental, Social and Governance).
- v) The internal reliability of the study was tested using Cronbach's Alpha. A discussion regarding the treatment of Likert scales as an interval scale instead of as an ordinal scale is quite common within the social sciences field. Based on the article from Norman (2010) there is enough evidence to continue with the treatment of the Likert scale as an interval scale instead of treating it strictly as an ordinal scale. This in turn means that the various statistical tests that were chosen to test the hypothesis can be run without a broader implication for the data.

4.7. Reliability and validity

Reliability is at the core of quantitative studies, concerned with the issue called consistency of measures in research. Two key parts of this are stability and internal reliability. Stability measures whether the measurement is stable over time, in other words, if we re-administer the test, the measure will remain stable. The most obvious way of testing for stability is to test and then re-test afterwards to assure stability, but due to time-constraints this was not a possibility.

The second key part, internal reliability, measures how well the measurements measure what they are supposed to and not something unrelated. To measure the study's internal reliability, a test was performed to see if Cronbach's alpha was above 0.8. This is the most common method of assessing internal reliability today and the 0.8 is seen as an acceptable level of internal reliability. Furthermore, the use of a pre-study is claimed to increase reliability (Bryman & Bell, 2013).

The validity of a study refers to issues surrounding the indicators, or in this case the set of indicators, and if these measure what they are supposed to measure. (Bryman & Bell, 2013) Numerous ways exist to measure the validity of a study; external validity is one such measurement. External validity is a measurement of construct validity and concerns whether the study's results could be generalized or not (Bryman & Bell, 2013). The participants of the study were independent of each other, and a random selection was made. However, the participants of the study were all based in Sweden and a generalization would therefore be difficult for other countries.

The internal validity of a study concerns mainly the causality of a study and whether one variable causes an effect on another variable. One of the ways to avoid internal validity concerns is to ensure randomized selection of participants in the study, and through this avoid a selection bias. Through the random selection of participants in this study the risk for selection bias is avoided and the internal validity of the study is strengthened.

Ecological validity is concerned with whether a social scientific study can be applied to people's everyday natural settings (Bryman & Bell, 2013). There is an inherent problem with the way that the study was conducted in that the participants are not actually investing, instead they are merely asked about the way they think about their investments. This is a common issue when doing research with a questionnaire, the fact that the respondents are not making choices, but instead asked about what choices they would make.

Furthermore, a common critique against questionnaire studies is that the respondents may experience the act of answering the questionnaire as unnatural (Bryman & Bell, 2013). Therefore, a choice was made to limit the number of questions and avoid questions where the respondents had to write their own answers (Bryman & Bell, 2013). Longer and more complicated questionnaires can make participants in the study tired, which in turn might remind participants of the unnatural situation that they find themselves in, which can negatively impact ecological validity (Bryman & Bell, 2013).

However, the study did not aim at figuring out exactly how the respondents would invest in a real-life situation, instead it aimed at their feelings and thoughts surrounding certain subfactors of ESG. By avoiding interviews, the study's ecological validity is also believed to be improved; participants in an interview-based study would probably be perceived as even more unnatural compared to answering a questionnaire (Bryman & Bell, 2013).

5. Results

This section begins by exploring the descriptive statistics as well as explore the internal reliability of the study. In this chapter, the hypotheses are answered in the same order as they were introduced in the theory chapter, each hypothesis is tested, and the results explained.

5.1. Internal reliability & Descriptive statistics

5.1.1. Reliability and validity within the main-study

The internal reliability of the study was tested using Cronbach's alpha across the survey responses. There were a total of 278 responses and 27 questions that were answered by all of them. Out of the sample, a Cronbach's alpha of 0.865 was achieved. The most common rule of thumb for Cronbach's alpha is that a score above 0.80 is seen as an acceptable level of internal reliability for a quantitative study. Based on this, an acceptable level of internal reliability was achieved in the study (Bryman & Bell, 2013).

However, the study did suffer from a bias when it came to sample selection, as there was a large part of respondents in the convenience sample that chose to not answer the survey. This indicates that the respondents are merely a subset of the population; Swedes that are interested enough in ESG to answer a questionnaire regarding it.

5.1.2. Descriptive statistics

The descriptive statistics can be seen in more detail in the [Appendix 5 - Main study socio-demographics](#). From using two different distribution techniques, the descriptive statistics have been separated into two; one for the Qualtrics survey, and one for the Pollfish survey to easily display the statistics. There are some overlapping answers and when possible, the samples are presented as one. In the case of this study, the descriptive statistics are only useful to decide the representativeness of the sample to a population. Regarding the sample, we do believe that a relatively representative sample was achieved.

5.1.3. General information about the sample

The answers that were *I do not know* were treated as missing responses throughout the statistical analysis. Making a judgement about what *I do not know* meant for a respondent was seen as impacting reliability poorly because of the researchers' own view on ESG would have an impact on the results of the study. A list of the mean and a 95% confidence interval as well as the number of "I do not know" for all 21 questions about the subfactors can be seen in [Appendix 7](#)

- [Answers to 21 Questions](#) and a visual representation of the means of all the 21 questions is presented in Figure 2.

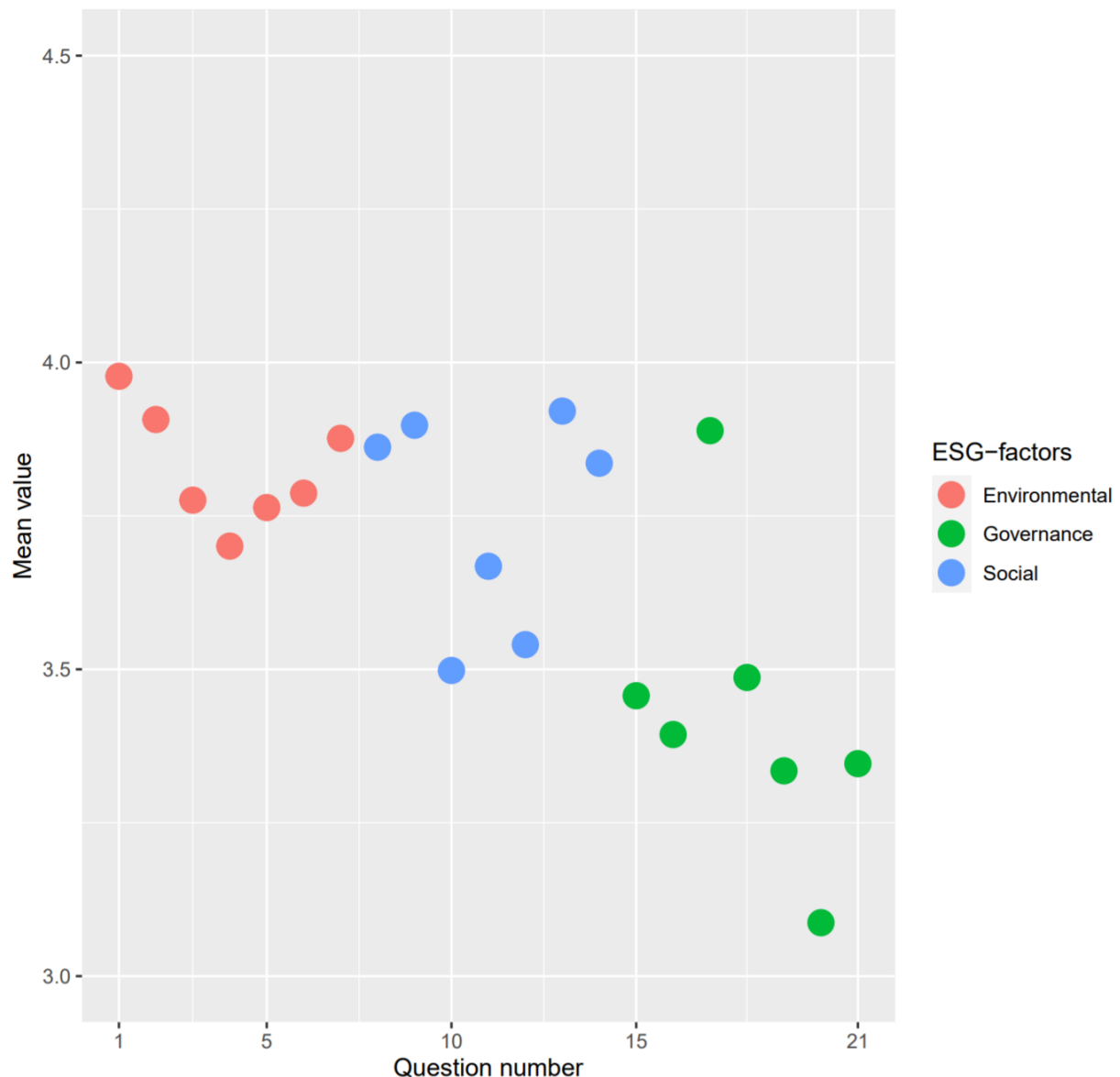


Figure 2: Mean importance placed on the 21 subfactor; colour coded based on the corresponding ESG-factors.

5.2. Hypotheses

In this chapter the results of the hypotheses are presented. First a table of the results of the hypotheses is presented, after that a more in-depth discussion surrounding the results and their impact on the study follows.

Table 1: An overview of the hypotheses that were tested and the results from these

Hypothesis 1 - <i>There is a correlation between the importance investors place on the ESG-subfactors and their respective ESG-factor.</i>	null-hypothesis rejected
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Hypothesis 2 - <i>There is a difference in the importance placed on the ESG-subfactors.</i>	null-hypothesis rejected
Hypothesis 3 - <i>There is a difference in the importance placed on the different ESG-subfactors within their respective ESG-factor.</i>	null-hypothesis, fully rejected for factors S and G, and statistical inclination that same can be done for main factor E.
Hypothesis 4 - <i>If an investor indicates a preference for Financial value, Moral value and or Reputational value then this affects the importance that this investor places on the ESG-factors.</i>	null-hypothesis, fully rejected for the factor Social and Governance, but partly rejected for the Environmental factor.

5.2.1. Hypotheses 1

To test [Hypothesis 1](#), first a Pearsons-correlation test was performed between the mean importance of the seven subfactors and their respective factor, a table over the results can be seen in [Appendix 8 - Hypothesis 1 – Correlation test](#).

For all three ESG-factors, there was a statistically significant correlation between the importance placed on the ESG-factors and the average importance placed on the ESG-subfactors. There was a slight difference between the correlation, with Environmental subfactors having the highest correlation at 0.584, Social subfactors at 0.535 and Governance subfactors the lowest at correlation of 0.476. This indicated that the average importance placed on the Environmental subfactors are explained to a higher degree with how important the respondents view the Environmental factor. Thus, the null hypothesis can be rejected; there is a correlation between the importance investors place on the ESG-subfactors and their respective ESG-factors.

Three regression analyses were run to further examine the hypothesis and to examine the relations between the three ESG-factors as three dependent variables and their respective ESG-subfactors. The goal of this was to examine if there were certain ESG-subfactors that did not have a relation to the main factor and see which ESG-subfactors created the correlation between the average score of the respective ESG-subfactor and the ESG-factor. A *relation* meaning either a positive or negative affect. The multiple linear regression that was used is presented in Equation 2.

Equation 2: Multiple linear regression to test the relationship between factors and their respective subfactors

$$Y_i = \alpha + \beta_1 \times x_{1i} + \beta_2 x_{2i} + \dots + \beta_7 \times x_{7i} + \varepsilon_i$$

Where,

Y_i = importance placed on a specific factor (Environmental, Social or Governance)

α = the intercept of the slope

β_i = the impact from x_i on the dependent variable

x_i = importance placed on a specific subfactor

ε_i = error term

The full results of the models can be seen in [Appendix 9 - Hypothesis 1 – individual regressions](#). Some subfactors had a statistically significant positive effect on the scoring of the ESG-factors, whereas some did not have an impact at all, and some had a negative effect.

5.2.2. Hypothesis 2

Before conducting the ANOVA test for [Hypothesis 2](#), a Bartlett's test of homogeneity of variances was run, and because it did not show significant results a regular ANOVA was run instead of a Welch's ANOVA. The ANOVA was then conducted to test hypothesis 2 and explore if there was a statistically significant difference between the importance placed on the subfactors. There was a statistically significant difference between the importance placed on the 21-subfactors, with a p-value of <0.001. This in turn means that the different sub-factors are judged differently compared to each other and the null hypothesis can be rejected, there is a difference in the importance placed on the ESG-subfactors. The results of the one-way ANOVA and the Bartlett's test can be seen in Table 2.

Table 2: The results of Bartlett test of homogeneity of variances and the results from a one-way ANOVA, both on all 21 subfactors

<i>Bartlett test of homogeneity of variances</i>					
Bartlett's K-squared = 17.507, df = 20, p-value = 0.6198					
Results from a one-way ANOVA on all 21 subfactors					
	<i>Df</i>	<i>Sum sq.</i>	<i>Mean sq.</i>	<i>F value</i>	<i>Pr (>F)</i>
Group	20	320	16	11.56	<0.001***
Residuals	5521	7641	1.384		

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

296 observations deleted due to missingness

5.2.3. Hypothesis 3

Before conducting the ANOVA test for [Hypothesis 3](#), a Bartlett's test of homogeneity of variances was run, and because it did not show significant results a regular ANOVA was chosen instead of a Welch's ANOVA. To test hypothesis 3, three separate ANOVA calculations were run on the three different sets of subfactors to establish if there was a difference between the importance placed on the subfactors within their respective factors. The results of the Bartlett's test and the ANOVA can be seen in [Appendix 10 - Hypothesis 3 – ANOVA results](#). One interesting aspect from this result is that both Social factor and Governance factor are highly significant, with a p-value of <0.001 for both Social and Governance, whereas Environmental factor was only slightly significant with a p-value of 0.0848. This means that even if there is a statistically significant difference among the subfactors within the Environmental factor, the difference is a lot bigger within the two other ESG-factors' subfactors. This in turn means that the null hypothesis can be rejected, with a statistically significant difference within Social and Governance and a statistical indication that the same can be said for Environmental. There is a difference in the importance placed on the ESG-subfactors within their respective ESG-factor.

5.2.4. Hypothesis 4

To test [Hypothesis 4](#), three regressions were run; one for each of the ESG-factors, with the average score of the ESG-subfactors for the specific category as the dependent variable and the three questions related to investor value preferences (Financial, Moral, Reputational) as independent dummy variables. A graphical illustration of the difference between groups can be seen in [Appendix 11 - Hypothesis 4 – visual representation](#) and the full model is presented in Table 3 and the equation used is seen in equation 3.

Equation 3: Multiple linear regression to test the relationship between factors and the preferences (Financial value, Moral value, and Reputational value)

$$Y_i = \alpha + \beta_1 \times z_{1i} + \beta_2 z_{2i} + \beta_3 \times z_{3i} + \varepsilon_i$$

Where,

Y_i = mean score of the seven subfactors within the factor

α = intercept of the slope

β_i = the impact from z_i on the dependent variable

z_i = dummy variable for Finance value, Moral value and Reputational value, 1 if "yes"

ε_i = error term

Table 3: A regression table where the Financial, Moral and Reputational are independent dummy variables and the average score on the three ESG- factors the dependent variables

<i>Predictors</i>	Environmental			Social			Governance		
	<i>Estimates</i>	<i>95 % Confidence interval</i>	<i>p</i>	<i>Estimates</i>	<i>95 % Confidence interval</i>	<i>p</i>	<i>Estimate s</i>	<i>95 % Confidence interval</i>	<i>p</i>
(Intercept)	3.23	3.03 – 3.44	<0.001***	3.17	2.97 – 3.36	<0.001***	2.89	2.69 – 3.08	<0.001***
Financial	0.47	0.24 – 0.70	<0.001***	0.37	0.16 – 0.59	0.001**	0.24	0.02 – 0.46	0.031*
Moral	0.37	0.15 – 0.58	0.001**	0.27	0.06 – 0.47	0.01*	0.34	0.14 – 0.55	0.001**
Reputational	-0.04	-0.24 – 0.16	0.701	0.19	-0.00 – 0.38	0.052 .	0.21	0.02 – 0.40	0.034*
Significance codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1									
Observations	278			278			278		
R ² / R ² adjusted	0.136 / 0.127			0.127 / 0.117			0.115 / 0.106		

Both Social and Governance showed a statistically significant relationship between the importance placed on them and all three of the preferences, whereas the Environmental factor only showed a statistically significant relationship with the Financial and Moral value. Furthermore, all the relationships between preferences and the ESG-factors were positive, meaning that a respondent responding that they held the specific preference responded to a higher importance placed on the specific ESG-factor. The only relationship that was negative was between the reputational preference and environmental, but since this was not a significant result no conclusions can be drawn from it. The null hypothesis can therefore be rejected fully on the social and governance ESG-factors. Investor preferences (Financial, Moral, Reputational) do impact the importance placed on the ESG-factors. And for the environmental factor it can be rejected in relation to the Financial and Moral values but not regarding Reputational values.

6. Discussion

The Introduction of the thesis presented the purpose and the aim of this study. This paper aimed to examine how Sweden-based retail investors value the different factors of ESG when asked about their respective subfactors compared to when asked about the main factors. The results of our tests of the full sample show high statistical significance. We do believe that this discussion will be able to shed some light on the results of the study.

6.1. Discussion about the results

Regarding hypothesis 1, the first important reflection to take from it is that there is a correlation between the average importance on the respective ESG-subfactors and the importance placed on the respective ESG-factors. But what is interesting is that the mean correlation ranges from 0.476 - 0.584, even though this is statistically significant correlation and respondents' scoring of the ESG-subfactors, and ESG-factors have a correlation that is not as high as one might expect. To further examine this and find what subfactors are driving the correlation and which ones are uncorrelated with the ESG-factors, three regressions were run.

From this regression it was made clear that not all subfactors have a direct impact on the importance that people place on the respective main factor. All ESG-factors had three subfactors that had a statistically significant positive relationship, setting the limit at 0.05 p-value, with the importance placed on the ESG factor. For Environmental these were *Climate change and the company's carbon emissions*, *Air and Water pollution* and *Deforestation*. For Social these were *Gender and diversity inclusion*, *Employee engagement* and *Labour standards* and for Governance these were *Board composition*, *Bribery and corruption* and *Whistle-blower schemes*. This could indicate that these factors are the best subfactors to focus on when, for example, describing the different ESG-factors. However, when conducting this study, there was no way to measure the weighting that retail investors attribute to the certain subfactors.

What this study did not measure however was if there were certain weights that retail investors put on the subfactors. An example can be that one respondent might not think that anything is important apart from climate change so the respondent answers *very important* on climate change, and *not at all important* on everything else. This would lower the mean of this respondent's answer to the subgroup Environmental. The respondent might put a very high weight behind this one answer which would in turn impact the correlation between the factors and subfactors negatively.

Relating to social structures and preferences, it is likely that many respondents view some subfactors as the best representative of their respective main factors, and thus think that the subfactor itself encapsulates the full meaning of the main factor. This is understandable and we believe that the results reflect the general discourse about ESG in society in general. In other words, most often when we talk about the Environmental main factor, we talk about *Climate change and carbon emissions*, most often when we talk about the social main factor, we talk about *Employee engagement* and *Labour standards* and most often when we talk about Governance main factor, we do talk about *Board composition*.

On the other hand, there were two subfactors that had a statistically significant negative relationship with the ESG-factor, the *Biodiversity* subfactor in the Environmental factor and the *Executive compensation* factor among the Governance-factor. These results are surprising, as this indicates that respondents that believe that these are more important also believe that the respective ESG-factor is less important. This indicates that a person who believes that biodiversity is an important subfactor thinks that its main-factor, Environment, is less important. These results were surprising to the researchers, and further research is needed to explore this result to understand it.

Regarding hypothesis 2, the study found that the respondents assign different importance to the subfactors. We believe that this is a highly important finding, as it validates the potency of research regarding the different subfactors and not only into the main factors. If there is a difference in opinion of how important the respondents consider the different subfactors, it would mean that further research into this area can go deeper than this study did and try to find explanations for these differences in terms of importance, and perhaps even identify a better tool to quantify *importance*. Furthermore, this highlights the importance of treating ESG as a broad spectrum and not just an “umbrella-term”. We do believe that this result in combination with the result of hypothesis 1 can be used to deduce that it is a better approach to investigate the subfactors separately instead of looking at the main factors Environmental, Social and Governance as an all-encompassing area. Furthermore, the results clearly show that some ESG-subfactors are more important than others, which could have implications for companies when it comes to deciding how to work with ESG or CSR.

By the result from hypothesis 3, we can see that there is a statistically significant difference between how important the respondents consider the subfactors regarding the Social and Governance main factor. This indicates that the difference in importance between the Environmental subfactors are not as big, indicating that a person that cares about the

Environmental factor generally cares equally about the subfactors, while the internal difference between the subfactors in Social and Governance main factors are big. Put in a real-world example, what this tells us is the following: if we were to ask a random person about if they consider environmental main factor importance, we could only tell that if the answer is *yes*, then there will not be a big difference in the importance assigned to subfactors - they will be equally important. However, if we were to ask about the Social or Governance main factors' importance, then we wouldn't be able to know what drives this importance. Another important finding that should be mentioned is that the societal setting and the structure have a direct impact on the result. As an example, the Governance subfactor *political contributions*. *Political contributions* were statistically insignificant in all tests, and we believe this is because Sweden is a country where companies in general do not make *political contributions* and they are not discussed in the public discourse to the same extent as in for example the United States.

Furthermore, hypothesis 4 also proved some important and interesting results. Respondents that responded *yes* to the financial and moral question generally answered higher on the Environmental, Social and Governance factor. However, the study also shows that while both Social and Governance main factors saw positive relations with the respondents' response regarding Reputational value, the Environmental main factor was the only main factor that is not driven by Reputational value. This is a highly interesting result, as it shows that the sample of respondents are not reputationally driven regarding the environmental factor. We believe this goes hand in hand with previous research, for example with the CFA Institute's (2015) survey of professional investors, where most respondents claimed they consider ESG in their investment decisions to help mitigate risk, thus indicating a financial risk-return consideration.

We also think that it is logical that the only main factor that is not driven by reputational preferences is the Environmental factor, as the subject most likely has become mature enough to not be an outlier-factor that people consider as a characteristic in other people. In addition, the real-world impacts of Social and Governance main factors, such as *Employee engagement* and *Labour standards* and *board composition*, are more politically loaded questions, which is probably one of the reasons why these are still considered as outlier personality traits in people and thus are taken into consideration when it comes to Reputational effects. In accordance with numerous other studies that has indicated that SRI-funds can outperform conventionally managed funds (Edmans, 2011; Kempf & Osthoff, 2007; Gil-Bazo, Ruiz-Verdu, & Santos, 2010), our study shows that the respondents believe that investing in a portfolio according to their preferences will allow them to outperform the market.

7. Conclusion

In this chapter the main conclusions of the paper is presented. After this a discussion regarding the generalization of the results and some limitations of the study will be presented.

7.1. Main conclusions

This research aimed to fill the research gap on what drives investments in ESG in Sweden from the perspective of retail investors. More specifically, the study aimed to examine to what degree, if any, retail investors consider the different subfactors of ESG unequally important. The research also examined the impact of different investor preferences on the importance placed on ESG-factors. The research was based on a quantitative analysis of a survey which was seen by 371 respondents and completed by 280 respondents.

Based on the results from the study a few important conclusions have been reached. The research clearly indicated that the ESG-subfactors were not equally correlated to the respective ESG-factors, rather, some of the subfactors showcased a high degree of impact on the respective ESG-factor whereas some lacked a statistically significant impact. Furthermore, the results of the study highlighted that the ESG-subfactors were not equally important, not when looking at ESG as a whole nor when looking at the social and governance factors, there was a difference when it came to the Environmental factor but not at all as significant. Instead, a few stood out as being the most important ones among Swedish based retail investors. This has clear implications not only for future research, where this research highlights the importance of asking respondents not only about ESG-factors but also about the ESG-subfactors, but also for the practitioners in the industry, where the results can help when choosing what subfactors to focus ESG and CSR work on.

The research also showcases that investor preferences impact the importance that investors place on the ESG-factors. The study also highlights the different impact the preferences had on the Environmental, Social and Governance factors. Where both the Social and Governance factors were significantly increased when respondents answered that they had Financial, Moral, and Reputational preferences. Whereas the environmental factor lacked a significant impact from investors that had a Reputational preference, this was theorized to be because of the politically loaded questions that make up the social and governance factors, which could make them more important for the Reputational impact.

7.2. Are the results and conclusions generalizable?

External validity is a concept regarding the cause-and-effect relationship of the survey, specifically regarding the generalizability of the survey beyond the sample and the research settings (Malhotra, 2008). The fact that the research was administered through a survey could have a direct negative impact on the generalizability of the results. We believe that the care that was put into designing the survey, including a pre-study to receive highly valuable feedback from respondents are factors that do take the survey a long way in becoming generalizable. However, it is also a valid point to make that the results achieved by this survey is only generalizable for a sample with similar characteristics. For this reason, the survey was aimed at a broad sample of individuals residing in Sweden. However, the study did suffer from a poor response rate. As previously mentioned, this is a problem for generalizability. Furthermore, the combination of two samples also likely had an impact.

7.3. Limitations to the study

Although the study provides information and some clarity into the importance that Sweden-based retail investors consider important about ESG in terms of capital allocation, the study also has its limitations. To make it easier for the reader, the limitations have been split into two specific considerations: limitations to the survey and limitations to the general study.

7.3.1. Limitations to the survey

There are limitations to all the ways to conduct research, including a survey. A minority of the answers in the main survey was acquired through convenience sampling and that limits its applicability to entire populations. A convenience sample was chosen based on time and resource constraints. To deal with this issue the study could be replicated to see if similar results are concluded but based on the time constraints this was not possible (Ehrenberg & Bound, 1993). Due to survey distribution via the internet and to retain the respondents' attention throughout the entire questionnaire, the questions were kept quite few and some questions that would have been interesting to ask were cut out. For example, adding more sub-questions is another possible solution, the same problem applies here, however. If the goal would be to add questions enough to fully cover ESG as a field the questionnaire would be incredibly long, and it would be almost impossible to find respondents to answer such a long questionnaire. In addition, another way of examining the question could have been chosen, such as having respondents themselves answer why they believe it to be important. The problem with this

would have been that it is quite intense to ask a respondent to respond to such an open-ended question. This would also have resulted in a massive data cleaning and structuring work.

Furthermore, a limitation to the study is that respondents that chose to answer the survey are largely self-selected. The fact that the respondents all chose to answer a survey regarding ESG could mean that the respondents might not fully reflect the Swedish population. Instead, they only represent a sample of Sweden that are interested enough in ESG to answer a questionnaire regarding it. This brings with it both positive and negative aspects, on a positive note this self-selection brings with it that the respondents in a better way represents the population in Sweden that in some ways believe ESG to be important. A negative aspect is that the sample represents the population of Sweden in a tilted way towards ESG-interested respondents primarily.

Another issue within the survey was that respondents that chose the “I do not know” response could do so based on several different bases of decision, which means that it is impossible to analyse without some broad judgements. This problem was considered when choosing the approach to take for designing the study. With a survey there is no way for researchers to explain complex words and phrases that might be hard for the general public to grasp the meaning of. The decision to not include long explanations of all 21 ESG-subfactors is based on assuring a high ecological validity by not making the survey too long, which would make it feel even more unnatural for the respondents.

This study also suffered somewhat from the high scoring across the board of the importance of the various ESG-subfactors which meant that differences between the ESG-subfactors' importance might have been understated. Having investors rank the ESG-subfactors would be an interesting future study, as this would more clearly put the various ESG-subfactors into relation with each other.

7.3.2. Limitations to the general study

Since there is a significant lack of research and, to our knowledge, other literature covering this topic we have kept the research question quite broad rather than narrowing down on for example one of the factors in ESG. Another limit is the study's focus on only retail investors based in Sweden. One limitation to the general study is that the definitions from CFA Institute might not match why retail investors consider ESG important. Although this is a limitation to the survey, we do believe that the choice to use the CFA Institute's definition is good. In combination with this, the CFA Institute could also have omitted subfactors in their definition that retail investors consider important.

Further, even though for example political contributions is not an important topic in Sweden, we do believe that we minimized the limitation by not making any adjustments to the definitions. A further limitation is the fact that the survey only aims to answer in what way the respondents view the parts of ESG, in terms of how important they are considered to be. Which means that it is not necessarily the way that respondents choose to invest, it is merely their opinions. Furthermore, this means that it is impossible to know what financial importance the respondents place on the ESG-issues. It is merely an internal comparison that can be done.

Another clear limitation to the general research question is the fact that even though the research within ESG and the general public's knowledge about ESG has increased recently, the topic is still relatively immature and is constantly being formed and reformed. This would limit the results of the survey and would mean that our survey would be better off conducted in, for example, 5 years.

7.4. Future research

This study showcased that there is a variance in the importance placed on the various ESG-subfactors but does not examine the financial value of these factors. It would be interesting to examine the financial value placed on these factors, a suggested experiment that would be in line with Lagerkvist et al (2020) could be run to calculate the financial importance placed on the various ESG-subfactors and how they differ in that factor. This would help further research within the field's sustainability and asset management to better price the ESG-subfactors in relation to how companies relate to them.

The quantitative nature of this study limits the findings somewhat. No deeper meanings can be discovered as to why the Swedish based retail investors chose to score the various ESG-subfactors in different ways. A combined quantitative and qualitative study would be interesting to get a deeper perspective on the choices made when ranking the importance of the various ESG-subfactors. Furthermore, future research could investigate the effect of adding or removing subfactors. As mentioned in the [Limitations to the survey](#), there could have been an omission of subfactors by CFA Institute.

Another interesting topic that can be expanded further on in future research is the weighting that people put on the different subfactors. As this study chose to omit that perspective, it would be an interesting future research topic to study the results of letting respondents put different weighting on the subfactors.

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9. Appendix 1 - ESG sub-category definitions

Table 4. An overview of the 21 subfactors, the definitions of them and what ESG-factor they belong to

<i>Subfactor</i>	<i>Definitions</i>	<i>ESG-factor</i>
Climate change and the company's Carbon emissions	Is the company contributing in a positive or negative way to carbon emissions and climate change	Environmental
Air and Water pollution	Refers to the release of particles, biological molecules, or other harmful gases into the atmosphere.	Environmental
Biodiversity	Biodiversity refers to genetic variability, diversity of species, and biological communities in each area.	Environmental
Deforestation	Purposeful clearing of forested areas.	Environmental
Energy efficiency	Refers to the use of technology that requires less energy per unit of output compared to other solutions.	Environmental
Waste management	All activities and actions that are carried out to manage waste from inception to disposal.	Environmental
Water scarcity	Impact on the lack of access to adequate quantities of water for human and environmental uses.	Environmental
Customer satisfaction	The overall happiness a customer feels when interacting with a company's products and services.	Social
Data protection and privacy	Data privacy defines who has access to data, while data protection provides tools and policies to restrict access to the data.	Social
Gender and diversity inclusion	Diversity is about representation or the make-up of an entity. Inclusion is about how well the contributions, presence, and perspectives of different groups of people are valued.	Social
Employee engagement	Employee engagement is a human resources (HR) concept that describes the level of enthusiasm and dedication a worker feels toward their job. Engaged employees care about their work and about the performance of the company and feel that their efforts make a difference.	Social
Community relations	Refers to the various methods companies use to establish and maintain a mutually beneficial	Social

	relationship with the communities in which they operate.	
Human rights	Human rights are the basic rights and freedoms that belong to every person in the world, from birth until death. These basic rights are based on shared values like dignity, fairness, equality, respect, and independence.	Social
Labour standards	Labour laws clarify and codify business owners' obligations to their employees. The labour movement has a long history of lobbying for laws that protect worker's rights, improve worker safety, prevent child labour, and increase workers' bargaining power relative to their employers.	Social
Board composition	Diversity is a key element of any discussion of board composition. It covers not only gender, age, race, and ethnicity, but also the range of skills, backgrounds, personalities, and experiences on the board.	Governance
Audit committee structure	Is the audit committee actively working to make sure the company is following the regulatory standards set out?	Governance
Bribery and corruption	Engaging in bribing and corruption	Governance
Executive compensation	Is the compensation in line with other similar companies	Governance
Lobbying activities	Is the company engaged in lobbying?	Governance
Political contributions	Does the company contribute to political campaigns	Governance
Whistle-blower schemes	Does the company have working whistle-blower schemes?	Governance

10. Appendix 2 - Pre-survey questionnaire

About the study

ESG (Environmental, Social and corporate Governance) as a field of investment has been growing rapidly in the past few years. There has been a surge of different ways of classifying ESG-investments. This study aims to examine how retail investors (People who in some way engage with the market without being professionals, via for example pension savings, savings on a separate account or countless other ways) view different parts of the ESG field.

This survey aims to explore what you feel about the different aspects of it, it is therefore your perspective that we are after, there are no wrong or right answers. There are in total 3 blocks to the survey, containing questions related to demographic, different questions that are part of ESG and your overall view on the field of ESG.

Your answers are completely anonymous and cannot be traced back to you, you can exit the survey at any time. If you have any questions related to the research, you may contact us on: 41672@student.hhs.se

Thank you for contributing to this survey with your knowledge and experience.

Best,
Henrik and Alexander

What is your age?

- ☐ 18-30
 - ☐ 31-40
 - ☐ 41-50
 - ☐ 51-65
 - ☐ 66 or higher
-

What is your gender?

- ☐ Male
 - ☐ Female
 - ☐ Non-binary / third gender
 - ☐ Prefer not to say
-

What best characterizes your area of residence?

- ☐ More than 150.000 inhabitants
 - ☐ 50.000 - 150.000 inhabitants
 - ☐ Less than 50.000 inhabitants
 - ☐ Rural
 - ☐ I do not know
-

What do you do for a living?

- ☐ Student
- ☐ Employed for wages
- ☐ Self employed
- ☐ Unemployed looking
- ☐ Unemployed not looking
- ☐ Homemaker
- ☐ Retired
- ☐ Unable to work
- ☐ Other

What is your most recent finished level of education?

- ☐ Elementary school or equivalent
 - ☐ High school or equivalent
 - ☐ University up to three years (bachelor's degree)
 - ☐ University more than three years
 - ☐ Other post high school education
 - ☐ Other
-

What is your monthly income/gross salary? (SEK)

- ☐ Less than 10,000
- ☐ 10,001 - 20,000
- ☐ 20,001 - 30,000
- ☐ 30,001 - 40,000
- ☐ 40,001 - 50,000
- ☐ 50,001 - 60,000
- ☐ 60,001 - 70,000
- ☐ More than 70,001

In the next set of questions, you are presented with a statement regarding your view on of the different sub-categories that make up ESG.

You are being asked to indicate your level of agreement or disagreement with each statement by indicating whether you: Strongly Agree, Agree, Somewhat Agree, Neither Agree nor Disagree, Somewhat Disagree, Disagree, or Strongly Disagree.

Please indicate your level of agreement by choosing the appropriate response.

	Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Disagree	Strongly Disagree	I do not know
I care about a company's impact on Climate change and the company's carbon emissions	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's impact on Air and Water pollution	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's impact on Biodiversity	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's impact on Deforestation	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's Energy efficiency	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's Waste management	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's impact on Water scarcity	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's work with Customer satisfaction	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's work with Data protection and privacy	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's work with Gender and diversity inclusion	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's Employee engagement	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's Community relations	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's impact on Human rights	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's Labor standards	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's Board composition	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's Audit committee structure	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's stance on Bribery and corruption	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's level of Executive compensation	☐	☐	☐	☐	☐	☐	☐	☐
I care if a company is engaged in Lobbying activities	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's Political contributions	☐	☐	☐	☐	☐	☐	☐	☐
I care about a company's Whistle-blower schemes	☐	☐	☐	☐	☐	☐	☐	☐

Rank the three options in accordance with what *you care most about* (1) to *what you care least about* (3) when you are allocating capital/investing:

	1	2	3
Environmental - Conservation of the natural world	☐	☐	☐
Governance - Standards for running a company	☐	☐	☐
Social - Consideration of people & relationships	☐	☐	☐

If you invested in a group of companies according to the ESG-areas you care about, do you think that group of companies would perform better than the general market?

- ☐ Yes
☐ No
-

If you invested in a group of companies according to the ESG-areas you care about, do you think that your investments would have an impact on the world?

- ☐ Yes
☐ No
-

If you invested in a group of companies according to the ESG-areas you care about, do you think your family, friends, or colleagues would care?

- ☐ Yes
☐ No

11. Appendix 3 - Pre-study survey socio demographics

Table 5: Descriptive statistics of the respondents to the pre-study

<i>Age</i>	<i>Count</i>	<i>%</i>
18 – 30	26	52%
31 – 40	8	16%
41 – 50	3	6%
51 – 65	12	24%
<u>66 or higher</u>	<u>1</u>	<u>2%</u>
Total	50	100%
<i>Gender</i>	<i>Count</i>	<i>%</i>
Male	30	60%
Female	19	38%
Non-binary/third gender	1	2%
<u>Prefer not to say</u>	<u>0</u>	<u>0%</u>
Total	50	100%
<i>Area of residence</i>	<i>Count</i>	<i>%</i>
More than 150.000 inhabitants	38	76%
50.000 – 150.000 inhabitants	3	6%
Less than 150.000 inhabitants	4	8%
Rural	0	0%
<u>I do not know</u>	<u>5</u>	<u>10%</u>
Total		
<i>Occupation</i>	<i>Count</i>	<i>%</i>
Student	14	28%
Employed for wages	31	62%
Self-employed	2	4%
Unemployed looking	0	0%
Unemployed not looking	0	0%
Homemaker	1	2%

Retired	1	2%
Unable to work	0	0%
<u>Other</u>	<u>1</u>	<u>2%</u>
Total	50	100%

<i>Education</i>	<i>Count</i>	<i>%</i>
Elementary school or equivalent	0	0%
High school or equivalent	5	10%
University up to three years	29	57%
University more than three years	15	29%
Other post high school education	2	4%
<u>Other</u>	<u>0</u>	<u>0%</u>
Total	51	100%

<i>Monthly gross salary</i>	<i>Count</i>	<i>%</i>
Less than 10.000	8	16%
10.001 – 20.000	10	20%
20.001 – 30.000	2	4%
30.001 – 40.000	4	8%
40.001 – 50.000	8	16%
50.001 – 60.000	3	6%
60.001 – 70.000	3	6%
<u>More than 70.000</u>	<u>13</u>	<u>25%</u>
Total	51	100%

12. Appendix 4 - Main- study Questionnaire

About the study

ESG (Environmental, Social and corporate Governance) as a field of investment has been growing rapidly in the past few years. There has been a surge of different ways of classifying ESG-investments. This study aims to examine how retail investors (People who in some way engage with the market without being professionals, via for example pension savings, savings on a separate account or countless other ways) view different parts of the ESG field.

This survey aims to explore what you feel about the different aspects of ESG when making capital allocation decisions, and it is therefore your perspective that we are after, there are no right or wrong answers. There are in total 3 blocks to the survey, containing questions related to demographic, different questions that are part of ESG and your overall view on the field of ESG.

Your answers are completely anonymous and cannot be traced back to you, you can exit the survey at any time. If you have any questions related to the research, you may contact us on: 41672@student.hhs.se

Thank you for contributing to this survey with your knowledge and experience.

Best regards and happy surveying,
Henrik Lilliecreutz Harryson and Alexander Hervieu

Indicate among the three options Environmental, Social and Governance, your level of importance assigned to each category when investing:

	Very important	Important	Neutral	Low importance	Not at all important
Social - Consideration of people & relationships	☐	☐	☐	☐	☐
Governance - Standards for running a company	☐	☐	☐	☐	☐
Environmental - Conservation of the natural world	☐	☐	☐	☐	☐

In the next set of questions, you are presented with a statement regarding your view of the different sub-categories that make up ESG.

When you answer these questions it is important that you do so from the perspective of investing or allocating capital, either directly (for example buying stocks) or indirectly (for example having your capital allocated in pension funds). You are supposed to indicate what factors you think are important in companies when making capital allocation decisions.

You are being asked to indicate how important you consider these categories when making investment decisions by indicating if you think the respective factors are: Very important, Important, Neutral, Low importance, Not at all important, or I do not know.

Please indicate your considerations by choosing the appropriate response.

	Very important	Important	Neutral	Low importance	Not at all important	I do not know
A company's impact on Climate change and the company's Carbon emissions	☐	☐	☐	☐	☐	☐
A company's impact on Air and Water pollution	☐	☐	☐	☐	☐	☐
A company's impact on Biodiversity	☐	☐	☐	☐	☐	☐
A company's impact on Deforestation	☐	☐	☐	☐	☐	☐
A company's Energy efficiency	☐	☐	☐	☐	☐	☐
A company's Waste management	☐	☐	☐	☐	☐	☐
A company's impact on Water scarcity	☐	☐	☐	☐	☐	☐
A company's work with Customer satisfaction	☐	☐	☐	☐	☐	☐
A company's work with Data protection and privacy	☐	☐	☐	☐	☐	☐
A company's work with Gender and diversity inclusion	☐	☐	☐	☐	☐	☐
A company's Employee engagement	☐	☐	☐	☐	☐	☐

A company's Community relations	☐	☐	☐	☐	☐	☐
A company's impact on Human rights	☐	☐	☐	☐	☐	☐
A company's Labor standards	☐	☐	☐	☐	☐	☐
A company's Board composition	☐	☐	☐	☐	☐	☐
A company's Audit committee structure	☐	☐	☐	☐	☐	☐
A company's stance on Bribery and corruption	☐	☐	☐	☐	☐	☐
A company's level of Executive compensation	☐	☐	☐	☐	☐	☐
A company's engagement in Lobbying activities	☐	☐	☐	☐	☐	☐
A company's Political contributions	☐	☐	☐	☐	☐	☐
A company's Whistle-blower schemes	☐	☐	☐	☐	☐	☐

If you invested in a group of companies according to the ESG-areas that you consider important, do you think that group of companies would perform better than the general market?

- ☐ Yes
☐ No

If you invested in a group of companies according to the ESG-areas that you consider important, do you think that your investments would have an impact on the world?

- ☐ Yes
☐ No

If you invested in a group of companies according to the ESG-areas that you consider important, do you think your family, friends, or colleagues would care?

- ☐ Yes
☐ No

13. Appendix 5 – Main-study socio-demographics

Table 6: Descriptive statistics of the respondents to the main-study

<i>Age</i>	<i>Count</i>	<i>%</i>
<i>Qualtrics and Pollfish combined</i>		
18 – 30	93	33%
31 – 40	57	21%
41 – 50	54	19%
51 – 65	65	23%
<u>66 or higher</u>	<u>9</u>	<u>3%</u>
Total	278	100%
<i>Gender</i>	<i>Count</i>	<i>%</i>
<i>Qualtrics and Pollfish combined</i>		
Male	143	51%
Female	135	49%
Non-binary/third gender	0	0%
<u>Prefer not to say</u>	<u>0</u>	<u>0%</u>
Total	278	100%
<i>Occupation</i>	<i>Count</i>	<i>%</i>
<i>Qualtrics and Pollfish combined</i>		
Student	46	17%
Employed for wages	160	58%
Self-employed	20	7%
Unemployed looking	14	5%
Unemployed not looking	2	1%
Homemaker	7	3%
Retired	10	4%
Unable to work	5	2%
<u>Other</u>	<u>14</u>	<u>5%</u>
Total	278	100%

<i>Education</i>	<i>Count</i>	<i>%</i>		<i>Count</i>	<i>%</i>
<i>Qualtrics</i>				<i>Pollfish</i>	
Elementary school or equivalent	1	1%		No answer	1 1%
High school or equivalent	14	18%		Elementary school	1 1%
University up to three years	26	33%		High school	79 40%
University more than three years	34	44%		Middle school	24 12%
Other post high school education	3	4%		Postgraduate	12 6%
<u>Other</u>	0	0%		University	48 24%
				<u>Vocational technical college</u>	<u>35 18%</u>
Total	78	100%		Total	200 100%
<i>Monthly gross salary</i>	<i>Count</i>	<i>%</i>		<i>Count</i>	<i>%</i>
<i>Qualtrics</i>				<i>Pollfish</i>	
Less than 10.000	5	6%		< 225.000	20 10%
10.001 – 20.000	18	23%		225.000 - 450.000	38 19%
20.001 – 30.000	7	9%		450.000 - 675.000	35 18%
30.001 – 40.000	11	14%		675.000 - 900.400	30 15%
40.001 – 50.000	12	15%		900.500 - 1.125.000	19 10%
50.001 – 60.000	3	4%		1.125.000 - 1.350.000	21 11%
60.001 – 70.000	4	5%		> 1.350.000	19 10%
<u>More than 70.000</u>	<u>18</u>	<u>23%</u>		No answer	1 1%
				<u>Prefer not to say</u>	<u>17 9%</u>
Total	78	100%		Total	200 100%

14. Appendix 6 – Results of TOST

Table 7: Results from the two-sample TOST on the means of all the 21 subfactors

<i>Df</i>	<i>Epsilon</i>	<i>Mean of Qualtrics</i>	<i>Mean of Pollfish</i>
176.44	0.5	3.608	3.653

95 percent two one-sided confidence interval (TOST interval): -0.188 0.098

Null hypothesis of statistical difference is: rejected

TOST p-value: <**0.001*****

Table 8: Results from the two-sample TOST on the means of the seven Environmental subfactors

<i>Df</i>	<i>Epsilon</i>	<i>Mean of Qualtrics</i>	<i>Mean of Pollfish</i>
155.33	0.5	3.850	3.766

95 percent two one-sided confidence interval (TOST interval): -0.097 0.265

Null hypothesis of statistical difference is: rejected

TOST p-value: <**0.001*****

Table 9: Results from the two-sample TOST on the means of the seven Social subfactors

<i>Df</i>	<i>Epsilon</i>	<i>Mean of Qualtrics</i>	<i>Mean of Pollfish</i>
186.34	0.5	3.718	3.722

95 percent two one-sided confidence interval (TOST interval): -0.162 0.153

Null hypothesis of statistical difference is: rejected

TOST p-value: <**0.001*****

Table 10: Results from the two-sample TOST on the means of the seven Governance subfactors

<i>Df</i>	<i>Epsilon</i>	<i>Mean of Qualtrics</i>	<i>Mean of Pollfish</i>
157.01	0.5	3.251	3.471

95 percent two one-sided confidence interval (TOST interval): -0.390 -0.051

Null hypothesis of statistical difference is: rejected

TOST p-value: **0.0035****

15. Appendix 7 - Answers to 21 Questions

Table 11. An overview of the average importance of the 21 subfactors, the 95% confidence interval related to it and a count of missing answers

<i>Subfactor</i>	<i>Estimate</i>	<i>95 % Confidence interval</i>	<i>Count of missing answers*</i>
A company's impact on Climate change and the company's Carbon emissions	3.98	3.84 - 4.11	11
A company's impact on Air and Water pollution	3.91	3.77 - 4.04	9
A company's impact on Biodiversity	3.78	3.63 - 3.92	15
A company's impact on Deforestation	3.70	3.56 - 3.84	14
A company's Energy efficiency	3.76	3.62 - 3.90	20
A company's Waste management	3.79	3.65 - 3.93	15
A company's impact on Water scarcity	3.88	3.73 - 4.02	11
A company's work with Customer satisfaction	3.86	3.73 - 4.00	10
A company's work with Data protection and privacy	3.90	3.75 - 4.04	14
A company's work with Gender and diversity inclusion	3.50	3.34 - 3.65	13
A company's Employee engagement	3.67	3.53 - 3.81	10
A company's Community relations	3.54	3.40 - 3.68	17
A company's impact on Human rights	3.92	3.77 - 4.07	13
A company's Labor standards	3.84	3.71 - 3.97	10
A company's Board composition	3.46	3.31 - 3.61	11
A company's Audit committee structure	3.39	3.25 - 3.54	24
A company's stance on Bribery and corruption	3.89	3.75 - 4.03	17
A company's level of Executive compensation	3.49	3.34 - 3.64	15
A company's engagement in Lobbying activities	3.33	3.20 - 3.47	12
A company's Political contributions	3.09	2.94 - 3.24	14
A company's Whistle-blower schemes	3.35	3.20 - 3.49	21

* Count of missing answers refers to answers that were *I do not know*

16. Appendix 8 - Hypothesis 1 – Correlation test

Table 12: Correlation between the Environmental-factor and the seven Environmental-subfactors

<i>Estimated correlation</i>	<i>95% Confidence interval</i>	<i>t</i>	<i>df</i>	<i>p</i>
0.583	0.500 - 0.656	11.93	276	<0.001***

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 13: Correlation between the Social-factor and the seven Social-subfactors

<i>Estimated correlation</i>	<i>95% Confidence interval</i>	<i>t</i>	<i>df</i>	<i>p</i>
0.535	0.445 - 0.614	10.52	276	<0.001***

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 14: Correlation between the Governance-factor and the seven Governance-subfactors

<i>Estimated correlation</i>	<i>95% Confidence interval</i>	<i>t</i>	<i>df</i>	<i>p</i>
0.476	0.380 - 0.562	9.00	276	<0.001***

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

17. Appendix 9 - Hypothesis 1 – individual regressions

Table 15. A regression table with the seven Environmental subfactors as independent variables and the Environmental factor as a dependent variable

<i>Predictors</i>	Importance placed on the Environmental factor		
	<i>Estimates</i>	<i>95 % Confidence interval</i>	<i>p</i>
(Intercept)	1.01	0.51 – 1.51	<0.001***
A company's impact on Climate change and the company's Carbon emissions	0.34	0.21 – 0.46	<0.001***
A company's impact on Air and Water pollution	0.21	0.07 – 0.34	0.003**
A company's impact on Biodiversity	-0.17	-0.31 – -0.04	0.012*
A company's impact on Deforestation	0.20	0.07 – 0.33	0.003**
A company's Energy efficiency	0.06	-0.07 – 0.18	0.377
A company's Waste management	0.07	-0.05 – 0.19	0.272
A company's impact on Water scarcity	0.08	-0.04 – 0.21	0.179
Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			
Observations	220		
R ² / R ² adjusted	0.456 / 0.438		

Table 16. A regression table with the seven Social subfactors as independent variables and the Social factor as a dependent variable

<i>Predictors</i>	Importance placed on the Social factor		
	<i>Estimates</i>	<i>95 % Confidence interval</i>	<i>p</i>
(Intercept)	1.38	0.77 – 1.99	<0.001***
A company's work with Customer satisfaction	-0.12	-0.25 – 0.02	0.083 .
A company's work with Data protection and privacy	0.11	-0.01 – 0.23	0.080 .
A company's work with Gender and diversity inclusion	0.16	0.06 – 0.27	0.003**
A company's Employee engagement	0.18	0.04 – 0.33	0.014*
A company's Community relations	0.02	-0.10 – 0.15	0.708
A company's impact on Human rights	0.12	-0.01 – 0.25	0.066 .
A company's Labor standards	0.21	0.06 – 0.35	0.006**
Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			
Observations	219		
R ² / R ² adjusted		0.358 / 0.337	

Table 17. A regression table with the seven Governance subfactors as independent variables and the Governance factor as a dependent variable

<i>Predictors</i>	Importance placed on the Governance factor		
	<i>Estimates</i>	<i>95 % Confidence interval</i>	<i>p</i>
(Intercept)	1.60	1.03 – 2.17	<0.001***
A company's Board composition	0.26	0.14 – 0.39	<0.001***
A company's Audit committee structure	0.12	-0.03 – 0.26	0.108
A company's stance on Bribery and corruption	0.18	0.04 – 0.31	0.009**
A company's level of Executive compensation	-0.16	-0.30 – -0.03	0.018*
A company's engagement in Lobbying activities	0.12	-0.02 – 0.26	0.099 .
A company's Political contributions	-0.07	-0.19 – 0.05	0.240
A company's Whistle-blower schemes	0.17	0.03 – 0.30	0.015*
Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			
Observations	206		
R ² / R ² adjusted		0.327 / 0.303	

18. Appendix 10 - Hypothesis 3 – ANOVA results

Table 18: The results of Bartlett test of homogeneity of variances and the results from a one-way ANOVA, both on the seven Environmental subfactors

<i>Bartlett test of homogeneity of variances</i>					
Bartlett's K-squared = 1.3505, df = 6, p-value = 0.9688					

Results from a one-way ANOVA on the Environmental subfactors					
	<i>df</i>	<i>Sum sq.</i>	<i>Mean sq.</i>	<i>F value</i>	<i>Pr (>F)</i>
Group	6	14.8	2.464	1.857	0.0848 .
Residuals	1844	2447.2	1.327		

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
95 observations deleted due to missingness

Table 19: The results of Bartlett test of homogeneity of variances and the results from a one-way ANOVA, both on the seven Social subfactors

<i>Bartlett test of homogeneity of variances</i>					
Bartlett's K-squared = 9.7027, df = 6, p-value = 0.1377					

Results from a one-way ANOVA on the Social subfactors					
	<i>df</i>	<i>Sum sq.</i>	<i>Mean sq.</i>	<i>F value</i>	<i>Pr (>F)</i>
Group	6	48.9	8.151	5.876	<0.001***
Residuals	1852	2568.8	1.387		

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
87 observations deleted due to missingness

Table 20: The results of Bartlett test of homogeneity of variances and the results from a one-way ANOVA, both on the seven Governance subfactors

<i>Bartlett test of homogeneity of variances</i>					
Bartlett's K-squared = 3.4862, df = 6, p-value = 0.7458					

Results from a one-way ANOVA on the Governance subfactors					
	<i>df</i>	<i>Sum sq.</i>	<i>Mean sq.</i>	<i>F value</i>	<i>Pr (>F)</i>
Group	6	91.6	15.264	10.61	<0.001***
Residuals	1825	2624	1.438		

Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
114 observations deleted due to missingness

19. Appendix 11 - Hypothesis 4 – visual representation

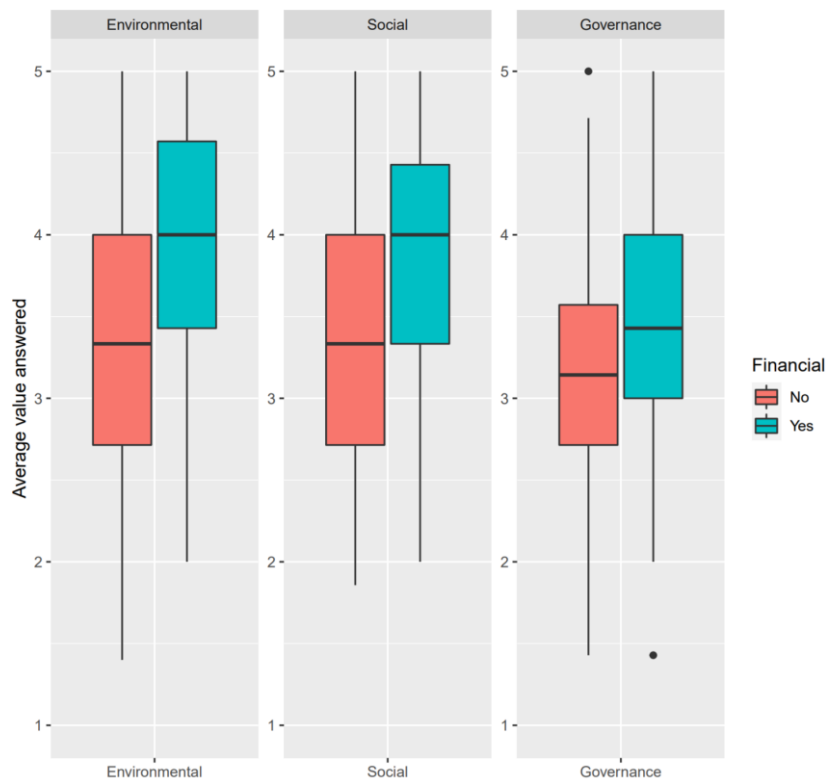


Figure 3: Boxplots illustrating the difference in importance placed on the ESG-factors between people that expressed a preference for Financial value and those that did not

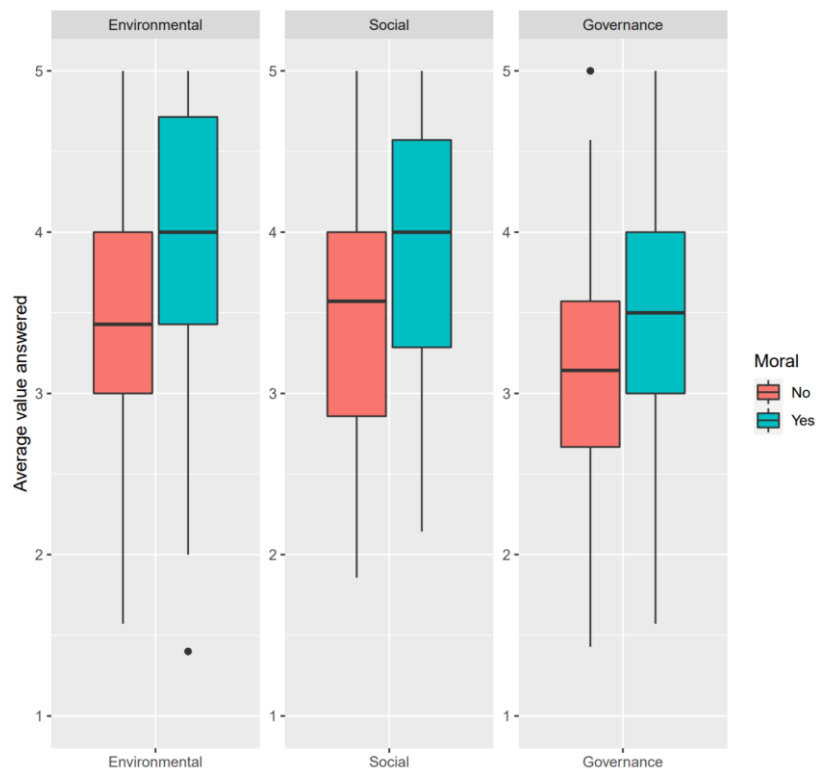


Figure 4: Boxplots illustrating the difference in importance placed on the ESG-factors between people that expressed a preference for Moral value and those that did not

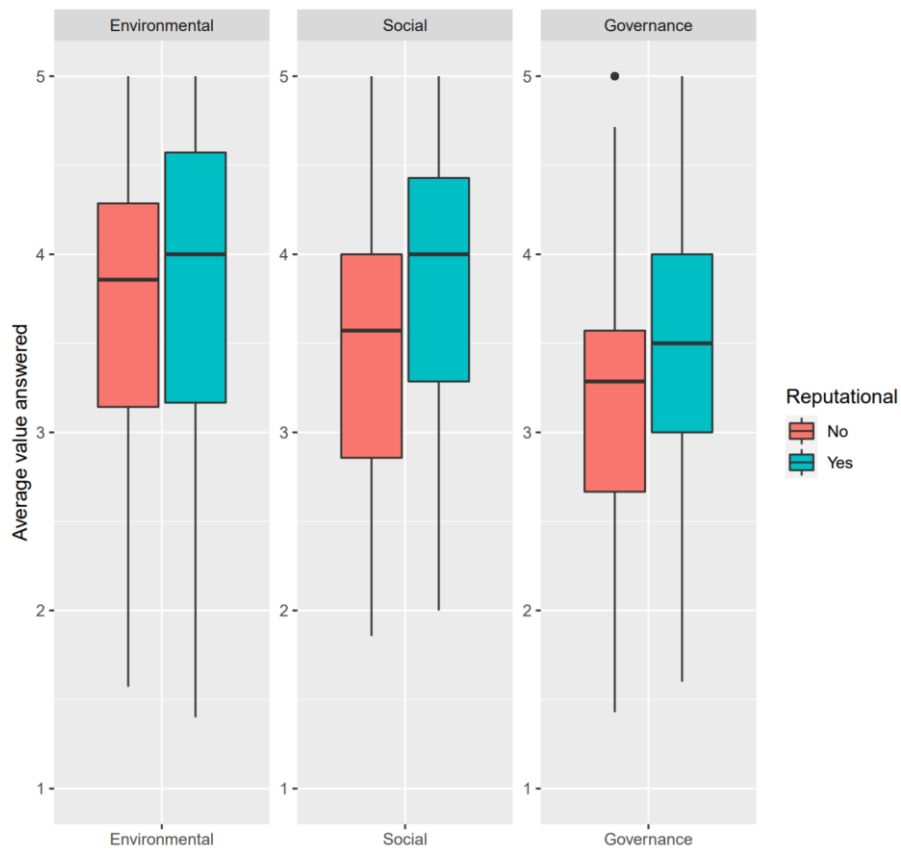


Figure 5: Boxplots illustrating the difference in importance placed on the ESG-factors between people that expressed a preference for Reputational value and those that did not