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Strategising Corporate Sustainability: Preventative Measures Could Harm Company Performance

A quantitative study on how different motivations relate to sustainability and financial performance.

Abstract

An increasing body of research shows interest in the relationship between sustainability- and financial performance. This study draws upon regulatory focus theory to analyse how variations in the underlying motivations of sustainability strategy relate to future performance. The theory suggests that decisions are made using either a promotion or prevention focus. Promotion seeks advancement and is concerned with maximising gains. In contrast, prevention seeks safety and is concerned with minimising losses. The study advances the research on sustainability- and financial performance by testing their respective relationship with regulatory focus. The testing is done through Linguistic Inquiry and Word Count, a software which is applied to analyse the levels of promotion and prevention focus in sustainability reports. These levels are used to examine whether a promotion or prevention focus can predict ESG-score and the financial performance measure ROA. Findings indicate that the regulatory focus can impact both the sustainability and the financial performance of a company.

Keywords: Sustainability, Motivation Theory, Regulatory Focus, Prevention, Promotion, ESG, ROA,

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Glossary

Regulatory focus theory	A motivational theory stating that human motivations are guided by two independent self-regulatory systems: promotion and prevention. One individual system is referred to as a "focus". Individuals tend to have a predominant focus (Higgins, 1997; 1998).
Promotion	A regulatory focus driven by aspirations and accomplishments. The strategic concern is maximising gains and minimising non-gains. (Higgins, 1997; 1998)
Prevention	A regulatory focus is driven by responsibilities and safety. The strategic concern is minimising losses and maximising non-losses. (Higgins, 1997; 1998)
ESG	A measure to quantify the sustainability performance of a firm, through looking at an environmental, social and governance perspective. Environmental entails measures such as emissions and waste, social convers areas such as diversity, and governance includes e.g. corporate stakeholder engagement (Refinitiv, 2020).
Sustainability performance	In this study ESG is used as a proxy for sustainability performance (Rajesh and Rajendran, 2019).
ROA	Return on assets is a financial measure that illustrates how much return in relation to its assets a company is able to generate. If revenues or profits are growing quicker than assets, the company may be improving its efficiency (Robinson, Henry, Pirie and Broihahn, 2015). In this study ROA is calculated as income after tax divided by average total assets (Refinitiv Eikon).
Financial performance	In this study the financial metric Return on Assets (ROA) is used as a proxy for financial performance (Robinson, Henry, Pirie and Broihahn, 2015).
LIWC	Linguistic Inquiry and Word Count. This is a software used for linguistic and content analysis (Pennebaker, Boyd, Jordan and Blackburn, 2015).

1. Introduction

1.1 Problematisation and Research Opportunity

Picture yourself getting into the car to drive to the supermarket. You are in full control of the vehicle. You decide how fast to go. Perhaps you like to drive aggressive and fast? Or maybe you prefer to drive defensive and slow? This is an everyday risk-taking situation most people can identify themselves with. Maybe the choice falls naturally, you say, "Why would I break regulations and endanger others in traffic?" Now instead picture a Fortune 500 CEO behind the steering wheel, but not alone, because in the backseat are other managers and employees. Together they drive their company forward. Similar to when you are driving your car, this group of people can drive the company with an aggressive style, or a more defensive style. Together they come up with a strategy best fit for the ride that they prefer. Which strategy to choose largely comes down to the underlying motivations and preferences as a collective. Put in a more practical context, there could be an opportunity to gain new customers and expand the business, or a need to reduce the risk for the company by responding to regulatory constraints. (Bonini and Görner, 2012; Hamstra, Bolderdijk and Veldstra, 2011)

The examples above illustrate some of the principles of motivational theory (Hamstra, Bolderdijk and Veldstra, 2011; Higgins, 1997). This theory portrays how we as individuals are motivated by the value of future end-states (Higgins, 1997). Freud (1955) described it as human behaviour being driven by either the seeking of pleasure or inversely, the avoidance of pain. This duality in motivation is also referred to as *hedonistic theories of motivation* and is the dominant motivational assumption across all psychological theories (Higgins 1997; Peters 2015). This not only applies to individuals but also has implications for how organisations choose to pursue various goals and strategies. And more so now than ever.

Since the inception of the idea of corporations' greater social responsibilities in the 1950s (Latapí Agudelo, Jóhannsdóttir and Davídsdóttir, 2019), the importance of corporate sustainability has grown to be an essential part of business strategy. Today, corporate sustainability is a prerequisite to stay competitive, impacting factors such as brand image, employee satisfaction, cost savings and improved risk management (Berns et al., 2009; Surroca, Tribó and Waddock, 2009). Business models must adapt to fit this change, and the ability to analyse it is increasing in demand (IFRS, 2020; KPMG, 2020). The demand is not only from analysts, as companies receive legitimacy pressure from multiple sources such as laws and regulations and social norms (Meyer and Rowan, 1977). As companies want to manage their stakeholder relations, they have started to report on their sustainability performance (KPMG, 2017; Lozano and Huisingh, 2011).

With the increased interest in sustainability reporting and transparency, over 10,000 companies globally are now scored on their performance from an *environmental*, *social and governance* (ESG) perspective (Refinitiv, 2020). The ESG-score provides an improved understanding of companies' sustainability performance and helps in identifying material risks and growth opportunities (CFA Institute, 2015). It has

also been shown that improved sustainability performance leads to improved intangible resources which in turn lead to higher financial performance (Surroca, Tribó and Waddock, 2009). The stakes are high, and companies need to leverage their sustainability performance to gain a competitive advantage in their respective industries (Bonini and Görner, 2012; Berns et al., 2009).

The way companies utilise this strategical sustainability challenge differs and can be traced back to their motivational preferences. More specifically, whether they are driven by the seeking of pleasure or the avoidance of pain, as in the example with the CEO. Higgins (1997) builds upon this hedonistic theory but adds the possibility that individuals might differ in the degree in which these two motivations are used in our daily decision making. Higgins thus proposes *regulatory focus theory*. The theory consists of two independent *self-regulatory systems*[1]*, promotion* and *prevention*. Promotion drives our preference for advancement, aspiration and accomplishment and is related to seeking pleasure. Prevention drives our preference for protection, safety and responsibility and is related to avoiding pain (Brockner, Higgins and Low, 2004). Indications by Hockerts (2014), show that companies with a high sustainability performance focus more on competitiveness and that lower-performing companies tend to focus more on risk. This study seeks to examine these antecedents of a corporate sustainability strategy. By analysing sustainability reports to discover what motivational orientations are the best fit to improve sustainability and financial performance.

1.2 Purpose, Research Question and Expected contribution

Based on the problematisation, the purpose of this study is to analyse variations in companies' sustainability strategy motivations, and its effects on sustainability and financial performance. This objective will be achieved by attempting to answering the following research questions:

What are the effects of a company's regulatory focus, within sustainability reporting, on its ESG-score and ROA?

Which differences and/or similarities exist between Swedish and US companies?

Through answering the above questions, scholars and society will gain an improved understanding of the antecedents of corporate sustainability, and new knowledge of how companies pursue sustainability in various ways based on their motivational inclination. The study will also illustrate how this may vary across markets. As a result, the study not only contribute to the theoretical discussion on the subject but also present findings that are useful for practitioners such as management teams and investment analysts.

1.3 Delimitations

To conduct this study several delimitations must be made, both theoretical and methodological. When combined, these delimitations make the study feasible.

[1] Self-regulation refers to the process in which people align their behaviours and concepts of self to their goals and standards (Cui and Ye, 2017).

First, when analysing motivational tendencies and goal-pursuit strategies, there are a set of applicable theories to choose from, some notable examples are *Expected Utility Theory* (Von-Neumann and Morgenstern, 1947) and *Prospect Theory* (Kahneman and Tversky, 1979). These theories do consider psychological effects, such as risk aversion and perceived gains, which indeed is related to strategy and research question of this study. However, it seems more fit when studying individuals rather than companies. Instead, this study seeks to examine the effects of Higgin's (1997) *Regulatory Focus Theory*. This theory is chosen because it allows for a better understanding of how individuals and groups value certain end-states differently, and how they are motivated by these and their resulting goal-pursuit strategies. Furthermore, this theory has laid the foundation in previous literature which successfully managed to predict future strategic outcomes from motivational tendencies (see e.g Gamache, McNamara, Mannor and Johnson, 2015).

Second, a qualitative methodological approach will not be used because a quantitative method will allow for a larger data sample to be linguistically analysed. Moreover, the measure used for regulatory focus can vary in very small degrees, a quantitative method to capture such small changes is recommended (Bryman and Bell, 2011).

Third, sustainability performance data will be measured by ESG-score. This will be collected from Refinitiv Eikon, consequently, the study is delimited to the companies they provide support. Any other terminal or data provider will not be used. Refinitiv Eikon is chosen for reasons of availability and because it is one of the major databases for financial data (Investopedia, 2020).

Fourth, the data sample is delimited to the fiscal years 2016-2019 because of two reasons. One, the number of sustainability reports decreases significantly stretching further back. Two, we cannot collect the reports for 2019, and the performance measures for 2020, as they have not been published yet.

Fifth, from a geographical point of view, this study is delimited to Sweden and the United States. Naturally, this could limit the results to the chosen market. But, by having two markets instead of one allows for a geographical comparative element to the findings, which is proven relevant by previous literature (see e.g. Higgins, 2008; Kurman and Hui, 2011). A larger geographical scope is not of interest because it would only add complexity and take focus away from the research question. Furthermore, this implies that the study is not delimited to a specific industry. This is because of limited amounts of sustainability reports, and there would not be enough data to test one specific industry. This is explained further below.

The final delimitation of the scope is to only include companies with a sustainability report separate from the annual report. As the reports will be analysed from a linguistic perspective, it is of best interest that they are comparable and represent what the company wants to display. Analysing what content is relevant in annual reports that have sustainability reports integrated into them, and subsequently hand-picking this would introduce individual biases from the authors, which is preferred to be avoided.

1.4 Research outline

In section 1, the subject is introduced, and the research question is posed. In section 2, previous relevant literature is presented along with identified research gaps. In section 3, the data and the methodological approach is explained. Empirical findings and hypotheses testing are processed in section 4. In section 5, the results, implications, and limitations are discussed. Section 6 concludes.

2. Literature Review

Three theoretical themes of further interest are identified: Corporate transparency and sustainability reporting, the relationship between sustainability and financial performance, and motivational theory. In the following section, these topics will be presented. After the theoretical background and framework have been discussed, the research gap and hypotheses generation will be presented.

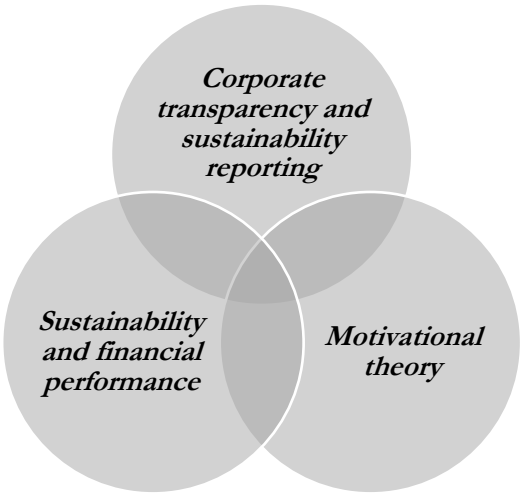

Figure 1: Venn diagram that illustrates what previous literature this study ties together

2.1 Theoretical background

2.1.1 Sustainability reporting and ESG-scoring

As business models are increasingly exposed to environmental and social issues, the demand for sustainability information is growing as investors see sustainability reporting more important to evaluate investments (IFRS, 2020; KPMG, 2020). Ranging from social norms and knowledge to laws and regulations, companies receive legitimacy pressure to apply institutionalised structures, processes and practices (Meyer and Rowan, 1977). As a result, there has been an increase by corporations all over the world to start reporting on their sustainability performance. However, it has been through the application of many different reporting standards (Lozano and Huisingh, 2011). Because institutions tend to be bound to a country, naturally organisational practices including corporate social responsibility will vary between countries (Williams and Aguilera, 2008). Consequently, there is a worldwide call for a standardised framework, similar to what IFRS has brought to global financial accounting and reporting (KPMG, 2020). Eccles, Krzus, Rogers and Serafeim (2012) also recognise this need, and they suggest that the reporting standards must be developed on a sector-by-sector basis, else there will be too many inconsistencies.

Today, however, standards still differ across nations, making comparability complex. The European Union (EU) has instituted mandatory reporting for companies with over 500 employees that are of public interest. These companies need to report on environmental protection, social responsibility, treatment of employees, respect for human rights, anti-corruption and board diversity (*The non-financial reporting directive*,

Directive 2014/95/EU). Nonetheless, companies are still allowed a large degree of flexibility in their reporting and can choose structure and standards as they see fit. Additionally, according to the directive member countries may still implement stricter regulations themselves, contributing the disparity in standards. In contrast, in the US, sustainability reporting is not mandatory. All listed companies however are required to disclose their environmental compliance expenses (US Securities and Exchange Commission, 2010). Although companies are not required to publish sustainability reports, many US companies still do. Within the S&P 500 index, 90% of companies published sustainability reports in 2019 (G&A Institute, 2020). In summary, standards do not only vary across countries, companies within the specific markets are not necessarily using the same standards themselves.

There are several initiatives to bring standardisation and comparability to sustainability reporting, such as GRI – Global Reporting Initiative (2020), SASB - Sustainability Accounting Standards Board (2018), the UN Global Compact (UN, 2020) and ISO 26000 (ISO, 2010). The most frequently used standard is developed by GRI, who is cooperating with the United Nations (Ballou, Heitger and Landes, 2006). Considering the absence of standardised terminology and reporting components, there is much confusion within the landscape of sustainability reporting (ACCA, 2016). Ballou, Heitger and Landes, (2006), further identify the need for assurance of sustainability reporting, similar to auditing for regular annual reports.

Although it seems necessary at glance, not everyone is dreaming of a standardised world. Presented by Albu, Albu, Dumitru and Dumitru (2013), comparability is seldom something that companies seek. Rather, they are looking to attract resources or to comply with powerful actors' expectations. Company's focus on resources does make sense when compared with the findings of Surroca, Tribó and Waddock (2009). Their findings indicate that intangible resources, specifically innovation, human resources, reputation, and culture are the mediating effects between corporate responsibility performance and corporate financial performance, and vice versa. These are intangible resources that companies can include in their sustainability reporting, depending on what framework they use (Isaksson and Steimle, 2009). And although there are disparities in sustainability reporting, both across and within countries, the information in these reports are still essential to the ESG-scoring process (Refinitiv, 2020). ESG-score is a process in which Refinitiv, and various other organisations, judge companies based on their sustainability performance. The score is based on over 450 metrics and scores, which is derived from corporate and public reporting. This is described further in section 3.6.2.

In summary, companies are experiencing pressure to increase transparency and sustainability reporting. Companies are however lacking a standardised framework for their reporting process, a process seemingly connected to their sustainability and financial performance.

2.1.2 ESG and financial performance

Previous literature shows that an improved ESG-score can lead to increased financial performance. A meta-study of over 2000 reports (Friede, Busch and Bassen, 2015), finds that over 90% of ESG studies

show a nonnegative relation with corporate financial performance. Surroca, Tribó and Waddock (2009), takes it one step further by analysing the mediating effect of intangible resources between sustainability performance and financial performance. They show that the intangible resources innovation, human capital, culture and reputation should increase as a result of either improving sustainability performance, by for instance attracting better employees. Or from better financial performance, by having money to invest into these resources. And what is interesting about their findings is that when these intangible resources increase, the performance measure increase with it. They present a virtuous circle, if there is an increase in one performance measure, then the other will increase, but only if the intangible assets are improved. Consequently, 82% of investors at investment companies are using ESG information in their investment's analyses (Amel-Zadeh and Serafeim, 2018).

Most relatable is the work of De Lucia, Pazienza and Bartlett (2020), who through a machine learning method analyse the relationship between ESG and the financial performance measure ROA of 1038 public companies in the European market. They find that machine learning algorithms can predict ROA, and thus argue for a relationship between ESG-score and ROA. This relationship is also shown to have a statistical significance by Buallay (2019) and Velte (2017). Buallay (2019), who with a data sample of 235 European banks, stretching ten years, regress the ROA on ESG-scores and show statistical significance in the relationship. Velte (2017) also find statistical significance for German companies.

Further interesting relationships between ESG and financial performance exist, as shown by the studies of Dhaliwal, Zhen Li, Tsang and George Yang (2011), Cheng, Ioannou and Serafeim (2013), Ng and Rezaee (2015), and Reverte (2012) whom all show that increased performance in ESG and CSR disclosure lead to lower cost of equity, a significant negative relationship between score and the cost. This relationship is especially highlighted by Dhaliwal et al. (2011), who also suggests that companies with a higher cost of equity that invest in corporate social responsibility activities see a reduction in the cost the following year.

In summary, previous literature demonstrates that there is a connection between sustainability and financial performance, especially in terms of ESG and ROA.

2.1.3 Leveraging different sustainability strategies

A stream of literature has appeared from the relationship of sustainability and financial performance, studying the strategical implications for companies. Kaplan and Norton (2004) suggest that, as rewards from investments in various intangible resources can be reaped at different times, it is important to balance the strategy to allow for a sustained income over time. Companies may leverage sustainability in various ways, the key is to identify the biggest opportunity in the industry, whether the lever is risk reduction, growth or return on capital is not clear, as all can generate great value (Bonini and Görner, 2012). More theoretically described, Ambec and Lanioe (2008) proposes two broad categories of economic impact stemming from the environmental performance: (1) opportunities for increasing

revenues, and (2) opportunities for reducing costs. Hockerts (2014) builds upon the framework of Ambec and Lanioe (2008) and develops four dimensions through which corporate sustainability may result in competitive advantages. These dimensions are: (1) creating new market space, (2) social brand building, (3) increased operational efficiency and (4) reducing business risk. Hockerts (2014) found indications that managers of companies with a high sustainability performance focused more upon efficiency gains and the competitive benefits of sustainability, i.e. social branding and new market. Managers with lower sustainability performance were primarily focused on risk reduction.

To summarise, there appear to be various strategies in which companies may reap the benefits of corporate sustainability.

2.1.4 Motivational theory and self-regulated systems

How organisations choose between these strategical opportunities partially comes down to their underlying motivational tendencies, which end-states they find valuable and the goal-pursuit strategies they see fit. For example, if the objective of corporate sustainability should be to seek out opportunities for (1) increasing revenues, (2) reducing costs, or both simultaneously. On its most fundamental level, this selection of objective or goal can be explained by *hedonistic theories of motivation*, also known as *approach-avoidance motivation* (Higgins, 1997). The hedonistic principle states that human behaviour is motivated by the *pursuit of pleasure* and the *avoidance of pain* (Higgins, 1997; 1998). The theory dates to the ancient Greek civilisation, with the word *"hedonism"* which translates to "*pleasure"* in English (Moore, 2019). Higgins (1997), however, claimed that there are differences in individuals' strategic inclinations to either (1) pursue pleasure, or (2) avoid pain. This difference-factor is neglected by the hedonistic theory. Put differently, some are more motivated by the pursuit of pleasure, and others are more motivated by avoiding pain. This strategic inclination underpins what people deem important in their lives and therefore also affects the significance attributed to different incentives and performance means (Higgins, 1997).

2.2 Theoretical Framework: Regulatory focus theory

Building upon the hedonistic principle but addressing the issue above, Higgins (1997) proposes *regulatory focus theory*. The theory consists of two independent self-regulated systems – *promotion* and *prevention*. *Self-regulation* refers to the process in which people align their behaviours and concepts of self to their goals and standards (Cui and Ye, 2017; Higgins 1998). *Promotion focus* is a system driven by aspirations and accomplishments, and *prevention focus* is a system driven by responsibilities and safety. In other words, these are two systems that humans use to compare and select desired end-states (Higgins 1997; 1998). The regulatory focus regulates the perceived pleasure and pain and has significant effects on our action's thoughts and feelings (Higgins 1998).

People high in promotion are sensitive to positive stimuli. They strive for goals through self-growth and the pursuit of the ideal self (Hamstra, Bolderdijk and Veldstra, 2011). A promotion-focused individual is strategically concerned with gains – to maximise gains and to minimise non-gains. They seek to ensure

against *errors of omission* and have a higher tolerance for experimentation and risk (Higgins, 1997; Higgins and Spiegel, 2004).[2] These individuals experience pleasure when rewarded for their accomplishments and pain when not rewarded (Brockner and Higgins 2001). A company leader with a promotion focus could for instance be looking to leverage sustainability of existing products to reach new customers or markets (Bonini and Görner, 2012).

People high in prevention are sensitive to negative stimuli. They strive towards goals through the fulfilment of duty and responsibility and engage in careful decision making to reduce uncertainty by following rules and conventions (Hamstra, Bolderdijk and Veldstra, 2011). A prevention-focused individual is strategically concerned with losses – to minimise losses and to maximise non-losses. They seek to avoid mistakes as well as committing *errors of commission* and have a lower tolerance for risk (Higgins 1997; Higgins and Spiegel, 2004). These individuals experience pleasure in situations lacking negative consequences and pain in situations with negative outcomes (Brockner and Higgins 2001). A company leader with a prevention focus might address a strategic lever such as mitigating operational risk related to climate change (Bonini and Görner, 2012).

2.2.1 Focus orientation – chronic, situational and within organisations

Regulatory focus theory does not only address individuals' chronic orientation to either of the self-regulated systems but also states that they can both be situationally induced (Higgins, 1998; 2000). The chronic orientation is a long-term personality tendency (Cui and Ye, 2017) influenced by our past and unique combination of goals, intentions and preferred outcomes (Higgins, 1997). The situational effects on the other hand constitute a short-term personality tendency influenced by the specific context and environment (Cui and Ye 2017; Higgins 2000).

Considering the effects of situational context on regulatory focus, i.e. that individuals do not operate in a vacuum without external influences, organisational effects could be considered when these theories are applied to businesses (Johnson, Smith, Wallace, Hill and Baron, 2015). Much like individuals, team motivational orientations and goal-pursuit strategies stem from the shared needs and values of the diversified collective, a collective regulatory focus (Faddegon, Scheepers and Ellemers, 2008; Stahl, Mäkelä, Zander and Maznevski, 2010). These form over time as individual members of the group interact (Johnson et al. 2015), usually with a tendency to increase task conflict, but also with an increased creativity and satisfaction (Stahl et al. 2010). Given that the principles of the self-regulated systems, *promotion* and *prevention,* work similarly on the individual and group level, they can both be used to examine behaviour at the organisational level, which is exemplified by Johnson et al. (2015).

Important to note is that although the underlying foci of regulatory focus have different and sometimes opposing effects, the two opposing orientations can also work as complements to each other (Förster,

[2] *"Error of omission"* is defined by the Cambridge dictionary as "*A mistake that consists of not doing something you should have done, or not including something such as an amount or fact that should be included.*"

Higgins and Bianco, 2003). Both foci are independent strategic means, which means that seeking growth does not necessarily fully exclude our need for security. Thus, people may not only be pre-dominant in one orientation but could in theory also be low or high in both (Förster, Higgins and Bianco, 2003; Gamache et al. 2015). Looking at other theories of self-regulated systems such as *regulatory mode theory*, it has been found that the most successful outcomes often occur as both modes are active in the specific situation (Kruglanski, Orehek, Higgins, Pierro and Shalev, 2010). [3] Regarding CEO regulatory focus, findings are conflicting. Some studies (Hmieleski and Baron, 2008; Wallace et al. 2010) suggests promotion and prevention-focus are positively and negatively, respectively, related to company performance. Other studies find that both foci contribute to successful CEO leadership (Kark and Van Dijk, 2007; Neubert, Kacmar, Carlson, Chonko and Roberts, 2008).

As explained previously, there are both chronic-orientations and situational effects on regulatory focus. The concept of *regulatory fit* refers to when there is an alignment between individuals' chronic regulatory focus, and the regulatory focus demanded by the specific situation or environment (Higgins, 2000). When regulatory fit exists between the chronic and the situational, the individual will experience a higher level of engagement and value creation as well as increased motivation (Avnet and Higgins 2003; Higgins, 2000, 2006). This means that if there is a match between an individual's regulatory focus and the frame of a specific task, performance will in general tend to improve (Kurman and Hui, 2011).

2.2.2 Regulatory focus and organisational decision making and performance

There is a broad body of research on regulatory focus and its effects for the strategic preferences of individual decision-makers and organisational performance (see e.g Appelt and Higgins, 2010; Faddegon, Scheepers and Ellemers, 2008; Gamache et al. 2015; Lee, Aaker and Gardner, 2000; Lockwood, Jordan and Kunda, 2002; Ouschan, Boldero, Kashima Wakimoto and Kashima, 2007; Wang and Lee, 2006). Less is however known about the regulatory focus on an organisational level (Johnson et al. 2015). For the individual decision-maker, it has been shown that the regulatory focus determines what information a decisionmaker prioritises as important and used to later justify strategic decisions (Gamache et al. 2015; Lee, Aaker and Gardner, 2000). Gamache et al. (2015) find a positive relationship between CEO promotion focus and the number- and size of acquisitions. Liao and Long show how CEO promotion focus positively affects organisational environmental processes and product innovation, with a respective negative effect of CEO prevention focus. In a recent study, Gamache et al. (2020) demonstrate how CEO regulatory focus influences the stakeholder strategy of companies. As stated above, fewer studies have examined the effects of regulatory focus on a collective level or in a team setting (Johnson et al. 2015).

[3] Regulatory mode theory consists of two self-regulated systems – locomotion and assessment. A person strong in assessment is focused upon establishing truth through comparing and critically evaluating certain end-states (e.g. goals) of various alternatives. A person strong in locomotion is on the other hand concerned with exerting control as well as initiating and maintaining a goal-related movement in a direct and straightforward manner (Kruglanski et al. 2000).

That is, however, the purpose of this study, to examine the regulatory focus of an organisation as a whole (see e.g Florack and Hartmann 2007; Rietzschel 2011; Rokhayati, Nahartyo and H, 2019).

2.2.3 Regulatory focus and national culture interlinkage

Regulatory focus is affected by national culture (Higgins, 2008), and previous studies also illustrate how levels of promotion and prevention focus vary across nations (Kurman and Hui, 2011). Therefore, motivations and preferred goal-pursuit strategies will also differ between countries. Studies exploring the connection between culture and regulatory focus have in most instances examined how levels of individualism versus collectivism affect the regulatory focus of a country's population (Kurman and Hui, 2011). Findings have thus far found individualistic, liberal and egalitarian cultures to be more promotion oriented, and collectivistic, hierarchical and traditional cultures to be more prevention-oriented (see e.g. Lalwani, Shrum and Chiu, 2009; Lee, Aaker and Gardner, 2000; Uskul, Sherman and Fitzgibbon, 2009; Zhang and Mittal, 2007). However, the connection of regulatory focus to national culture is not always straight forward. The relationship between individualism or collectivism and regulatory focus tends to hold up in most studies. This is however not always the case, as cultures have also been found to be high in both foci, for example, Hong Kong (Uskul, Sherman and Fitzgibbon, 2009) and Asian-Australian (Ouschan et al. 2007).

Li, Griffin, Yue and Zhao (2013) examined cultural effects on corporate risk-taking by leveraging Hofstede's model of six dimensions of national cultures (Hofstede, 1980; 2011). These six dimensions are power distance, uncertainty avoidance, individualism/collectivism, masculinity/femininity, long/short term orientation, and indulgence/restraint. Li et al. (2013) found the cultural level of individualism to be positively associated with corporate risk-taking, and uncertainty avoidance to be negatively associated with corporate risk-taking. This would be expected given the relationship between individualism and promotion focus, as well as the evident connection between uncertainty avoidance and prevention focus (Lalwani, Shrum and Chiu, 2009; Lee, Aaker and Gardner, 2000; Uskul, Sherman and Fitzgibbon, 2009; Zhang and Mittal, 2007). On these two parameters, both Sweden and the US ranked above average on individualism. On a scale between 0-100, the US scored 0.91 and Sweden that scored 0.71. On uncertainty avoidance, both the US and Sweden ranked below average, the US with 0.46 and Sweden with 0.29.[4] Overall, US companies were greater risk-takers than Swedish ones (Li et al. 2013).

[4] To compare countries, visit https://www.hofstede-insights.com/product/compare-countries/

2.3 Hypothesis Generation

With the corporate sustainability report acting as the transparent link between a business' sustainable goals and operations, as well as the foundation of their ESG-score (Refinitiv, 2020), the intention is to examine these reports using regulatory focus theory to shed light on how different motivational inclinations affect sustainability- and financial performance. A difference in the effect is expected to be found because of three main reasons: (1) firms use different sustainability strategies in practice, (2) these strategies can be placed in theoretical groups, (3) these theoretical groups can be connected to regulatory focus theory, and (4) regulatory focus can be quantified and measured.

First, companies will leverage and use different strategies to implement sustainability into their operations (Bonini and Görner, 2012). Not only are there various strategies they can choose from, but they should also allocate investments differently to allow for a balanced income over time (Kaplan and Norton, 2004). Part of the strategy that these companies develop is regarding intangible resources, such as human capital and culture, which when improved lead to better sustainability performance (Isaksson and Steimle, 2009; Surroca, Tribó and Waddock, 2009; Refinitiv, 2020). Because of the multiple approaches, companies should pick what fits their industry the best, and will generate the most value to them (Bonini and Görner, 2012).

Second, these strategical approaches can be divided into two groups: (1) opportunities for increasing revenues, and (2) opportunities for reducing costs (Ambec and Lanioe, 2008). Hockerts (2014) in turn expanded the two rather theoretical groups to four practical dimensions: (1) creating new market space, (2) social brand building, (3) increased operational efficiency, and (4) reducing business risk. Hockerts (2014) found indications that managers of companies with a high sustainability performance focused more on efficiency gains and the competitive benefits of sustainability, in other words, creating new market space and social branding. Managers of companies with lower sustainability performance were however primarily focused on risk reduction.

Third, these findings by Ambec and Lanioe (2008) and Hockerts (2014) can subsequently be linked to the theoretical framework, regulatory focus theory. High sustainability performers focus more on benefits and gains, factors which can be connected to promotion-based motivation (Higgins, 1997, 1998). In the same way, low sustainability performers focus on risk reduction, which can be connected to prevention-based motivation (Higgins, 1997, 1998). As previously mentioned, the regulatory focus reflects what is valued as important and therefore also affects the significance attributed to different incentives and performance means (Higgins, 1997).

Fourth, this attribution of value and significance can be measured and quantified using linguistic word count. To translate regulatory focus in sustainability reports into a quantifiable variable, the software Linguistic Inquiry and Word Count (LIWC) is used (Pennebaker et al. 2015). When running sustainability reports through LIWC, the translated value is the percentage of words within each report corresponding to the respective category of regulatory focus (more on this in section 3.6.1). To identify and measure

regulatory focus, a dictionary constructed by Gamache et al. (2015) is used (see section 3.7.3 for details on its construct). The full list of words is shown in Table 1.

Given that regulatory focus appears to be tied to sustainability strategies, that regulatory focus can be quantified using linguistic word count, and that sustainability performance can be measured in ESG, it is hypothesised that:

$\boldsymbol{H_{1A}}$: Promotion focus in sustainability reports correlates positively with ESG-score.

$\boldsymbol{H_{1B}}$: Prevention focus in sustainability reports correlates negatively with ESG-score.

Furthermore, Hockerts (2014) suggests a linkage between improved corporate sustainability and financial performance. This is in line with the studies of Velte (2017), Buallay (2019) and De Lucia, Pazienza and Bartlett (2020), all demonstrating significant positive relationships between ESG and ROA. A causal relationship is shown by Surroca, Tribó and Waddock (2009), who present the results that a virtuous circle of positive correlation can be found between corporate sustainability performance, intangible resources, and corporate financial performance. If the sustainability performance increases, the company will for instance attract better employees, and as a result, improve its financial performance. Subsequently, building on the first hypothesis, that promotion focus correlates positively with ESG, and inversely that a prevention focus correlates negatively with ESG, it is also hypothesised that:

$\boldsymbol{H_{2A}}$: Promotion focus in sustainability reports correlates positively with ROA.

$\boldsymbol{H_{2B}}$: Prevention focus in sustainability reports correlates negatively with ROA.

Finally, these hypotheses are expected to be supported in different degrees when testing on different markets. This is because of a set of factors. First, practices such as sustainability reporting vary between countries (Williams and Aguilera, 2008). Second, Kurman and Hui (2011) demonstrate how promotion and prevention levels differ between countries. Third, Li et al. (2013) show that compared to Swedish companies, US companies tend to be greater risk-takers. This follows the impact of national levels of individualism and uncertainty avoidance, both demonstrated to affect the promotion levels of cultures (see e.g. Lalwani, Shrum and Chiu, 2009; Uskul, Sherman and Fitzgibbon, 2009). Combining these factors, i.e. (1) differences in reporting practices and (2) differences in regulatory focus, different degrees of regulatory fit are expected between the markets. Again, regulatory fit states that if there is a match between the regulatory focus and the nature of a specific task, performance will in general improve (Kurman and Hui, 2011). Given the prior arguments, different results are expected to be found, and therefore, all the hypotheses will be tested for in each market. This is described in detail in the following section.

3. Methodology

The following section presents the research methodology used to answer the research question. First, the methodological fit is discussed. Second, the research philosophy, scientific approach and strategy are explained. Third, the sample collection and construction of variables are described. Lastly, concepts relating to reliability, replication and validity are reviewed.

3.1 Methodological fit

Edmondson and McManus (2007) refer to *methodological fit* as the selection of an appropriate methodology to answer the research question, given the state of prior knowledge related to the field of study. The concept may be considered an overarching criterion to ensure research quality. Edmondson and McManus (2007) mention three levels of knowledge maturity: nascent, intermediate and mature. They propose a qualitative, hybrid or quantitative method for each level of maturity respectively. With extensive literature covering regulatory focus, as well as sustainability and financial performance, all areas of study are considered either intermediate or mature. Therefore, a quantitative approach is considered most relevant. Furthermore, in line with the guiding principles of methodological fit, the research question of the study is suitable for this degree of theoretical maturity, being to test a theory in a new setting. In this study, this entails examining regulatory focus theory in the context of corporate sustainability and financial performance.

To enable a quantitative study, as proposed by Edmondson and McManus (2007), a degree of innovation is required for the methodological approach. To quantify organisational regulatory focus, an archival field study is conducted leveraging secondary data. Through linguistic analysis and regression models, the areas of study are bridged, and their correlation measured. The limitations of this strategy are normally similar to a field study using primary data, i.e. generalisability, low precision of measurements, and control of behavioural variables (Scandura and Williams, 2000). With the proposed methodology and research design, the latter two limitations are however avoided. Precision in measurements is considered high given the use of well-established measures, and that control over organisational behaviour is not needed because the organisational behaviour this study intends to examine is described in the sustainability reports.

3.2 Research philosophy

This topic pertains to the set of philosophical assumptions and beliefs about how the authors view the world (Saunders, Lewis and Thornhill, 2007). Given that the research question builds upon previous theories and findings, this study develops testable hypotheses that are either confirmed or non-confirmed using regression analysis. The intention is therefore to explain a certain phenomenon rather than understand it from an interpretivist viewpoint. Instead of placing ourselves in the shoes of subjects, a third-party approach is taken, treating the observations as objects. This approach is what would be referred to as Weber's *Erlären* (explaining) rather than *Verstehen* (understanding) (Feest, 2010; Moses and Knutsen, 2007). With the study setting out to examine the effects of regulatory focus on sustainability and financial performance, the aim is not to study the phenomena as a social construct but rather in its

absolute observable notion. This work is therefore rooted in a naturalistic view on social sciences, with positivism as its epistemological approach. Subsequently, this study can be argued to take an objectivist standpoint from an ontological perspective as all observations are assumed to exist beyond the influence of the researchers. This rather than a constructivist perspective, where all external facts are subject to constant revision (Bryman and Bell, 2011). This is especially true as all measures are based on official corporate documents.

3.3 Scientific approach

The scientific approach relates to if the study intends to test the theory by the use of deduction, build theory through induction, or both. Given that the research philosophy is more positivist as well as objectivist, a deductive scientific approach is considered appropriate (Saunders, Lewis and Thornhill, 2007). In line with the deductive approach, a framework building on existing theory is developed, such as *regulatory focus theory* (Higgins, 1997) and theory on sustainability strategy (Hockerts, 2014). Furthermore, empirically testable hypotheses are developed and causal relationships between variables are examined. This is also supported by Bryman and Bell (2011), in which the deductive approach is said to be the most frequently used method when analysing data and applying previous theories and research.

3.4 Research strategy

There are various strategies for answering a research question and fulfilling the objectives of a study. With this study setting out to examine motivational tendencies in sustainability reports and its subsequent effects for sustainability and financial performance, it draws upon a longitudinal archival research strategy (Bryman and Bell, 2011; Saunders, Lewis and Thornhill, 2007). It may also be described as a field study examining secondary data (Scandura and Williams, 2000), with corporate documents and financial statistics as its main sources of data (Saunders, Lewis and Thornhill, 2007).

To test the hypotheses of whether the regulatory focus in sustainability reports impacts sustainability and financial performance, a quantitative methodology is employed. The previously mentioned variables can all vary across objects in small degrees. To study such fine differences, quantitative measurement is desirable to detect variations. This measurement also provides a consistent device for explaining the given phenomena, it enables a more precise estimate of the degree of relationship between concepts, as well as the statistical significance of these relationships (Bryman and Bell, 2011). Furthermore, to ensure consistency in results based on such minor differences, a large dataset is required. Given the previous arguments, a quantitative approach is deemed the most appropriate as the studied phenomena need both close measurements as well as extensive data (Bryman and Bell, 2011). Howitt and Cramer (2011) further state that when examining personality traits[5] the qualitative method is challenging when observing and measuring such phenomena.

[5] See Cui and Ye (2017) for how regulatory focus relates to personality traits and tendencies.

From a practical point of view, this will be operationalised through various data collection and analysis methods. Empirics will be collected both from companies' websites and a database for financial information. The analysis will be executed using quantitative linguistic content analysis on corporate documents and through secondary analysis of existing statistics (Bryman and Bell, 2011). These will form several regression models, examining the relationship between (1) the regulatory focus stemming from the content analysis, with (2) corporate performance measures. These analytical tools are preferred since they allow for the construction of the indicator *regulatory focus in corporate sustainability reports*, and the subsequent testing for effect on the two measures – sustainability and financial performance. Given that the empirical content never was intended to be analysed in line with the purpose of this study, the method is both *unobtrusive* and *non-reactive* (Bryman and Bell, 2011; Webb, Campbell, Schwartz and Sechrest, 1966). This research method is usually argued to overcome social desirability as a source of error (Harris, 2001). However, given a phenomenon such as Greenwashing (see for example Delmas and Burbano, 2011; Lyon and Maxwell, 2006), the authors want to highlight the risk of companies desiring to appear more sustainable than what may be the case.

Certainly, a more explorative and qualitative study could have provided interesting insights into the area. This study would have had to take somewhat of a reverse approach, by possibly examining high and low sustainability performers and how they differ in their sustainability strategies. However, given the scope and aim of this study, the authors do not see how a qualitative approach could adequately answer the research question.

3.5 Sampling and data collection

The following sections describe how the population is sampled, how the data is collected and the limitations that are associated with such a technique.

3.5.1 Sampling the population

Sampling refers to the technique used to reduce the amount of data collected by considering only a fraction of cases from the entire population (Saunders, Lewis and Thornhill, 2007). The most appropriate technique depends on a set of limitations such as time, budget and practical aspects. It will also affect how generalisations might be made about the population from which the sample is collected (Saunders, Lewis and Thornhill, 2007). Largely there are two different techniques, probability- and non-probability sampling. Whilst the former allows for statistical estimations of population characteristics, the latter cannot make such statistical inferences, however, generalisations may still be possible to a degree (Saunders, Lewis and Thornhill, 2007). This study uses a non-probability convenience sample (Etikan, Musa and Alkassim, 2016). This is an effect of the research question, the research strategy and corporate reporting standards, all of which limits to the possible sampling techniques. These limiting factors are explained below.

Before sampling the population, the population itself and the timeframe may be defined. With this study setting out to examine both Swedish and US companies, this naturally gives two populations from which two independent samples should be collected. Furthermore, given the research question "*What are the effects of a company's regulatory focus, within sustainability reporting, on its ESG-score and ROA?",* firms must have a sustainability report as well as publicly available measures of ESG and ROA. Regarding timeframe, this study will examine the period 2016-2019. This follows from the delimitations (see section 1.3).

Concerning sustainability reporting, the authors consider separate sustainability reporting a prerequisite to measure its regulatory focus. There are several reasons for this. First, a majority of a company's sustainability-related information is condensed into this document (see e.g. Roca and Searcy, 2012). Therefore, it appears to be a natural place to study sustainability strategy. Second, numerous companies integrate the sustainability report into their regular annual report (Jensen and Berg, 2012). To secure that the data set is not too dissimilar, the authors cannot surgically remove sustainability reporting from annual reports. The sustainability-related information is in many cases fully integrated with the text and does not follow a chronological order.[6] Should the information be removed manually, there is a significant risk of misunderstanding what is relevant and thus directly interfering with our testing results. Third, those that do have a separate sustainability report are not necessarily reporting using the same structure (see section 2.1.1). This limitation is addressed using various approaches. To begin with, the problem of standards and reporting structure cannot be fully resolved and is a consequence of the various options a company has when reporting on sustainability. However, companies with a higher ESG-score tends to be more transparent and structured in the way they present their sustainability data.[7] Thus, by primarily addressing companies with higher ESG-score, a more comparable data set with similar reporting standards is obtained.

Given the above, there is an issue with *randomisation* and *non-sampling error*. All sustainability reports are collected as part of a *non-probability sample*. As described earlier some units of the population are more likely to be selected given the sampling criteria each unit must fulfil (Bryman and Bell, 2011). This might generate a difference between the sample and the population. It could be argued that the *sampling frame* is inadequate, however, the authors reason in line with Bryman and Bell (2011), which is that given the impossibility and/or extreme difficulty in obtaining a probability sample, especially in the Swedish market (see the following section), a non-probability sample will have to suffice. The following section lays out how the authors went about collecting the sample given the limitations above.

[6] This is a conclusion drawn from the authors' own sampling process. Initially, integrated reporting was considered, however, difficulty in identifying the sustainability-related information led the authors to change sampling technique.
[7] See for example Refinitiv (2020), *Environmental, Social and Governance (ESG) Scores from Refinitiv,* for directions on the connection between transparency and ESG-score.

3.5.2 Data collection

In this section, the data collection process is explained, which is a consequence of the sampling technique described above. Companies are first filtered on the possession, or non-possession, of an ESG-score. Next, they are examined to see if they obtain sustainability reports. Lastly, the remaining data were accessed through the Refinitiv Eikon database.

To collect the data, the respective markets are first filtered using Refinitiv Eikon for the selected timeframe of 2016-2019. Given that the ESG-score is one of the dependent variables and a requirement to measure sustainability performance, this generates a natural place to start filtering companies. This generates a list of companies that are scored on ESG. Given this list of companies, the authors proceed with collecting the available separate sustainability reports from each company's website.

As a result of the sampling and data collection process, a total of 188 reports are collected.[8] The Swedish market is not too generous with observations fulfilling the sampling-criteria and generates a sample of 81 reports collected from 48 companies. The collection of data on the Swedish market is exhaustive, meaning all available reports given our criteria are collected. The US market is not as limited. From the given list of ESG rated companies, sustainability reports are collected starting from the top-scorer and downwards. Companies that did not fulfil the criteria were skipped. Following this procedure, a sample of 106 reports, collected from 71 companies, was generated. This sample was considered large enough to fulfil its purpose, combined with the fact that the authors did not want the US sample to be significantly larger than the Swedish. Overall, the data ranges three years from 2016 to 2018, one for each fiscal year reported. The sustainability reports are not only from the same companies each year, this is because of two main reasons. First, as new companies become publicly listed, our sample changes with it. Second, companies change reporting standards and methods, those who keep a separate sustainability report might integrate it the following year.

The remaining data points for the dependent variables ESG-score, ROA, and the control variables (see next section, 3.6) are collected from Refinitiv Eikon by creating a formula in Microsoft Excel that fetches the data from its terminal for each fiscal year. To make this possible, every company name is converted into a *Refinitiv readable ticker*, e.g. H&M = HMb.ST.[9] For instance, when calling for the ESG-score we used:

```
=@TR($C$2:$C$90;"TR.TRESGScore(SDate=0FY,Period=-2FY)/*ESG FY-2*/";"CH=Fd
RH=IN";AP2),
```

This remotely echoes Refinitiv's terminal and asks for the ESG-score during the period two fiscal years

[8] One report had to be terminated because of a corrupt file which was not appropriately analysed in LIWC. This therefore reduced the original total of 188 to 187 reports.
[9] A ticker symbol is an abbreviation used to identify companies.

back (-2FY) with a reference start date this fiscal year (0FY). The same process was applied for every variable with changes to fit each year.

3.6 Statistical model

The following sections explain the different variables that construct the model, as well as the tools and methods that were used to access and analyse the data. In short, the independent variable regulatory focus is hypothesised to have a predictive relationship with the dependent variables ESG and ROA. After describing the independent and dependent variables, the control variables of the model are presented.

3.6.1 Independent variables

The regulatory foci, promotion and prevention focus, are the independent variables of this study. To translate regulatory focus in sustainability reports into a variable fit for regression, the software Linguistic Inquiry and Word Count (LIWC) is leveraged (Pennebaker et al. 2015). LIWC offers built-in dictionaries, however, to identify and measure regulatory focus, a dictionary constructed by Gamache et al. (2015) is used (see section 3.7.3 for details on its construct). The full list of words is shown in Table 1. Note that the dictionary also includes different tenses of the words, for instance, "Expand", "Expansion", and "Expanded".

Table 1
Regulatory Focus Dictionary

Promotion Words	Prevention Words
Accomplish	Accuracy
Achieve	Afraid
Advancement	Careful
Aspiration	Anxious
Aspire	Avoid
Attain	Conservative
Desire	Defend
Earn	Duty
Expand	Escape
Gain	Escaping
Grow	Evade
Hope	Fail
Hoping	Fear
Ideal	Loss
Improve	Obligation
Increase	Ought
Momentum	Pain
Obtain	Prevent
Optimistic	Protect
Progress	Responsible
Promoting	Risk
Speed	Safety
Swift	Security
Toward	Threat
Velocity	Vigilance
Wish	

When running sustainability reports through LIWC, the translated value is the percentage of words within each report corresponding to the respective category of regulatory focus. Two independent variables are therefore generated: *Promotion Focus* and *Prevention Focus*. To clarify, all observations are analysed in their levels of promotion and prevention. Observations are not attributed to one of the two categories. When testing, these variables are lagged one year and will be analysed to predict the future outcome for the dependent variables.

There are a set of downsides of using LIWC to conduct linguistic content analysis (Kanze, Huang, Conley and Higgins, 2018). This is principally due to its inability to understand the context. An example is the case of the Swedish security company, Securitas, for which LIWC will recognise words that are related to the firm's industry in general. For example, in their 2017 sustainability report, they state, "We are creating

customer value, growing faster than the security market on average, and are recognised as the leader of the global security industry." (Securitas, 2018, p. 4). In this case, the word "security" will be identified as prevention-based, although the context is not prevention-oriented. Furthermore, LIWC leaves the study exposed to a low detection rate. As previously mentioned, it cannot identify context and is therefore limited to its 51 words. Lastly, LIWC risk failing to analyse parts of documents. If text would be part of a picture or illustration, LIWC will be blind to such information. Overall, this problem is assumed to be spread out evenly between firms. Additionally, documents were analysed in search of such issues. One document with such errors was found and thus eliminated from the study.

3.6.2 Dependent variables

Return on assets

The dependent variables are Total Return on Assets (ROA) and ESG-score. ROA represent how well the management team is managing the capital invested in the company, debt or equity. In this model, ROA is a ratio calculated as a percentage of the income after tax divided by average total assets (Refinitiv Eikon). The average total assets are the opening and closing total assets for the same fiscal period (Refinitiv Eikon).

$$ROA = \frac{Income\ after\ tax}{Average\ total\ assets}$$

ESG-score

ESG is a complex metric and is in this study calculated and provided by Refinitiv. It is based on over 450 metrics and scores, which is derived from corporate and public reporting. The metric is based on the three overarching pillars being environmental, social and governance, which are the headlines for ten themes. Environmental represents resource use, emissions and innovation. Social represents workforce, human rights, community and product responsibility. Governance represents the management, shareholders and corporate social responsibility strategy (Refinitiv, 2020). Of the 450 metrics, 186 of the most relevant and comparable data points are selected for the overall scoring process, which ranges from 0 to 100 (Refinitiv, 2020). In this model, ESG is kept as an interval variable ranging from 0-100 (Bryman and Bell, 2011).

$$ESG = evironmental + social + governance$$

3.6.3 Control variables

Control variables are variables which are thought to impact the relationship between the dependent and independent variables (Bryman and Bell, 2011). These variables might limit the causal inference that could be made as well as limit the explanatory power of the study. The model used in this study must therefore be able to rule out such threats to examine if the dependent variables are behaving as hypothesised (Nielsen and Raswant, 2018). Without such control variables there is the risk of both type I and type II

errors (Bryman and Bell, 2011; Nielsen and Raswant, 2018; Saunders, Lewis and Thornhill, 2007).[10] All variables are retrieved from Refinitiv Eikon's database and lagged one year, by using the appropriate formula in Microsoft Excel (see section 3.5.2). Below, relevant covariates are accounted for.

ESG control variables

In a study by Drempetic, Klein and Zwergel (2019), it was shown that ESG-score correlates with firm size. The study breaks down firm size into the number of employees, total assets, market cap and revenue, and successfully predicts the ESG-score. This study tests for the possibility of using the first three as control variables in the regression tests. Revenue is not collected because it is reported in various ways, and thus cannot be collected for all companies using one formula. The total employees, total assets and market cap are all collected. They are log-transformed because of a large disparity in the data points (Feng et al. 2014). Because the variable for full-time employees cannot realistically be zero, it is mean-centred to produce a measure that is growing with the same relationship but avoids having a confidence interval ranging through zero (Enders and Tofighi, 2007).

ROA control variables

Doğan (2013) show that in the Turkish market, firm size also predicts ROA. Firm size is tested as the total sales, total assets and the total number of employees. This suggests that we can collect the latter two, total assets and the total number of employees, and test for its possibility of being used as control variables. Also, as market cap is already collected to control for ESG, it will be tested to be used as a control variable for ROA, together with the first two. Because of disparity in the data, they are also log-transformed (Feng et al. 2014).

3.7 Reliability, replicability and validity

The main preoccupations of quantitative researchers are the level and degree of generalisation, replicability, measurement and causality (Bryman and Bell, 2011). In the following sections, concepts relating to these areas are reviewed.

3.7.1 Reliability

Reliability refers to the consistency of the measures used in our study. When determining if a measure is reliable there are three levels to consider, stability, reproducibility, and accuracy (Krippendorff, 2004). This being a quantitative content analysis, internal reliability will only be touched upon briefly (Bryman & Bell 2011).

[10] A type I error, or a false positive, refers to an incorrect conclusion that there is a causal relationship between two variables. This means rejecting the null hypothesis when it should be confirmed.
A type II error, or a false negative, refers to an incorrect conclusion that there is not a causal relationship between two variables. This means confirming the null hypothesis when it should be rejected.

Stability

Stability is the weakest form of reliability. If findings are stable, measures and coding procedures should yield the same results during repeated trials (Krippendorff, 2004). Concerning measures, regulatory focus theory states that motivations and goal-pursuit strategies could be of both long-term/chronic character, as well as induced situationally (Avnet and Higgins, 2003). Thus, depending on the setting or how an organisation has been affected from one point in time to another, they might deviate from their chronic regulatory focus. Even the chronic regulatory focus of an organisation may not be perfectly stable. However, according to Schildberg-Hörisch (2018), preferences tend to be persistent and moderately stable over time. Thus, all else equal, measuring the regulatory focus from one year to another should yield a highly similar outcome. The other two measures may also change from one year to another due to improved or worsened economic performance. They could also change due to alterations in their definitions. We partially offset this instability by including a longitudinal element, executing the study over a timeframe of three years (Bryman and Bell, 2011). Concerning coding procedures, stability requires intra-coder reliability, referring to if each coder is consistent over time (Krippendorff, 2004). This is assumed as the methodology minimises human errors and provides clear coding instructions.

Reproducibility

Reproducibility is the second level of reliability. This entails inter-coder reliability, meaning that the study can be reproduced by various researchers, under different circumstances, leveraging similar instruments (Bryman and Bell, 2011; Krippendorff, 2004). Considering the transparent coding scheme and established statistical procedures, the methodology should allow for full reproducibility between coders.

Accuracy

Accuracy is the strongest form of reliability. This concept can only be measured against a given standard that is assumed to be correct. Given that the hypotheses build upon prior research, the results are expected to be in line with previous knowledge (Krippendorff, 2004). The statistical relationship between regulatory focus and ESG, as well as ROA, is however not previously established in the given markets. Thus, full accuracy cannot be guaranteed.

Internal reliability

The regulatory focus variable rests upon a measurement of 51 words in different tenses (26 plus 25 for promotion and prevention respectively). This dictionary of words which measures motivational orientation is originally developed by Gamache et al. (2015) and has been used successfully in multiple other research projects (see e.g. Gamache, Neville, Bundy and Short, 2020 and Kanze et al. 2018). Within each of these focuses' dictionaries, the authors remain confident that the words measure the same phenomena, being either promotion or prevention. This due to the rigorous validation procedures in developing the dictionary (see the section 3.4.3 Measurement validity).

3.7.2 Replicability

Replicability refers to the degree to which another researcher may be able to replicate a given study, to prove or disprove the results (Bryman & Bell, 2011). The content analysis methodology leveraged in this study is normally considered highly transparent and objective, which enables replications and follow-up studies (Bryman & Bell, 2011). All measures and indicators of this study are based upon previous research, i.e. they have been tested and validated by other researchers. Additionally, all procedures of methodology and analysis are laid out and can easily be followed by other researchers (Bryman and Bell, 2011). What speaks against replicability is the usage of a non-randomised convenience sample.

3.7.3 Validity

Validity is what leads us to accept the results of the study as true. The validation process should provide us with compelling evidence of why the results should be taken seriously (Krippendorff, 2004). To determine the degree of validity, the following four concepts are discussed, measurement validity, internal validity, external validity and ecological validity (Bryman and Bell, 2011).

Measurement validity

This form of validity refers to if the indicators truly measure the concepts that they intend to capture. To ensure this, the study used well-established measures for all indicators, based solely on previous research. The measurement of sustainability regulatory focus was carried out using the dictionary of words developed by Gamache et al. (2015). This dictionary was constructed through a rigorous and iterative three-step process. First, based on regulatory focus theory two lists of words were created. All words associated with the motivations and attitudes of the respective focus. These words were then narrowed down to only include those with the highest association to the theory. Secondly, they asked 25 scholars and experts in the regulatory focus field about the dictionary, and to place each word in either promotion focus, prevention focus, or cannot be determined. This resulted in clear categories, which verified the content validity. The final step was to test for convergent and discriminant validity. 174 undergraduate students enrolled in a management course was recruited to answer an established regulatory focus survey. They also provided a 10-sentence response to a regulatory focus-oriented question. The written answers were then analysed using the developed dictionary of words using LIWC. Through analysing the correlation between the results of the survey and the written responses, validity was confirmed through regression analysis. Given the prior steps and measures taken by Gamache et al. (2015), the authors remain confident in the measurement validity of the regulatory focus dictionary. Concerning the measurement validity of sustainability and financial performance, this study uses the established measurements of ESG and ROA (Refinitiv, 2020).

Internal validity

The internal validity is concerned with verifying causality between the independent and dependent variables (Bryman and Bell, 2011). In this study, this relates to the effect of regulatory focus on ESG and ROA. The direction of causality is important as well as accounting for other factors explaining the changes in the dependent variables. Regulatory focus is based on our motivations which subsequently guides our decisions and behaviours (Higgins 1997; 1998). With that said, it seems implausible that a company would choose and execute a sustainability strategy without any preferences. The causal relationships tested for in this study have all been carefully thought through using theoretically driven hypothesis generation. Furthermore, to account for the impact of other variables on ESG and ROA, control variables based on previous studies were included in the model (Nielsen and Raswant, 2018). Therefore it is argued that potential significant effects found between the independent and dependent variables should demonstrate an acceptable level of internal validity.

External validity

This concept raises the question of whether the findings could be generalised to the greater population (Bryman and Bell, 2011). Given that this study includes a non-randomised convenience sample, several measures were taken as an effort to offset such limitations. For the Swedish market, this partially comes down to how the population is defined. If this is made up of companies with an ESG-score and a separate sustainability report, there is no need to discuss external validity as this study includes all possible observations. However, if the other extreme is true and the population is considered all companies with a sustainability agenda, then generalisation can be debated. Nonetheless, this study includes observations from three years, a factor which is said to often overcome threats of validity (Saunders, Lewis and Thornhill, 2007). The observations also include a multitude of industries. A similar argument could be used for the US market with regards to timeframe and industries. Here the observations can however not be argued to be collectively exhaustive of the population. Furthermore, as the companies included in this study are measured on sustainability performance, there is a risk of survivorship-bias, i.e. the companies analysed are only those large enough to have such a score. Because of this, the authors remain careful when generalising the results.

Ecological validity

This criterion discusses if the findings apply to people's everyday natural social setting (Bryman and Bell, 2011). All companies are studied in the equivalent of their natural environment. The instruments used focus on existing data and documents produced by the companies themselves. These are statistics

following their natural reporting process. Therefore, it is argued that these represent the daily environment and operations of the companies. The ESG-score is however aggregated by Refinitiv (2020) and could pose a risk of ecological fallacy (Bryman and Bell, 2011). For example, if large companies are scored higher on ESG and therefore will benefit from a different regulatory focus. The authors do however not see why this would be the case and are still as a safety measure restricted in the generalisations. Lastly, there is no interference with the subjects of the study, further adding to the ecological validity of the findings.

4. Empirical Findings

In the following section, key descriptive statistics and regression results are presented which are used to support or reject the hypotheses.

4.1 Descriptive statistics

Table 2
Descriptive Statistics

Aggregated Market	n	Mean	SD	Min	.25	Median	.75	Max
ESG (t + 1)	187	71.04	18.27	8.49	62.06	77.79	84.19	93.21
ESG (t + 1, logged)	187	1.83	0.17	0.93	1.79	1.89	1.93	1.97
Return on Total Assets (t + 1)	187	7.10	6.84	-16.29	3.36	6.42	9.80	36.13
Return on Total Assets (t + 1, logged)	171	1.81	0.87	-2.67	1.34	1.94	2.36	3.59
Total Assets (logged)	187	10.45	0.63	8.60	9.94	10.49	10.89	12.44
Market Cap (logged)	187	10.48	0.58	8.60	10.03	10.49	10.90	11.89
Full Time Employees (mean centered, logged)	187	0.00	0.86	-2.98	-0.43	0.05	0.61	2.08
Promotion Focus	187	0.79	0.29	0.00	0.59	0.75	0.96	1.73
Prevention Focus	187	0.86	0.49	0.07	0.61	0.78	1.02	4.79
Sweden								
ESG (t + 1)	81	56.97	19.07	8.49	46.86	58.84	69.24	91.29
ESG (t + 1, logged)	81	1.72	0.21	0.93	1.67	1.77	1.84	1.96
Return on Total Assets (t + 1)	81	6.96	7.35	-16.29	3.20	5.75	9.00	36.13
Return on Total Assets (t + 1, logged)	75	1.79	0.81	-0.94	1.32	1.83	2.31	3.59
Total Assets (logged)	81	10.42	0.62	9.34	9.88	10.50	10.89	12.44
Market Cap (logged)	81	10.42	0.55	9.34	9.92	10.44	10.83	11.57
Full Time Employees (mean centered, logged)	81	0.00	0.89	-2.54	-0.33	0.12	0.52	1.61
Promotion Focus	81	0.76	0.32	0.23	0.52	0.68	1.03	1.73
Prevention Focus	81	0.98	0.64	0.32	0.69	0.82	1.13	4.79
USA								
ESG (t + 1)	106	81.69	6.98	43.87	77.86	82.31	86.64	93.21
ESG (t + 1, logged)	106	4.40	0.10	3.78	4.35	4.41	4.46	4.53
Return on Total Assets (t + 1)	106	7.20	6.46	-9.42	3.47	6.99	9.95	31.83
Return on Total Assets (t + 1, logged)	96	0.72	0.44	-1.16	0.54	0.84	1.00	1.50
Total Assets (logged)	106	10.48	0.63	8.60	10.12	10.48	10.91	12.40
Market Cap (logged)	106	10.52	0.60	8.60	10.13	10.53	10.97	11.89
Full Time Employees (mean centered, logged)	106	0.00	0.66	-2.34	-0.44	0.10	0.49	1.76
Promotion Focus	106	0.81	0.25	0.00	0.67	0.78	0.95	1.60
Prevention Focus	106	0.77	0.31	0.07	0.55	0.75	0.94	1.91

Presented in Table 2 are descriptive statistics for all variables, divided into three sections. The first section shows the statistics for our data when it is aggregated. Second and third section shows the data when it is split into each independent market, Sweden and USA, respectively. The first two variables are the dependent variables for sustainability performance, the second two are the dependent variables for financial performance, where one of each is log-transformed. The following three variables are the control variables. The final two variables are the core predicting variables in the study, the independent variables.

Worth noting is that some numbers for Return on Total Assets (ROA) are negative, which means these are not possible to log-transform. This is shown in the reduction of n by 6 and 10 in section two and section three, respectively. Aggregated, this reduction of 16 is shown in section one, where n = 171.

In section one, looking at the ESG-score, which can take possible values of 0-100, it is shown that although the minimum value is low at 8.49, the first quartile contains the number 62.06 and that the maximum value is 93.21. This might suggest a skewness towards higher values in our data set for ESG. Looking at the log-transformed values for ESG, there is a similar relationship, suggesting that a potential skewness might pertain the transformed values as well.

For the latter two variables, Promotion Focus and Prevention Focus, on average Sweden appears to use more prevention-focused words, while the USA appears to use more Promotion Focused words, even while having the minimum value of 0.17 used Promotion Focused words. USA has a mean of 81.69 in ESG-score, Sweden has a mean of 56.97. The USA is spreading the Regulatory Focus evenly with a difference of .04 percentage points. Sweden on the other hand, in this sample, is prevention dominated with a 0.22 percentage points difference.[11]

4.2 Data checks

There are a set of criteria a regression model assumes. In this following section, assumptions of homoskedasticity and normality will be tested.

First, multicollinearity will not be tested for by using, for example, a VIF-test. This is because Stata does not allow multivariate regression when the variables correlate too much, consequently, the variables are omitted automatically should there have been a risk for multicollinearity.

Second, a White heteroskedasticity test is conducted (White, 1980) to check if the error terms in the models have a constant variance. The null hypothesis for this test is $H_0 = \sigma^2_i = \sigma^2$. In other words, the variance is constant. The alternate hypothesis is $H_1 = \sigma^2_i \neq \sigma^2$. In other words, the variance is not constant and there is an issue with heteroskedasticity.

Finally, skewness, and kurtosis, are two measures of normality (Cameron and Trivedi, 1990). Because of indications of skewness in the descriptive statistics above, this is tested in the section below, before confirming the regression results. Linear models are however typically robust to the violation of normality (Box and Watson, 1962; Knief and Forstmeier, 2020). Gelman and Hill (2007) conclude the least important assumption is that the residuals are normally distributed. Nonetheless, as Knief and Forstmeier (2020) highlight, this is still of importance to a lot of scholars and academics, so it is being tested to show respect in that regard.

[11] U.S Regulatory focus difference: Promotion – Prevention = 0.81-0.77 = 0.04
Swedish regulatory focus difference: Promotion – Prevention = 0.76 – 0.98 = -0.22

At the same time as testing for heteroskedasticity, a test for normality is also performed. By using the Cameron and Trivedi (1990) test it can be concluded whether there are signs of kurtosis or skewness in our data samples. Similar to White's test, a confirmed null hypothesis for skewness and normality means that there are no issues. Both tests were conducted in Stata after each respective regression, using the command *estat imtest, white*. They are both χ^2 distributed and generate a p-value that can be used to simplify the testing and quicker draw conclusions. The significance level is set to 0.05. The results from these tests are presented below, where the results and testing process for each respective model are described.

4.3 Hypothesis Testing

This section processes the hypotheses testing. Divided into two sections, first testing the sustainability performance, ESG. Second testing the financial performance, ROA. These two sections are following the order of the respective models, presented in Table 3 and Table 4.

4.3.1 Sustainability Performance: ESG

To compare the quality improvement of including the predicting variables – Promotion Focus and Prevention Focus, only the significant control variables are kept in the reference control models to make it as parsimonious as possible. The principle of parsimony suggests that researchers should design models so that as few explanatory variables as possible are used, in other words, simplifying the model as far as possible (Tenenbaum and Fillho, 2016). Most control variables are significant, with some exceptions. These insignificant control variables were as a result removed from the models. In Table 3 and 4, all the odd number models include the control variables only. All the even number models include the addition of Regulatory Focus Variables.

Table 3
Effect of Sustainability Report Regulatory Focus on Sustainability Performance

	ESG (t + 1, logged)				ESG (t + 1)	
	Model 1 SWE & USA	**Model 2 SWE & USA**	**Model 3 USA**	**Model 4 USA**	**Model 5 SWE**	**Model 6 SWE**
R^2 Adjusted	0.222	0.235	0.095	0.078	0.342	0.339
Firm Size Control Variables						
Total Assets (logged)						
Market Cap (logged)	.057** (.021)	.058** (.021)	0.052*** (0.015)	0.052*** (0.015)	15.017*** (3.393)	14.596*** (3.423)
Full Time Employees (mean centered, logged)	.072*** (.014)	.077*** (.015)			5.892** (2.098)	6.833** (2.366)
Regulatory Focus Variables						
Promotion Focus		-.026 (.040)		0.005 (0.036)		-.251 (5.844)
Prevention Focus		-.049* (.022)		-.008 (0.029)		-3.677 (2.882)

* p < .05
** p < .01
*** p < .001
Standard Errors are given in parantheses.
Model 1 & Model 2: n = 187
Model 3 & Model 4: n = 106
Model 5 & Model 6: n = 81

Shown in Table 3 are the parsimonious regression results with the sustainability performance metric ESG as the dependent variable. The structured process of testing is as follows. Initially, there is an attempt to keep the data in its original state. If there however are indications of issues when testing for

homoskedasticity and normality, the dependent variable is log-transformed. This methodology typically solves most issues (Curran-Everett, 2018).

Aggregated Market

First, the relationship between regulatory focus and sustainability performance, ESG is tested for. Starting with the aggregated market, our results are shown in Model 1 and 2. Model 2 is the control model, where it can deductively be seen that as Total Assets is not in the model, it is not significant and consequently removed for parsimony reasons.

The two remaining control variables representing Firm Size show a significant and positive relationship with ESG. In Model 2, Hypothesis 2A is tested. After log-transforming Model 1 and 2 to remove issues with heteroskedasticity and normality, signs of skewness remain. Which is expected for the ESG data, as indications of this in the descriptive statistics were found. The regression shows that Promotion Focus has a better relationship with ESG than Prevention Focus. Nevertheless, it demonstrates a negative relationship and it is not significant. Prevention Focus also demonstrates a negative relationship with ESG, and it is significant. It is moreover noted that the explanatory rate of Model 2 is higher compared with Model 1, suggesting that the Regulatory Focus Variables improve the model. In summary, Hypothesis 1B is supported as there is a significant negative coefficient for Prevention Focus, ($p < 0.05$).

$\boldsymbol{H_{1A}}$: Promotion focus in sustainability reports correlates positively with ESG-score.
Not Supported

$\boldsymbol{H_{1B}}$: Prevention focus in sustainability reports correlates negatively with ESG-score.
Supported

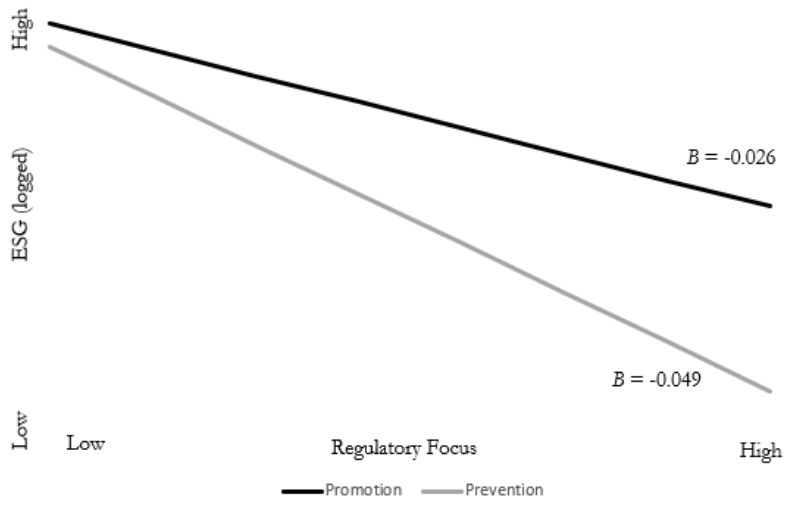

Figure 2: Coefficients for Regulatory Focus Variables Model 2

USA

As for ESG in the US Market, shown in Model 3 and 4, only one control variable for Firm Size remains significant, Market Cap. Promotion Focus does have a positive coefficient, and Prevention Focus a negative one, showing signs of the hypothesised relationship that Promotion Focus is better, albeit they are not significant. Similar to the first models with ESG as a dependent variable, Model 3 and 4 also show signs of skewness.

$\boldsymbol{H_{1A}}$: Promotion focus in sustainability reports correlates positively with ESG-score.
Not Supported

$\boldsymbol{H_{1B}}$: Prevention focus in sustainability reports correlates negatively with ESG-score.
Not Supported

Model 5 and 6 show the tests for the Swedish market and the ESG-score. 2/3 Firm Size Control variables are significant and predict the ESG-score with an explanatory rate of 34%, higher than the other models. However, when inserting the Regulatory Focus variables, the explanatory rate is reduced. Also, the variables are not significant, but the relationship remains with the coefficient for Prevention Focus being more negative than Promotion Focus. This model shows signs of skewness which was worsened when the dependent variables were log-transformed, which is why it is kept in its original state.

$\boldsymbol{H_{1A}}$: Promotion focus in sustainability reports correlates positively with ESG-score.
Not Supported

$\boldsymbol{H_{1B}}$: Prevention focus in sustainability reports correlates negatively with ESG-score.
Not Supported

Table 4
Effect of Sustainability Report Regulatory Focus on Financial Performance

	Return on Total Assets (t + 1, logged)				Return on Total Assets (t + 1)	
	Model 7 SWE & USA	**Model 8 SWE & USA**	**Model 9 SWE**	**Model 10 SWE**	**Model 11 USA**	**Model 12 USA**
R^2 Adjusted	0.261	0.258	0.319	0.308	0.310	0.358
Firm Size Control Variables						
Total Assets (logged)	-1.534*** (.207)	-1.52*** (.208)	-1.49*** (.298)	-1.520*** (.303)	-10.525*** (1.821)	-10.138*** (1.768)
Market Cap (logged)	1.73*** (.231)	1.722*** (.232)	1.646*** (.348)	1.687*** (.354)	13.415*** (1.922)	13.526*** (1.856)
Full Time Employees (mean centered, logged)	-.210** (.075)	-.186* (.078)	-.416*** (.099)	-.459*** (.114)		
Regulatory Focus Variables						
Promotion Focus		-.206 (.208)		.070 (.260)		-4.363* (2.024)
Prevention Focus		-.073 (.114)		.116 (.128)		-3.847* (1.629)

* p < .05
** p < .01
*** p < .001
Standard Errors are given in parantheses.
Model 7 & Model 8: n = 171
Model 9 & Model 10: n = 75
Model 11 & Model 12 n = 106

Shown in Table 4 are the parsimonious regression results after conducted with financial performance as the dependent variable, Return on Total Assets (ROA).

Aggregated Market

For model 7 and 8, when testing for heteroskedasticity and normality, the null hypothesis of homoskedasticity and normal levels of kurtosis is rejected. This suggests that the error terms in the model are heteroskedastic, thus not having a constant variance. It also indicates that there are levels of kurtosis high enough to interfere with the assumption of normality. After log-transforming the dependent variable the null hypothesis can no longer be rejected. This suggests no issues with heteroskedasticity and that the model is normally distributed ($p > 0.05$).

Model 7 and 8 test the financial predictions by regulatory focus for the aggregated market – Sweden and the USA. As shown in Model 7, all control variables are significant, and most of them at the $p < 0.001$ level. The Firm Size Control Variables, Total Assets, Market Cap, and Full Time Employees, have different relationships with ROA. Market Cap shows a positive relationship with ROA, while Total Assets and Full Time Employees show a negative relationship. These relationships, as well as the significance, remain in Model 8, where the Regulatory Focus Variables are added to the regression model. It is then found that both variables show a negative relationship with ROA, however, neither are significant. It is also found that the explanatory rate is reduced when comparing the models, which is reflected in the significance of the variables.

$\boldsymbol{H_{2A}}$: Promotion focus in sustainability reports correlates positively with ROA.
Not supported

$\boldsymbol{H_{2B}}$: Prevention focus in sustainability reports correlates negatively with ROA.
Not supported

Sweden

For comparison, the aggregated market is now split into its respective parts, Sweden and USA. The Swedish market is first analysed, i.e. Model 9 and 10. Equivalent to the aggregated market, to avoid issues with heteroskedasticity, the dependent variables are log-transformed. In Model 9 it is found that all control variables are significant at the $p < 0.001$ level. The relationship is similar to the aggregated market, where two of the control variables have a negative coefficient and one is positive. Like in the previous model, when inserting the Regulatory Focus Variables (Model 10), the explanatory rate is reduced, as the variables are not significant. However, the coefficients for Promotion Focus and Prevention Focus are now positive.

$\boldsymbol{H_{2A}}$: Promotion focus in sustainability reports correlates positively with ROA.
Not supported

H_{2B}: Prevention focus in sustainability reports correlates negatively with ROA.

Not supported

USA

Finally, the US market is tested separately where the results show interesting indications. In Model 11 and 12, only two out of three control variables for firm size are included, as Full Time Employees is not significant. Tests for heteroskedasticity and normality show signs of kurtosis, and when log-transformed it is worsened and shows signs of heteroskedasticity as well. Consequently, the dependent variable is kept in its original state. When inserting the Regulatory Focus Variables in Model 12, the explanatory rate of the model increases significantly. This model shows significant independent variables, both for Promotion Focus and Prevention Focus. Both variables have a negative correlation coefficient, which is not what was hypothesised in 2A, but it is in line with the expectations of hypothesis 2B.

H_{2A}: Promotion focus in sustainability reports correlates positively with ROA.

Not supported

H_{2B}: Prevention focus in sustainability reports correlates negatively with ROA.

Supported

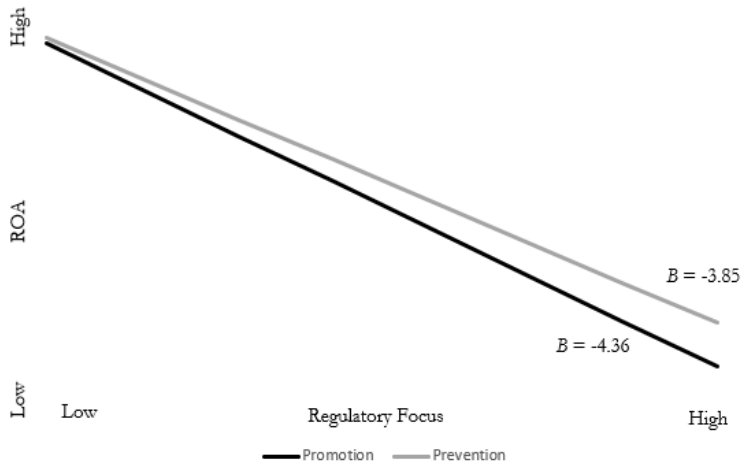

Figure 3: Coefficients for Regulatory Focus Variables Model 12 USA

Included below is a summary of the hypotheses testing.

Table 5

Summary of Hypothesis Testing

Hypothesis	Aggregated market	SWE	USA
H_{1A} : Promotion focus in sustainability reports correlates positively with ESG-score.	Not supported	Not supported	Not supported
H_{1B} : Prevention focus in sustainability reports correlates negatively with ESG-score.	Supported	Not supported	Not supported
H_{2A} : Promotion focus in sustainability reports correlates positively with ROA.	Not supported	Not supported	Not supported
H_{2B} : Prevention focus in sustainability reports correlates negatively with ROA.	Not supported	Not supported	Supported

5. Discussion

At the outset of this study, we asked the question *"What are the effects of a company's regulatory focus, within sustainability reporting, on its ESG-score and ROA?"*. Our results show that prevention-focused sustainability reports can harm both the ESG-score and the ROA of the company. Indications were also found that promotion-focused sustainability correlates negatively with ROA. This highlights the importance of strategic motivations explained by companies in the sustainability report, and its direct relationship with financial performance, measured as ROA, and its indirect relationship through sustainability performance, measured as ESG-score.

5.1 Theoretical implications

5.1.1 Regulatory focus: Organisational motivation

As the Hedonistic Theories of Motivation states, human behaviour is motivated by the pursuit of pleasure and the avoidance of pain (Higgins, 1997; 1998). To date, empirical research on regulatory focus theory within a business has principally examined individuals' motivation and goal-pursuit strategies (Johnson et al. 2015), such as CEOs (Gamache et al. 2015). Less is however known about the regulatory focus of organisations. As team efforts are built on the diversity of its members, motivational orientations and goal-pursuit strategies can be examined at the organisational level (Johnson et al. 2015). Our study contributes to this by, to our knowledge, establishing a precedent through exploring the relationship between companies' regulatory focus in sustainability reports and its direct and indirect financial performance.

5.1.2 ESG performance: Negative effect of sustainability prevention focus

The results build on theory by Ambec and Lanioe (2008) who proposes that environmental performance stem from either opportunity of increasing revenues, or opportunities for reducing costs. It also builds upon Hockerts (2014), who proposes four dimensions through which corporate sustainability may result in competitive advantages: creating new market space, social brand building, increased operational efficiency and reducing business risk. Our findings are aligned with Hockerts (2014), who demonstrates a connection between lower sustainability performance and risk reduction strategies. We find suggestions of a similar relationship with a sustainability prevention focus, in other words, being concerned with e.g. avoiding risk. This correlates negatively with ESG, meaning prevention-focus can lead to lower sustainability performance. Put differently, prevention-focused motivations and goal-pursuit strategies from a corporate sustainability point of view will not reward companies, but rather work against them.

These results could be considered in opposition to what would be suggested by regulatory fit. This theory suggests that the performance of a certain task will increase when the dominant regulatory focus of the organisation matches the natural focus of the task (Higgins, 2000; Kurman et al. 2011). Prevention focus is related to following responsibilities and obligations (Hamstra, Bolderdijk and Veldstra, 2011), and companies receive legitimacy pressure through laws and norms (Meyer and Rowan, 1977). It would be

possible to argue that the companies that are high in prevention focus should experience regulatory fit when following the obligations and as a result, perform better. According to our results, this is not the case. Therefore, it appears the relationship of regulatory fit does not hold up, or possibly there might be underlying flaws in the ESG scoring process, not fully rewarding reporting in line with its measures.

5.1.3 ROA in the US: Negative effects of sustainability promotion and prevention focus

Albeit a direct relationship between the financial performance measure ROA and the regulatory focus could not be established with significance across the aggregated market, a negative relationship was found within the US market specifically. It demonstrated a negative correlation between both sustainability promotion and prevention focus and the ROA. Previous literature has examined the relationship between ESG and financial performance (Friede, Busch and Bassen, 2015) and ROA in particular (e.g. Buallay, 2019; De Lucia, Pazienza and Bartlett, 2020; Velte, 2017), we instead looked at the motivational antecedents of corporate sustainability and the effects on ROA. To our knowledge, no quantitative study has thus far been able to demonstrate such a relationship. These findings also add to the previous literature on sustainability strategies. Hockerts (2014) claimed that companies with the equivalent of promotion-focused sustainability strategies were better sustainability performers than those leveraging the equivalent of prevention strategies. Our results, however, show that both approaches appear economically disadvantageous. With neither approach resulting in improved ROA, one could potentially discuss if ESG truly leads to improved financial performance for US companies, contrary to the findings of e.g. Friede, Busch and Bassen (2015) and De Lucia, Pazienza and Bartlett (2020). It should however be emphasised that to our knowledge there is no research proving regulatory focus to be collectively exhaustive of all the motivational antecedents of corporate sustainability.

With that said, there might be other motivational antecedents of corporate sustainability proving economically beneficial. Perhaps a direct link to this is the findings of Surroca, Tribó and Waddock (2009), who prove that the intangible resources innovation, human resources, reputation and culture are the mediating effects between sustainability performance and financial performance, and vice versa. Furthermore, as shown by Albu et al. (2013), companies want to attract resources and comply with powerful actors' expectations. Because of this, we theorise that possibly companies in the US market, which show a negative relationship between both regulatory focus variables, damage their sustainability strategy because they want to answer to too many stakeholders. In other words, they are too widespread in their motivations. Hence, they reduce their chances from a regulatory focus perspective to motivate a strategy that drives positive effects on their returns. Instead, they should be focusing on what is relevant to improve their sustainability performance.

5.1.4 Time

One factor that could be crucial to both the development of ESG-score and the ROA is time. In this study we have tested the regulatory focus in sustainability reports released the year before the ESG-score

and ROA. Looking at the results that were found, perhaps one year is not enough. It could be that after one year the investments into intangible resources, such as human resources, culture, innovation or emission reductions have not yet fully been integrated. For example, say that a company invests heavily into human resources and culture. This would make the company more attractive; employees would feel more satisfied, and better talent would want to work there (Surroca, Tribó and Waddock, 2009). But do they convert these investments into a better, more talented and skilled workforce over one year? This is not evident, and it could require more time. Even if they do manage to improve the workforce within a year, will this improved effort contribute to better returns within that timeframe as well? This is most likely not a guarantee. For this given example perhaps the ESG-score would be updated and improved quicker, because of the improved social factor, but the ROA could have a longer delayed impact. As there is a multitude of factors discussed in a sustainability report, it is easy to picture the complexity of how they develop differently with time. Depending on what intangible resources companies choose to invest in, and how the allocation is spread amongst them, the rewards will come at different times. Kaplan and Norton (2004) show that benefits from innovations could take over a year, and that benefits from an improved reputation by enhancing regulatory processes could take even longer than that. Thus, they suggest that it is important to balance the strategy to enable sustained growth over time. In this case, perhaps the negative correlation observed is just the start of a convex relationship where initially the ESG and returns are decreasing, but over time as they are integrated and effects start to take place, they will start to increase.

5.1.5 Cross-market differences: culture and sustainability regulatory focus

Because of the cultural effects on regulatory focus and corporate risk-taking (Higgins, 2008; Kurman and Cui, 2011; Lalwani, Shrum and Chiu, 2009; Li et al. 2013; Uskul, Sherman and Fitzgibbon, 2008), and because institutions tend to be bound to its country causing organisational CSR activities to vary between countries (Williams and Aguilera, 2008), we suspected there might be differences between the markets studied. This is theorised by regulatory fit, which suggests that because of the variations in national regulations regarding sustainability reporting, it would make sense that which regulatory focus has the best fit for a given situation differs from country to country. As there are less sustainability reporting regulations in the US compared to Sweden, it could have implied that the best regulatory fit in the US was a promotion focus. Furthermore, it appears to be a predominant promotion focus within US culture and organisations (see e.g. Kurman and Cui, 2011; Li et al. 2013). Taken together, on a general level in the US market there should exist a natural promotion regulatory fit, causing promotion-oriented businesses to perform better. Indeed, we see a negative correlation with prevention regulatory focus and the ROA in the US market. However, the promotion focus has an even stronger negative correlation. Practically dismantling the argument for regulatory fit and culture inclinations in the US.

5.2 Practical Implications

From this study, we can distinguish several practical implications which are of importance to multiple parties. The implications principally apply to the samples analysed (see section 3.5 Sampling and data collection).

From a managerial perspective, our results enable decision-makers to evaluate their strategic sustainability motivations and goal-pursuit strategies and potentially adjust their approach. As a sustainability prevention focus within a company can lead to a lower ESG-score, and subsequently may cause lower financial performance, companies need to take command and not fall into a prevention mindset by accident. However, the dual negative results of promotion and prevention on ROA in the US leave us unable to recommend a specific strategy from a pure ROA perspective. As our results could indicate that rewards are reaped further in the future than one year, it is suggested to keep a balanced strategical approach that enables both short-term and long-term rewards.

From an external stakeholder perspective, investors and analysts may find practical value as they now have the insight to scan and analyse sustainability reports to gain knowledge about regulatory focus. As has been discussed, there are no clear standards when it comes to sustainability reporting. We have shown that the way of reporting could lead to a worsened performance. Since companies are pressured by multiple parties to develop their sustainability performance and ESG-score, it seems to be of interest to many that companies report in a similar way that is not only comparable but also keeps the ability for companies to communicate the best sustainability strategy. Whilst some markets lack the regulations, the ones with laws in place, such as Sweden, are free to publish their sustainability reports in different ways as long as the required content is there. It stands evident that stakeholders face a substantial challenge in interpreting sustainability reports in a systematic way when they follow mixed standards and structures. To aid them in this process, we call for regulatory institutions to set a new universal standard for how companies should structure and publish their sustainability report.

The society may find the results rather controversial. The concept of sustainability entails being more cautious by carefully taking decisions and always keeping the impact on society and the future in the back of your mind (see e.g. *The Ten Principles of the UN Global Compact*). This is in line with an organisational prevention focus, described in five parts these are: (1) engaging in careful decision making, (2) following rules and conventions, (3) minimising losses, (4) avoiding mistakes, and (5) seeking outcomes lacking negative outcomes (Higgins, 1997; Higgins and Spiegel, 2004). The findings in this study, however, show that a sustainability strategy, when aligned with such focus, appears to not be rewarding for companies within the sample and tested time frame. As the incentives for companies lack, society might find it difficult to convince companies to maintain this approach.

5.3 Methodological Implications

Amongst our student peers, it is observed that strategy research is mostly approached qualitatively, for instance by setting up semi-structured interviews with someone who has insight at specific companies.

Although it would have been possible to interview company representatives with insights into strategic sustainability motivations, there would have been the risk of receiving rationalised motivations, made up only after an action was taken. Instead, we leveraged the linguistic analysis software LIWC. This enabled an increased data sampling through analysing existing sustainability documents. In combination with statistical analytics software, we were able to demonstrate significant relationships between the weighted usage of words in sustainability documents and the sustainability- and financial performance of companies. To our knowledge, this methodological approach is a novelty by students and sets a precedent at the school for student peers to learn from. This will hopefully inspire future students to pursue a similar methodological approach.

5.4 Suggestions for future research

First, given the results obtained, and the methodological approach developed, the authors see fit to continue to research and validate prevalent motivational strategies within corporate sustainability. As shown in this study, both promotion and prevention motivations were not found beneficial from sustainability- and financial performance perspective. Thus, we call for continued research into what is then the appropriate strategy.

Second, it is suggested to examine the field sustainability strategies in regulated versus non-regulated markets, and if successful approaches might differ given the difference in the regulatory environment.

Third, the time-variable is rather interesting and deserves to be explored and tested properly. A design could be to measure the regulatory focus at time *t* and then measure the sustainability- and financial performance for the companies at time *t+1, t+2, t+3, t+4, t+5* to find what strategical motivations lead to rewards within which time-frame, and perhaps discover the discussed convex relationship.

Finally, secondary analysis in our study was the process of developing the control variables representing firm size. As was shown by Doğan (2013), companies in the Turkish market see improved profitability as their size increases. The two variables for total assets and the number of employees were tested and findings show that they both have a negative relationship with ROA. The more assets and the more employees, the less profitability. The variable for the market cap was also tested, which shows a positive relationship with ROA. Indicating that firm size does correlate with better profitability, but it is not as clear as Doğan (2013) found it to be in the Turkish market. Full-time employees are typically paid with cash, which is an asset in the company. One interesting relationship, we ask ourselves, is if the management wastes too many assets by hiring employees when they could be better of investing into something else? This relationship is therefore suggested to be explored further by other researchers.

5.5 Limitations

Most of the limitations of the study are a consequence of the methodological approach, both in the selection and collection of data. With regards to the collection-phase, it must be emphasised that the data

is collected in a non-randomised fashion, a forced methodology given the natural limitations of the research field (Bryman and Bell, 2011; Etikan, Musa and Alkassim, 2016).

Although the sampling process was conducted in the same way for both the Swedish and the US market, the US sample is slightly larger. The Swedish market has a limited number of companies fulfilling all criteria, consequently, an exhaustive sample was collected. The US market offers more companies that fulfil the criteria, and slightly more was collected from this market. The results of the aggregated models may therefore be slightly weighted towards the dynamics of the US market.

The sampling procedure further generates limitations with regards to the generalisability of the results. The sample examined in this study does not grant us the ability to generalise the results to the entire population. As found in section 4, models in the regression tests break the assumption of normality. This is to be treated with caution and further strengthen the argument that these results are not generalisable. As Knief and Forstmeier (2020) point out, this is of importance to a lot of scholars and academics. The results are still interpretable to the hypothesis testing, as suggested by Box and Watson (1962) and Gelman and Hill (2007), linear models are typically robust to the violation. Our results hold up in the respective independent samples we have tested for, a total of 187 observations. Be wary of assuming these results to be true in other markets with fundamentally different dynamics. There, successful sustainability strategies may be different. This is because of factors previously discussed such as the regulatory landscape, culture and so on. Furthermore, these results are based on historical data. History does not predict the future, but we can learn from some of the key elements and adapt them to the situation we are faced with.

When studying large amounts of texts with LIWC there is a potential risk of the software missing vital information. Some documents could include pictures with text. In this case, LIWC would miss accounting for these words. Generally, this flaw should be evenly distributed across observations and regulatory foci. We see no reason to believe that such errors should exist to a higher degree within either promotion or prevention.

6. Conclusions

This study sought to explore the relationship between regulatory focus in sustainability reports and sustainability- and financial performance. It is shown that there is a relationship between both promotion and prevention focus and the measures for sustainability- and financial performance. First, it is found that prevention focus can correlate negatively with sustainability performance. Second, unexpected results are found as both foci show a negative relationship with financial performance in the US market. This is against the hypotheses and what previous literature has shown, possibly because it is the start of a convex relationship. A clear relationship between cultural differences and country-specific regulations, regulatory fit, could not be concluded. So as you drive down the road with your colleagues, remember to stop for a

thinking-break to analyse what motivates you, and if that will take you to the destination you are looking for.

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Appendix

Appendix 1
Eikon Excel Formulas

=@TR($A$2:$A$78;"TR.ROATotalAssetsPercent(SDate=0FY,Period=FY-1)/*ROA*//*ROA*/";"CH=Fd RH=IN";K3)

=@TR($A$2:$A$77;"TR.TRESGScore(SDate=0FY,Period=FY-1)/*ESG FY*/";"CH=Fd RH=IN";P3)

=@TR($C$2:$C$66;"log(TR.CompanyMarketCap(SDate=-2CY))/*logmarketcap2017*/";"CH=Fd RH=IN";V2)

=@TR($C$2:$C$66;"log(TR.Employees(SDate=0FY,Period=FY-2))/*Employees2017*/";"CH=Fd RH=IN";AB2)

=@TR($C$2:$C$66;"log(TR.TotalAssetsReported(SDate=0FY,Period=FY-2))/*LogTotalAssets2018*/";"CH=Fd RH=IN";AI2)

Appendix 2

Raw Data
Part 1

Year	Country	Filename	WC	Dic	Promotion	Prevention	ROA	LogROA	ESG	LogESG
2016	USA	ADBE.O	2351	1.53	0.17	0.21	12.44054137	1.094839	78.50592	1.894902
2016	SWE	NOBI.ST	5737	3.19	0.35	0.98	13.09186697	1.117002	61.32602	1.787645
2016	SWE	SECUb.ST	12753	7.05	0.42	4.79	5.618476549	0.749619	48.3183	1.684112
2016	USA	A	24688	2.93	0.46	0.77	8.434032059	0.926035	88.60907	1.947478
2016	SWE	KINVb.ST	6719	2.81	0.49	0.95	24.24541952	1.38463	53.11284	1.7252
2016	SWE	SCAb.ST	47100	2.7	0.51	0.69	1.68480484	0.22655	82.36604	1.915748
2016	USA	CCL	47763	3.12	0.52	1.21	6.542889065	0.81577	78.91225	1.897144
2016	SWE	SAS.ST	15886	2.52	0.59	0.37	3.573372312	0.553078	68.42836	1.835236
2016	USA	LOW	20886	2.79	0.6	0.81	9.948492805	0.997757	80.26364	1.904519
2016	USA	NRG	27382	3.05	0.6	0.65	-4.960171117	#NUM!	81.3598	1.91041
2016	SWE	TRELb.ST	24463	3.55	0.63	1.13	6.193923643	0.791966	59.35104	1.773428
2016	SWE	HMb.ST	66025	2.64	0.64	0.37	15.77841582	1.198063	72.55202	1.860649
2016	USA	ADSK.O	7854	2.72	0.65	0.31	-3.557121537	#NUM!	80.35759	1.905027
2016	USA	LDOS.K	20169	2.93	0.66	0.43	2.748041055	0.439023	84.03903	1.924481
2016	USA	MRK	83755	3.24	0.67	0.91	5.503986379	0.740677	81.31242	1.910157
2016	SWE	NOLAb.ST	21556	2.92	0.67	0.76	13.18579991	1.120106	69.23825	1.840346
2016	SWE	AXFO.ST	26635	2.89	0.69	0.45	13.33151581	1.12488	72.82974	1.862309
2016	SWE	HPOLb.ST	23313	2.77	0.69	0.61	14.09050401	1.148927	55.91845	1.747555
2016	USA	HAS.O	36926	3.33	0.73	0.84	13.7367504	1.137884	84.06292	1.924604
2016	USA	FCX	17835	3.51	0.74	1.08	4.358139348	0.639301	81.06777	1.908848
2016	USA	CPB	35670	3.38	0.76	0.78	5.374073242	0.730304	87.73013	1.943149
2016	USA	AA	28982	3.62	0.77	0.79	3.556803557	0.55106	85.60573	1.932503
2016	USA	ABT	41174	3.77	0.77	0.75	2.812684229	0.449121	81.38537	1.910546
2016	USA	CSCO.O	76785	3.68	0.78	0.58	8.809649542	0.944959	86.64	1.937718
2016	USA	BBY	13106	3.72	0.79	0.96	9.52982717	0.979085	86.25792	1.935799
2016	USA	CBRE.K	23434	3.23	0.8	0.61	7.52935052	0.876758	86.10643	1.935036
2016	SWE	ERICb.ST	38716	3.98	0.83	0.72	-11.92319569	#NUM!	81.93908	1.913491
2016	SWE	SEB	20884	3.53	0.85	0.86	7.220653489	0.858577	9.126529	0.960306
2016	USA	F	48191	4.1	0.87	0.7	2.915517669	0.464716	77.73683	1.890627
2016	SWE	CLASb.ST	11892	2.85	0.89	0.43	8.835549629	0.946234	46.86448	1.670844
2016	USA	BDX	24346	3.38	0.9	0.64	3.474415667	0.540882	80.75017	1.907143
2016	USA	HD	15081	3.51	0.91	0.45	20.01714384	1.301402	82.89	1.918502
2016	USA	BAX	26734	3.61	0.95	0.96	7.312367946	0.864058	77.86209	1.891326
2016	USA	GM	61832	3.93	0.97	0.84	3.514736095	0.545893	72.64498	1.861206
2016	USA	GPS	33507	3.47	0.97	0.48	11.30841721	1.053402	90.78027	1.957991
2016	USA	JNJ	53046	3.71	0.97	0.81	9.580886467	0.981406	88.71075	1.947976

2016	USA	LMT	21977	4.7	1.01	1.63	7.997797217	0.90297	83.89071	1.923714
2016	USA	MO	25026	3.35	1.02	0.6	15.39255503	1.187311	87.50169	1.942016
2016	USA	INTC.O	46587	3.45	1.06	0.55	12.68175977	1.10318	86.5271	1.937152
2016	SWE	ASSAb.ST	21532	3.66	1.08	0.8	8.868872159	0.947868	62.96578	1.799105
2016	SWE	SKAb.ST	10166	3.77	1.17	0.82	3.900121329	0.591078	60.06362	1.778612
2016	SWE	HUSQb.ST	16325	4.77	1.21	1.14	7.778232645	0.890881	76.57863	1.884108
2016	SWE	ALV	3306	4.93	1.24	1.48	7.781081129	0.89104	58.09609	1.764147
2016	SWE	ELUXb.ST	37037	4.11	1.27	0.75	6.551114659	0.816315	73.76228	1.867834
2016	USA	SCS	9658	3.89	1.48	0.36	5.948729185	0.774424	81.39	1.910571
2016	SWE	ALFA.ST	2873	5.26	1.64	1.74	5.641621116	0.751404	84.02878	1.924428
2017	USA	TXN.O	8427	2.69	0.26	0.65	31.82955232	1.502831	85.01124	1.929476
2017	SWE	TEL2b.ST	10040	2.69	0.3	0.77	1.714500523	0.234138	63.85663	1.805206
2017	USA	DXC	17726	3.12	0.39	0.91	3.72627766	0.571275	71.21	1.852541
2017	SWE	MTG	26474	2.52	0.39	0.62	11.86295736	1.074193	27.4007	1.437762
2017	SWE	SWEDa.ST	140788	3.24	0.44	1.42	0.949957028	-0.0223	77.14723	1.88732
2017	SWE	KINVb.ST	7313	2.91	0.46	0.75	-16.28913938	#NUM!	52.46608	1.719879
2017	USA	AMN	3606	3.08	0.47	0.44	10.32090402	1.013718	63.57353	1.803276
2017	SWE	NOBI.ST	8285	3.42	0.47	0.97	10.07627459	1.0033	62.45029	1.795534
2017	SWE	SHBa.ST	43228	2.76	0.52	0.81	0.60423129	-0.2188	59.99812	1.778138
2017	SWE	ALV	12655	3.93	0.55	1.39	4.943849655	0.694065	53.84057	1.73111
2017	USA	ADI.O	12287	2.97	0.56	0.75	7.508382704	0.875546	76.86041	1.885703
2017	SWE	KLED.ST	10354	3.11	0.57	0.8	6.139826711	0.788156	52.17492	1.717462
2017	SWE	HMb.ST	49541	2.46	0.58	0.39	10.85146793	1.035488	80.40137	1.905263
2017	SWE	LOOMIS.ST	18256	3.82	0.59	1.26	8.074550466	0.907118	39.22734	1.593589
2017	SWE	NOLAb.ST	20507	2.68	0.6	0.72	14.57408155	1.163581	68.35238	1.834754
2017	USA	CVX	13032	3.56	0.61	1.18	5.843965261	0.766708	84.63504	1.92755
2017	SWE	TRELb.ST	24434	3.41	0.61	1.13	6.540389195	0.815604	64.74052	1.811176
2017	SWE	HPOLb.ST	26273	2.93	0.62	0.86	13.27098283	1.122903	57.99243	1.763371
2017	USA	MMM	60357	3.44	0.65	0.76	14.87239384	1.172381	84.3525	1.926098
2017	USA	NOC	21654	3.26	0.66	0.65	8.642365452	0.936633	75.672	1.878935
2017	USA	BG	19942	2.89	0.67	0.49	1.2325047	0.090789	76.64523	1.884485
2017	USA	AA	38437	3.25	0.69	0.67	5.318800441	0.725814	84.36489	1.926162
2017	USA	CBRE.K	18474	3.17	0.7	0.78	8.573901868	0.933179	85.84782	1.933729
2017	USA	CSCO.O	72185	3.63	0.71	0.68	12.09524778	1.082615	87.58	1.942405
2017	SWE	SAS.ST	17408	2.99	0.71	0.56	4.778739851	0.679313	68.28446	1.834322
2017	SWE	ERICb.ST	42655	3.86	0.73	0.69	-2.374381199	#NUM!	82.96439	1.918892
2017	USA	AMAT.O	9463	3.08	0.73	0.71	22.40095002	1.350266	80.76553	1.907226
2017	USA	GILD.O	21459	3.33	0.73	0.78	8.157780797	0.911572	83.599	1.922201
2017	USA	ABT	62076	3.85	0.74	0.94	3.435990043	0.536052	77.08739	1.886983
2017	USA	JWN	8485	2.65	0.74	0.26	6.987063308	0.844295	72.77539	1.861985
2017	SWE	SECUb.ST	19535	6.32	0.74	3.98	5.753992627	0.759969	51.3665	1.71068
2017	USA	HAL	15495	3.69	0.76	1	6.305441871	0.799716	83.61108	1.922264
2017	USA	PII	7857	4.11	0.78	1.45	9.293967101	0.968201	71.98918	1.857267
2017	USA	HES	32970	4.42	0.8	1.26	-0.516331799	#NUM!	77.63183	1.89004
2017	USA	ADM	12902	3.6	0.82	1	4.411109461	0.644548	75.89703	1.880225
2017	USA	GS	10354	3.16	0.82	0.52	1.078886838	0.032976	68.4479	1.83536

2017	USA	IFF	25321	3.91	0.83	0.86	4.260912183	0.629503	82.2521	1.915147
2017	SWE	DUST.ST	16839	3.91	0.84	1.32	5.29846639	0.72415	58.83541	1.769639
2017	USA	CBT	17369	3.5	0.85	0.74	2.522029778	0.40175	80.22231	1.904295
2017	USA	OC	89301	4.01	0.86	0.74	5.955550725	0.774922	91.93587	1.963485
2017	USA	F	48504	4.49	0.89	0.78	1.387087505	0.142104	83.28771	1.920581
2017	USA	FCX	17097	3.84	0.9	1.12	6.987097261	0.844297	81.26962	1.909928
2017	USA	HSY	20593	2.77	0.9	0.37	17.54957061	1.244266	74.48559	1.872072
2017	SWE	DOMETIC.ST	3630	4.41	0.91	1.29	4.840592174	0.684898	54.76609	1.738512
2017	USA	INTC.O	33766	3.43	0.95	0.7	16.52229989	1.218071	87.66224	1.942813
2017	SWE	SEB	9700	3.37	0.95	0.88	-0.133740925	#NUM!	9.222091	0.964829
2017	USA	TGT	35795	3.11	0.96	0.44	7.093745787	0.850876	83.1113	1.91966
2017	USA	APD	31204	4.09	0.98	1.12	9.177723765	0.962735	86.354	1.936282
2017	SWE	ELUXb.ST	35632	4.11	1.03	0.91	3.054791441	0.484982	77.90451	1.891563
2017	SWE	ALFA.ST	13359	4.35	1.04	1.45	8.202782473	0.913961	91.28704	1.960409
2017	USA	MO	28189	3.54	1.04	0.55	14.50421139	1.161494	87.08746	1.939956
2017	SWE	ASSAb.ST	22940	4.05	1.05	1.21	2.67460148	0.427259	62.11207	1.793176
2017	USA	JNJ	84911	3.95	1.05	1.05	9.860857289	0.993915	89.29167	1.950811
2017	USA	CVS	41050	3.77	1.1	0.53	-0.477387538	#NUM!	77.428	1.888898
2017	USA	LMT	20209	5.32	1.11	1.91	10.9359972	1.038858	78.95958	1.897405
2017	USA	GPS	21833	3.27	1.2	0.4	12.91931662	1.11124	90.78027	1.957991
2017	SWE	SAABb.ST	8674	4.61	1.21	1.41	2.701580207	0.431618	65.23896	1.814507
2017	SWE	INTRUM.ST	7657	3.75	1.23	0.71	2.803738318	0.447737	40.30439	1.605352
2017	USA	JPM	16455	3.12	1.26	0.07	1.247912195	0.096184	74.01226	1.869304
2017	SWE	LUNDb.ST	2074	3.62	1.35	0.58	5.649167308	0.751984	27.6319	1.441411
2017	SWE	HUSQb.ST	17333	4.78	1.38	1.07	3.277271192	0.515512	83.31295	1.920713
2017	USA	BSX	10822	4.31	1.54	0.67	8.011787917	0.903729	76.92755	1.886082
2017	USA	WMT	9570	3.85	1.6	0.31	3.596363525	0.555864	77.06073	1.886833
2017	SWE	SKAb.ST	1854	4.26	1.73	0.49	4.070295437	0.609626	62.62073	1.796718
2018	SWE	PROB.ST	2188	2.56	0.23	1.1	6.873604963	0.837185	24.97449	1.397497
2018	SWE	TROAX.ST	5363	2.48	0.28	1.03	11.8238273	1.072758	32.6535	1.51393
2018	USA	TXN.O	4754	2.38	0.36	0.38	28.54217039	1.455487	86.67535	1.937896
2018	SWE	RESURS.ST	9169	3.28	0.36	1.24	3.090838077	0.490076	39.50808	1.596686
2018	SWE	WALLb.ST	5596	2.98	0.39	0.64	5.317092597	0.725674	56.47493	1.751856
2018	SWE	MTGb.ST	23518	2.41	0.4	0.81	-3.127560776	#NUM!	70.77388	1.849873
2018	SWE	INDUa.ST	4338	3.09	0.41	0.44	28.38226691	1.453047	32.41577	1.510756
2018	SWE	TEL2b.ST	11019	2.68	0.42	0.69	3.198955845	0.505008	71.65877	1.855269
2018	SWE	BILIa.ST	3595	2.67	0.45	0.64	5.73316283	0.758394	37.63531	1.575595
2018	SWE	BURE.ST	2849	3.79	0.46	0.81	36.12892202	1.557855	19.38193	1.287397
2018	SWE	NOBI.ST	11523	3.26	0.5	0.92	8.704061896	0.939722	64.52786	1.809747
2018	SWE	KINVb.ST	7596	3.11	0.51	0.61	28.32383603	1.452152	46.56327	1.668043
2018	SWE	NOLAb.ST	18919	2.82	0.52	0.77	12.45349867	1.095291	63.90889	1.805561
2018	SWE	NETb.ST	6677	2.91	0.52	1.09	15.56910574	1.192264	49.13978	1.691433
2018	SWE	HPOLb.ST	21809	2.82	0.53	0.83	9.673473229	0.985582	58.09555	1.764143
2018	USA	PEAK.K	11432	2.95	0.55	0.59	0.513512467	-0.28945	74.86766	1.874294
2018	SWE	LEOV.ST	5824	3.49	0.55	1.08	3.524068022	0.547044	43.84616	1.641932
2018	USA	FCN	8964	3.55	0.56	0.23	8.354398061	0.921915	79.61342	1.900986

2018	USA	HST	20168	2.84	0.58	0.68	7.640910022	0.883145	79.95731	1.902858
2018	USA	LDOS.K	25112	2.87	0.58	0.46	7.388211942	0.868539	80.64364	1.90657
2018	USA	WM	68204	3.51	0.58	0.78	6.631873474	0.821636	89.65238	1.952562
2018	USA	CBRE.K	26462	3.17	0.59	0.76	8.710126654	0.940024	85.97723	1.934383
2018	USA	CCL	56928	3.53	0.59	1.21	6.835202781	0.834751	84.96612	1.929246
2018	USA	GILD.O	22142	3.02	0.59	0.7	8.561714897	0.932561	77.02055	1.886607
2018	SWE	ALV	12645	4.27	0.6	1.6	6.859954939	0.836321	57.98251	1.763297
2018	USA	D	60593	3.5	0.61	1.21	1.514276124	0.180205	80.323	1.90484
2018	SWE	SAS.ST	18477	3.18	0.61	0.61	1.820820689	0.260267	68.08371	1.833043
2018	USA	CVX	14465	3.57	0.66	1.24	1.15939433	0.064231	81.74432	1.912458
2018	SWE	TRELb.ST	26222	3.44	0.66	1.21	-0.323804237	#NUM!	68.2881	1.834345
2018	USA	MMM	71643	3.66	0.67	0.81	11.29141562	1.052748	85.39053	1.93141
2018	SWE	ATTE.ST	22199	3.1	0.68	0.48	0.390436711	-0.40845	50.84466	1.706245
2018	SWE	SKISb.ST	4526	2.92	0.68	0.57	5.171129517	0.713585	20.22	1.305781
2018	SWE	HEXAb.ST	11240	4.27	0.69	1.46	6.98654651	0.844263	46.52246	1.667663
2018	USA	AA	34891	3.47	0.69	0.87	-5.545622989	#NUM!	86.42105	1.93662
2018	USA	IBM	21816	3.13	0.69	0.82	6.953637578	0.842212	67.25391	1.827718
2018	SWE	HMb.ST	59623	2.62	0.7	0.32	11.23644342	1.050629	70.16827	1.846141
2018	USA	AMAT.O	16655	3.25	0.7	0.69	14.63294869	1.165332	76.63679	1.884437
2018	USA	A	18768	2.91	0.72	0.45	11.90462958	1.075716	87.94522	1.944212
2018	USA	CSCO.O	68499	3.53	0.73	0.65	11.64207925	1.066031	87.58	1.942405
2018	SWE	MTRS.ST	7675	4.46	0.73	1.92	2.933732762	0.467421	41.16256	1.614502
2018	USA	NEM	77199	3.95	0.73	1.25	9.428397238	0.974438	82.31019	1.915454
2018	USA	FCX	18780	4.07	0.75	1.41	-0.491418248	#NUM!	80.66183	1.906668
2018	USA	SPGI.K	14551	3.72	0.75	0.82	22.15594786	1.34549	84.32241	1.925943
2018	SWE	GRANG.ST	16658	3.34	0.76	0.77	6.232794889	0.794683	78.77201	1.896372
2018	USA	OMI	89865	3.93	0.78	0.79	-0.608989881	#NUM!	43.87333	1.642201
2018	USA	PCG	65787	3.88	0.78	1.29	-9.423457529	#NUM!	88.5778	1.947325
2018	USA	BBY	15929	3.63	0.79	1	10.81707146	1.03411	62.00352	1.792416
2018	USA	JLL	34872	3.43	0.8	0.55	4.503314612	0.653532	81.05218	1.908765
2018	USA	KR	62800	3.07	0.8	0.76	3.627030009	0.559551	87.24546	1.940743
2018	SWE	NEWAb.ST	12097	3.03	0.81	0.66	4.787877611	0.680143	48.35513	1.684443
2018	SWE	SEB	5989	3.54	0.82	0.87	4.882677709	0.688658	8.494142	0.92912
2018	USA	IFF	29196	3.72	0.82	0.79	3.516609322	0.546124	87.44459	1.941733
2018	SWE	RECIb.ST	6226	3.49	0.84	0.79	2.590849693	0.413442	56.25593	1.750168
2018	USA	AMZN.O	14282	3.36	0.84	0.55	5.982015798	0.776848	88.6349	1.947605
2018	USA	HAL	22174	3.62	0.84	0.78	-4.396503047	#NUM!	87.60603	1.942534
2018	USA	MSFT.O	16992	3.85	0.84	1.08	15.06497218	1.177968	93.21468	1.969484
2018	USA	CPB	29068	3.27	0.85	0.57	4.639498433	0.666471	88.47966	1.946843
2018	USA	HPE	71231	3.56	0.88	0.71	2.864971667	0.45712	70.21398	1.846424
2018	USA	BKR	20351	4.43	0.9	1	0.512248601	-0.29052	82.29219	1.915359
2018	USA	GM	65029	4.49	0.94	1.18	2.928129721	0.46659	85.68951	1.932928
2018	USA	JNJ	65991	4.06	0.96	1.12	9.732781429	0.988237	77.8438	1.891224
2018	USA	TGT	35795	3.11	0.96	0.44	7.776945128	0.890809	84.46498	1.926677
2018	SWE	ASSAb.ST	23224	3.85	0.97	1.07	8.901334711	0.949455	67.68693	1.830505
2018	USA	PLD	7561	3.91	0.97	0.85	4.388376453	0.642304	81.51265	1.911225

2018	SWE	ELUXb.ST	37604	3.78	1.03	0.83	1.783264746	0.251216	83.73938	1.92293
2018	USA	INTC.O	35486	3.5	1.03	0.74	15.91609418	1.201837	88.55031	1.94719
2018	SWE	ALFA.ST	14740	4.27	1.04	1.24	8.995002776	0.954001	90.47824	1.956544
2018	USA	F	32735	4.67	1.04	0.68	0.069504171	-1.15799	81.33924	1.9103
2018	USA	CBT	17057	4.39	1.07	1.06	5.921895006	0.772461	78.76862	1.896353
2018	SWE	DOMETIC.ST	5181	4.67	1.08	1.02	3.743360832	0.573262	56.92385	1.755294
2018	SWE	AAK.ST	24579	3.42	1.09	0.72	7.388777653	0.868573	52.74339	1.722168
2018	SWE	BUFAB.ST	9903	3.47	1.13	0.74	5.657423971	0.752619	29.00585	1.462486
2018	SWE	LUNDb.ST	2360	3.6	1.14	0.64	12.56092386	1.099022	35.54594	1.55079
2018	USA	GPS	26391	3.52	1.14	0.43	3.506995582	0.544935	88.8048	1.948436
2018	USA	MO	35346	4.04	1.23	0.63	-2.318342404	#NUM!	88.61699	1.947517
2018	SWE	HUSQb.ST	19548	4.63	1.31	1.01	6.273886931	0.797537	78.76012	1.896306
2018	USA	PEP.O	16257	4.16	1.59	0.45	9.404910529	0.973355	85.19795	1.930429

Appendix 3
Raw Data
Part 2

Year	Country	Filename	LogTotalAssets Lag-1year	Log Full Time Employees Lag-1year	MarketCap Lag-1year	Mean Centered Log(FTE)	FullTimeEmployees
2016	USA	ADBE.O	10.16243	4.196066	10.70918	-0.077446839	15706
2016	SWE	NOBI.ST	9.856124	3.809223	10.17242	-0.46428951	6445
2016	SWE	SECUb.ST	10.69499	5.450292	10.69802	1.176779796	282028
2016	USA	A	9.925621	4.09691	10.1661	-0.176602419	12500
2016	SWE	KINVb.ST	10.97138	1.60206	10.78096	-2.671452441	40
2016	SWE	SCAb.ST	10.75367	4.664369	11.25854	0.390856849	46171
2016	USA	CCL	10.61043	4.978181	10.57584	0.704668085	95100
2016	SWE	SAS.ST	10.51262	4.029789	9.916172	-0.243722961	10710
2016	USA	LOW	10.54766	5.278754	10.79143	1.005241169	190000
2016	USA	NRG	10.37199	3.942653	9.587411	-0.33085962	8763
2016	SWE	TRELb.ST	10.68674	4.36633	10.63842	0.092817118	23245
2016	SWE	HMb.ST	11.0276	5.059132	11.56836	0.785619127	114586
2016	USA	ADSK.O	9.614222	3.954243	10.21673	-0.319269923	9000
2016	USA	LDOS.K	9.95376	4.50515	9.885904	0.231637546	32000
2016	USA	MRK	10.94385	4.832509	11.21035	0.558996481	68000
2016	SWE	NOLAb.ST	9.676876	3.8074	9.79191	-0.466112719	6418
2016	SWE	AXFO.ST	10.05953	3.964307	10.47789	-0.30920565	9211
2016	SWE	HPOLb.ST	10.01494	3.617	10.44386	-0.656512091	4140
2016	USA	HAS.O	9.723454	3.732394	9.987095	-0.541118672	5400
2016	USA	FCX	10.57173	4.477121	10.25432	0.203608823	30000
2016	USA	CPB	10.16224	4.255273	10.26875	-0.018239927	18000
2016	USA	AA	10.24172	4.146128	9.710538	-0.127384396	14000
2016	USA	ABT	10.88224	4.875061	10.75244	0.601548831	75000
2016	USA	CSCO.O	11.03657	4.862728	11.18098	0.589215096	72900
2016	USA	BBY	10.11558	5.09691	10.12681	0.823397581	125000
2016	USA	CBRE.K	10.06887	4.875061	10.02616	0.601548831	75000
2016	SWE	ERICb.ST	11.41478	5.047135	11.25063	0.773622192	111464
2016	SWE	SEB	9.712734	4.079181	9.665206	-0.194331186	12000
2016	USA	F	11.41245	5.303196	10.68306	1.029683625	201000
2016	SWE	CLASb.ST	9.623218	3.452553	9.904096	-0.820959369	2835
2016	USA	BDX	10.57673	4.706718	10.54778	0.43320535	50900
2016	USA	HD	10.64864	5.608526	11.21307	1.335013601	406000
2016	USA	BAX	10.23328	4.681241	10.38233	0.407728805	48000
2016	USA	GM	11.32732	5.352183	10.72516	1.078670086	225000
2016	USA	GPS	9.902492	5.130334	9.951867	0.856821336	135000
2016	USA	JNJ	11.19674	5.101747	11.49614	0.828234642	126400

2016	USA	LMT	10.66857	4.986772	10.86467	0.713259302	97000
2016	USA	MO	10.6355	3.919078	11.12017	-0.35443434	8300
2016	USA	INTC.O	11.09078	5.025306	11.23523	0.751793433	106000
2016	SWE	ASSAb.ST	10.99758	4.671432	11.25142	0.397919614	46928
2016	SWE	SKAb.ST	11.03916	4.632488	10.93477	0.358975229	42903
2016	SWE	HUSQb.ST	10.54922	4.120541	10.61072	-0.152971403	13199
2016	SWE	ALV	9.931961	4.788875	9.999244	0.515362684	61500
2016	SWE	ELUXb.ST	10.95203	4.7315	10.84483	0.457987692	53889
2016	USA	SCS	9.269326	4.068186	9.322221	-0.20532657	11700
2016	SWE	ALFA.ST	10.72056	4.228939	10.80109	-0.04457339	16941
2017	USA	TXN.O	10.24655	4.472961	11.01255	0.199448687	29714
2017	SWE	TEL2b.ST	10.59905	3.643255	10.70736	-0.630257207	4398
2017	USA	DXC	10.53047	5.176091	10.43252	0.902578827	150000
2017	SWE	MTG	9.749698	2.913284	9.718394	-1.36022853	819
2017	SWE	SWEDa.ST	12.34491	4.163996	11.35029	-0.109516677	14588
2017	SWE	KINVb.ST	10.97138	1.556303	10.88507	-2.717209931	36
2017	USA	AMN	9.098283	3.474216	9.371583	-0.799296168	2980
2017	SWE	NOBI.ST	9.856124	3.784403	10.08513	-0.48910913	6087
2017	SWE	SHBa.ST	12.44201	4.073058	11.33878	-0.200454271	11832
2017	SWE	ALV	9.931961	4.799341	10.04336	0.525828117	63000
2017	USA	ADI.O	10.32513	4.184691	10.51613	-0.088821001	15300
2017	SWE	KLED.ST	10.49894	2.037426	10.11378	-2.236085934	109
2017	SWE	HMb.ST	11.0276	5.090533	11.39321	0.817020716	123178
2017	SWE	LOOMIS.ST	10.18081	4.358144	10.39375	0.084631892	22811
2017	SWE	NOLAb.ST	9.676876	3.860278	10.10354	-0.413234332	7249
2017	USA	CVX	11.4045	4.715167	11.37618	0.441654926	51900
2017	SWE	TRELb.ST	10.68674	4.364589	10.66359	0.091076082	23152
2017	SWE	HPOLb.ST	10.01494	3.642366	10.43763	-0.631146851	4389
2017	USA	MMM	10.57963	4.961592	11.14671	0.688079498	91536
2017	USA	NOC	10.54565	4.845098	10.72776	0.571585608	70000
2017	USA	BG	10.27579	4.491362	9.974656	0.217849262	31000
2017	USA	AA	10.24172	4.164353	9.998573	-0.109159576	14600
2017	USA	CBRE.K	10.06887	4.90309	10.16738	0.629577555	80000
2017	USA	CSCO.O	11.03657	4.870404	11.27724	0.596891473	74200
2017	SWE	SAS.ST	10.51262	4.013848	10.07482	-0.259664436	10324
2017	SWE	ERICb.ST	11.41478	5.00318	11.25379	0.729667959	100735
2017	USA	AMAT.O	10.28823	4.264818	10.73239	-0.008694609	18400
2017	USA	GILD.O	10.84685	4	10.97119	-0.273512432	10000
2017	USA	ABT	10.88224	4.995635	10.99711	0.722122762	99000
2017	USA	JWN	9.909289	4.875061	9.897224	0.601548831	75000
2017	SWE	SECUb.ST	10.69499	5.458988	10.69742	1.185475732	287732
2017	USA	HAL	10.39941	4.740363	10.62983	0.466850257	55000
2017	USA	PII	9.489901	4.041393	9.88956	-0.232119747	11000
2017	USA	HES	10.36384	3.317018	10.17851	-0.956494331	2075
2017	USA	ADM	10.60166	4.495544	10.35053	0.222031905	31300
2017	USA	GS	11.96226	4.563481	10.9827	0.289968653	36600

2017	USA	IFF	9.662656	3.863323	10.08108	-0.410189572	7300
2017	SWE	DUST.ST	9.790785	3.061452	9.792959	-1.212059953	1152
2017	USA	CBT	9.523486	3.653213	9.581549	-0.620299918	4500
2017	USA	OC	9.936111	4.230449	10.00977	-0.043063511	17000
2017	USA	F	11.41245	5.305351	10.6956	1.031838937	202000
2017	USA	FCX	10.57173	4.401401	10.43848	0.127888109	25200
2017	USA	HSY	9.744584	4.186391	10.37869	-0.087121216	15360
2017	SWE	DOMETIC.ST	10.49143	3.94295	10.39299	-0.330562362	8769
2017	USA	INTC.O	11.09078	5.01157	11.33451	0.738058011	102700
2017	SWE	SEB	9.712734	4.071882	9.712829	-0.201630425	11800
2017	USA	TGT	10.60534	5.537819	10.54984	1.264306663	345000
2017	USA	APD	10.2664	4.176091	10.55514	-0.097421173	15000
2017	SWE	ELUXb.ST	10.95203	4.753644	10.91237	0.480131899	56708
2017	SWE	ALFA.ST	10.72056	4.213969	10.91004	-0.05954335	16367
2017	USA	MO	10.6355	3.919078	11.13438	-0.35443434	8300
2017	SWE	ASSAb.ST	10.99758	4.676016	11.25474	0.402504065	47426
2017	USA	JNJ	11.19674	5.127105	11.57445	0.853592366	134000
2017	USA	CVS	10.97832	5.390935	10.86594	1.117422675	246000
2017	USA	LMT	10.66857	5	10.96405	0.726487568	100000
2017	USA	GPS	9.902492	5.130334	10.12203	0.856821336	135000
2017	SWE	SAABb.ST	10.65319	4.215558	10.63134	-0.057954175	16427
2017	SWE	INTRUM.ST	10.83107	3.798858	10.60093	-0.4746547	6293
2017	USA	JPM	12.40374	5.402328	11.56944	1.128816024	252539
2017	SWE	LUNDb.ST	11.1112	3.514149	10.66827	-0.759363298	3267
2017	SWE	HUSQb.ST	10.54922	4.140099	10.65306	-0.133413107	13807
2017	USA	BSX	10.27971	4.462398	10.53201	0.188885566	29000
2017	USA	WMT	11.31074	6.361728	11.46618	2.088215404	2300000
2017	SWE	SKAb.ST	11.03916	4.606381	10.83267	0.332868933	40400
2018	SWE	PROB.ST	9.622409	2.222716	9.622409	-2.050795961	167
2018	SWE	TROAX.ST	9.706718	2.849419	9.706718	-1.424093018	707
2018	USA	TXN.O	10.95093	4.475497	10.95093	0.201984422	29888
2018	SWE	RESURS.ST	10.03902	2.883661	10.03902	-1.389850997	765
2018	SWE	WALLb.ST	10.38543	2.399674	10.38543	-1.873838711	251
2018	SWE	MTGb.ST	10.29287	3.519171	10.29287	-0.754340968	3305
2018	SWE	INDUa.ST	10.89589	1.30103	10.89589	-2.972482436	20
2018	SWE	TEL2b.ST	10.89057	3.714665	10.89057	-0.558847439	5184
2018	SWE	BILIa.ST	9.930285	3.679882	9.930285	-0.59363049	4785
2018	SWE	BURE.ST	9.875967	2.369216	9.875967	-1.904296575	234
2018	SWE	NOBI.ST	9.923516	3.783975	9.923516	-0.489537429	6081
2018	SWE	KINVb.ST	10.76952	1.568202	10.76952	-2.705310708	37
2018	SWE	NOLAb.ST	9.936028	3.809492	9.936028	-0.464020055	6449
2018	SWE	NETb.ST	9.877746	2.905256	9.877746	-1.368256383	804
2018	SWE	HPOLb.ST	10.36318	3.666518	10.36318	-0.606994452	4640
2018	USA	PEAK.K	10.12504	2.303196	10.12504	-1.970316375	201
2018	SWE	LEOV.ST	9.598122	2.948413	9.598122	-1.325099466	888
2018	USA	FCN	9.407919	3.678336	9.407919	-0.595176185	4768

2018	USA	HST	10.09238	2.264818	10.09238	-2.008694609	184
2018	USA	LDOS.K	9.897371	4.50515	9.897371	0.231637546	32000
2018	USA	WM	10.5791	4.640481	10.5791	0.366969005	43700
2018	USA	CBRE.K	10.1351	4.954243	10.1351	0.680730077	90000
2018	USA	CCL	10.53165	5	10.53165	0.726487568	100000
2018	USA	GILD.O	10.90803	4.041393	10.90803	-0.232119747	11000
2018	SWE	ALV	9.786763	4.763428	9.786763	0.489915561	58000
2018	USA	D	10.67128	4.32838	10.67128	0.054867171	21300
2018	SWE	SAS.ST	9.900788	4.006295	9.900788	-0.267217574	10146
2018	USA	CVX	11.3178	4.686636	11.3178	0.413123837	48600
2018	SWE	TRELb.ST	10.52895	4.381025	10.52895	0.107512349	24045
2018	USA	MMM	11.04084	4.970886	11.04084	0.69737349	93516
2018	SWE	ATTE.ST	10.10176	4.261715	10.10176	-0.011797656	18269
2018	SWE	SKISb.ST	9.888424	3.121231	9.888424	-1.152280977	1322
2018	SWE	HEXAb.ST	11.15121	4.302071	11.15121	0.028558622	20048
2018	USA	AA	9.69522	4.146128	9.69522	-0.127384396	14000
2018	USA	IBM	11.00624	5.544812	11.00624	1.27129948	350600
2018	SWE	HMb.ST	11.26499	5.090903	11.26499	0.817390762	123283
2018	USA	AMAT.O	10.49672	4.322219	10.49672	0.048706863	21000
2018	USA	A	10.3322	4.170262	10.3322	-0.103250717	14800
2018	USA	CSCO.O	11.28961	4.880242	11.28961	0.606729344	75900
2018	SWE	MTRS.ST	9.793263	3.546296	9.793263	-0.727216597	3518
2018	USA	NEM	10.26615	4.093422	10.26615	-0.180090747	12400
2018	USA	FCX	10.17434	4.428135	10.17434	0.154622362	26800
2018	USA	SPGI.K	10.6298	4.326336	10.6298	0.052823429	21200
2018	SWE	GRANG.ST	9.78176	3.255996	9.78176	-1.017516705	1803
2018	USA	OMI	8.595674	3.826075	8.595674	-0.447437629	6700
2018	USA	PCG	10.09056	4.380211	10.09056	0.10669881	24000
2018	USA	BBY	10.15386	5.09691	10.15386	0.823397581	125000
2018	USA	JLL	9.76108	4.954243	9.76108	0.680730077	90000
2018	USA	KR	10.3412	5.656098	10.3412	1.38258577	453000
2018	SWE	NEWAb.ST	9.342415	3.415808	9.342415	-0.857704704	2605
2018	SWE	SEB	9.617149	4.100371	9.617149	-0.173141887	12600
2018	USA	IFF	10.15581	4.113943	10.15581	-0.15956908	13000
2018	SWE	RECIb.ST	9.771375	3.832509	9.771375	-0.441003519	6800
2018	USA	AMZN.O	11.86594	5.81124	11.86594	1.537727341	647500
2018	USA	HAL	10.36708	4.778151	10.36708	0.504638818	60000
2018	USA	MSFT.O	11.89191	5.158362	11.89191	0.88485006	144000
2018	USA	CPB	9.996991	4.278754	9.996991	0.005241169	19000
2018	USA	HPE	10.26662	4.778151	10.26662	0.504638818	60000
2018	USA	BKR	10.3738	4.819544	10.3738	0.546031503	66000
2018	USA	GM	10.67405	5.238046	10.67405	0.964533671	173000
2018	USA	JNJ	11.53921	5.130655	11.53921	0.857142917	135100
2018	USA	TGT	10.53767	5.556303	10.53767	1.282790069	360000
2018	SWE	ASSAb.ST	11.22026	4.684423	11.22026	0.410910992	48353
2018	USA	PLD	10.5678	3.20871	10.5678	-1.064802412	1617

2018	SWE	ELUXb.ST	10.76244	4.714313	10.76244	0.440800559	51798
2018	USA	INTC.O	11.3308	5.031004	11.3308	0.757491849	107400
2018	SWE	ALFA.ST	10.90064	4.236235	10.90064	-0.037277569	17228
2018	USA	F	10.48332	5.298853	10.48332	1.025340644	199000
2018	USA	CBT	9.411224	3.662758	9.411224	-0.6107546	4600
2018	SWE	DOMETIC.ST	10.20933	3.902601	10.20933	-0.370911301	7991
2018	SWE	AAK.ST	10.49322	3.557387	10.49322	-0.71612555	3609
2018	SWE	BUFAB.ST	9.514026	3.097951	9.514026	-1.175561361	1253
2018	SWE	LUNDb.ST	10.59673	3.511215	10.59673	-0.762297731	3245
2018	USA	GPS	9.992365	5.130334	9.992365	0.856821336	135000
2018	USA	MO	10.96642	3.919078	10.96642	-0.35443434	8300
2018	SWE	HUSQb.ST	10.57812	4.148479	10.57812	-0.125033174	14076
2018	USA	PEP.O	11.19299	5.426511	11.19299	1.152998829	267000

Appendix 4

Raw Regression Results

A. ESG (logged) Aggregated Market

Source	SS	df	MS	Number of obs =	187
				F(2, 184) =	27.67
Model	1.23961458	2	.61980729	Prob > F =	0.0000
Residual	4.14370881	184	.022398426	R-squared =	0.2303
				Adj R-squared =	0.2219
Total	5.38332339	186	.028787826	Root MSE =	.14966

LogESG	Coef.	Std. Err.	t	P>t	[95% Conf	Interval]
MarketCapLag1year	.0570794	.020889	2.73	0.007	.0158678	.098291
MeanCenteredLogfulltimeemplo	.071903	.0141244	5.09	0.000	.0440374	.0997687
_cons	1.229543	.219143	5.61	0.000	.7972009	1.661885

Source	SS	df	MS	Number of obs =	187
				F(4, 182) =	15.33
Model	1.35093758	4	.337734395	Prob > F =	0.0000
Residual	4.03238582	182	.022034895	R-squared =	0.2509
				Adj R-squared =	0.2346
Total	5.38332339	186	.028787826	Root MSE =	.14844

LogESG	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
MarketCapLag1year	.0576212	.020752	2.78	0.006	.0166773	.0985652
MeanCenteredLogfulltimeemplo	.0765673	.0146474	5.23	0.000	.0476678	.1054669
Promotion	-.0258364	.0403591	-0.64	0.523	-.1054652	.0537925
Prevention	-.0486129	.0221845	-2.19	0.030	-.0923831	-.0048427
_cons	1.285902	.2192576	5.86	0.000	.853304	1.7185

B. ROA (logged) Aggregated Market

Source	SS	df	MS	Number of obs =	171
				F(3, 167) =	21.13
Model	35.2808567	3	11.7602856	Prob > F =	0.0000
Residual	93.5044387	167	.55657404	R-squared =	0.2740
				Adj R-squared =	0.2610
Total	128.785295	170	.753130383	Root MSE =	.74604

LogRoa	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
LogTotalAssetsLag1year	-1.534241	.2073798	-7.40	0.000	-1.943647	-1.124835
MeanCenteredLogfulltimeemplo	-.2102836	.0747845	-2.81	0.006	-.357922	-.0626451
MarketCapLag1year	1.733041	.2312965	7.49	0.000	1.276419	2.189663
_cons	-.3213273	1.185716	-0.27	0.787	-2.662151	2.019497

Source	SS	df	MS	Number of obs =	171
				F(5, 165) =	12.89
Model	36.0168315	5	7.20336631	Prob > F =	0.0000
Residual	92.7684639	165	.558846168	R-squared =	0.2797
				Adj R-squared =	0.2580
Total	128.785295	170	.753130383	Root MSE =	.74756

LogRoa	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
LogTotalAssetsLag1year	-1.516416	.2084365	-7.28	0.000	-1.927944	-1.104888
MeanCenteredLogfulltimeemplo	-.1863314	.0780449	-2.39	0.018	-.34042	-.0322428
MarketCapLag1year	1.722217	.2319672	7.42	0.000	1.264231	2.180204
Promotion	-.2058338	.20762	-0.99	0.323	-.6157499	.2040824
Prevention	-.0727977	.113514	-0.64	0.522	-.2969149	.1513195
_cons	-.1698923	1.195795	-0.14	0.887	-2.53082	2.191035

C. ROA (logged) Sweden

Source	SS	df	MS	Number of obs =	75
				F(3, 71) =	12.55
Model	16.8748943	3	5.62496476	Prob > F =	0.0000
Residual	31.8240537	71	.448226108	R-squared =	0.3465
				Adj R-squared =	0.3189
Total	48.698948	74	.658093891	Root MSE =	.6695

LogROA	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
LogTotalAssetsLag1year	-1.490224	.2979875	-5.00	0.000	-2.084394	-.8960538
MeanCenteredLogfulltimeemplo	-.415623	.0997719	-4.17	0.000	-.6145625	-.2166836
MarketCapLag1year	1.645775	.3482765	4.73	0.000	.9513311	2.340218
_cons	.1625476	1.626268	0.10	0.921	-3.08014	3.405235

Source	SS	df	MS	Number of obs =	75
				F(5, 69) =	7.57
Model	17.2574178	5	3.45148356	Prob > F =	0.0000
Residual	31.4415302	69	.45567435	R-squared =	0.3544
				Adj R-squared =	0.3076
Total	48.698948	74	.658093891	Root MSE =	.67504

LogROA	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
LogTotalAssetsLag1year	-1.520266	.3027488	-5.02	0.000	-2.124233	-.9162984
MeanCenteredLogfulltimeemplo	-.458903	.1142364	-4.02	0.000	-.6867985	-.2310076
MarketCapLag1year	1.687333	.3540811	4.77	0.000	.9809603	2.393705
Promotion	.0705952	.2599857	0.27	0.787	-.4480622	.5892526
Prevention	.1159651	.1279397	0.91	0.368	-.1392676	.3711978
_cons	-.1267537	1.669875	-0.08	0.940	-3.458064	3.204557

D. ESG Sweden

Source	SS	df	MS	Number of obs =	81
				F(2, 78) =	21.77
Model	10423.756	2	5211.87799	Prob > F =	0.0000
Residual	18673.4986	78	239.403828	R-squared =	0.3582
				Adj R-squared =	0.3418
Total	29097.2546	80	363.715682	Root MSE =	15.473

ESG	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
MarketCapLag1year	15.01715	3.393929	4.42	0.000	8.260359	21.77395
MeanCenteredLogfulltimeemplo	5.891875	2.097807	2.81	0.006	1.715462	10.06829
_cons	-99.49681	35.40322	-2.81	0.006	-169.9792	-29.01441

*** p < .

Source	SS	df	MS	Number of obs =	81
				F(4, 76) =	11.25
Model	10819.201	4	2704.80025	Prob > F =	0.0000
Residual	18278.0536	76	240.500705	R-squared =	0.3718
				Adj R-squared =	0.3388
Total	29097.2546	80	363.715682	Root MSE =	15.508

ESG	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
MarketCapLag1year	14.5955	3.422923	4.26	0.000	7.778157	21.41284
MeanCenteredLogfulltimeemplo	6.832947	2.365852	2.89	0.005	2.120944	11.54495
Promotion	-.251394	5.8435	-0.04	0.966	-11.88973	11.38695
Prevention	-3.676922	2.88211	-1.28	0.206	-9.417141	2.063296
_cons	-91.30386	36.1567	-2.53	0.014	-163.3162	-19.29155

E. ROA USA

Source	SS	df	MS	Number of obs =	106
				F(2, 103) =	24.84
Model	1429.46701	2	714.733503	Prob > F =	0.0000
Residual	2991.87876	103	28.768065	R-squared =	0.3233
				Adj R-squared =	0.3103
Total	4421.34576	105	41.7108091	Root MSE =	5.3636

ROATotalAssetsPercent	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
LogTotalAssetsLag1year	-10.52453	1.820914	-5.78	0.000	-14.13547	-6.913594
MarketCapLag1year	13.41515	1.921544	6.98	0.000	9.604652	17.22564
_cons	-23.65799	9.248576	-2.56	0.012	-41.99826	-5.317713

Source	SS	df	MS	Number of obs =	106
				F(4, 101) =	15.78
Model	1689.94609	4	422.486522	Prob > F =	0.0000
Residual	2731.39968	101	26.7784282	R-squared =	0.3822
				Adj R-squared =	0.3580
Total	4421.34576	105	41.7108091	Root MSE =	5.1748

ROATotalAssetsPercent	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
LogTotalAssetsLag1year	-10.13818	1.767877	-5.73	0.000	-13.64476	-6.631605
MarketCapLag1year	13.52616	1.85594	7.29	0.000	9.84491	17.20741
Promotion	-4.363229	2.02442	-2.16	0.033	-8.378655	-.3478019
Prevention	-3.847236	1.629183	-2.36	0.020	-7.078712	-.6157591
_cons	-22.40788	8.941411	-2.51	0.014	-40.14312	-4.67263

F. ESG (logged) USA

Source	SS	df	MS	Number of obs =	106
				F(1, 104) =	12.09
Model	.101705771	1	0.101705771	Prob > F =	0.0007
Residual	.882990733	104	0.008409436	R-squared =	0.1033
				Adj R-squared =	0.0947
Total	.984696504	105	0.00928959	Root MSE =	.0917

LogESG	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
MarketCapLag1year	.0518312	0.014904	3.48	0.001	.0222794	.081383
_cons	3.853334	0.1570737	24.53	0.000	3.541885	4.164782

Source	SS	df	MS	Number of obs =	106
				F(3, 104) =	3.99
Model	.102584619	3	0.034194873	Prob > F =	0.0098
Residual	.882111885	102	0.008564193	R-squared =	0.1042
				Adj R-squared =	0.0781
Total	.984696504	105	0.00928959	Root MSE =	.09254

LogESG	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
MarketCapLag1year	.0518325	0.0153262	3.38	0.001	.0214366	.0822285
Promotion	.0045183	0.0359787	0.13	0.900	-.066837	.0758735
Prevention	-.008385	0.0291352	-0.29	0.774	-.0661677	.0493977
_cons	3.856085	0.1588411	24.28	0.000	3.541061	4.171109