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The Association of Board Independence and Ownership Concentration with CSR

Determinants of the relationship between CSR-engagement and Financial Performance

by
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Abstract

Title:	The Association of Board Independence and Ownership Concentration with CSR -A study of the determinants of the relationship between CSR-engagement and Financial Performance
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Five Key Words:	Corporate Social Responsibility, Financial Performance, Board Independence, Ownership Concentration, Nordics
Purpose:	The purpose of this thesis is to examine the relationship between CSR and financial performance in the Nordic region. Also, this thesis aims to examine corporate governance mechanisms in connection to ownership structure and CSR.
Methodology:	This thesis applies a deductive and quantitative approach, using panel data and multivariate regressions.
Theoretical Perspective:	The theoretical frameworks applied in this thesis are the Agency Theory, Stakeholder Theory, Instrumental Stakeholder Theory, Stakeholder Influence Capacity, Resource Dependency Theory, Free Cash Flow Theory, Availability of Funds hypothesis.
Empirical Foundation:	The sample consists of 1215 firm-year observations of listed firms in the Nordic region during the time period from 2014 to 2018.
Conclusions:	The results of this thesis show a positive relationship between CSR-engagement and financial performance. We also find that board independence positively influences CSR, but find no significant results for a moderating effect of ownership structure on the relationship between board independence and CSR.

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1. Introduction

1.1 Background

The Nordic countries are cited as global leaders within the field of corporate social responsibility (CSR) and sustainability, with the highest environmental standards in the world. For instance, the Global 100 index (2020)[1] reported that the three world's most sustainable firms are Nordic, and Midttun et al. (2015) considered the region to be the most eminent regarding CSR practices. While the Nordic region has had a clear sustainability focus for many years, the SDG's stipulated by the Paris agreement accelerated the initiatives to align the financial markets with the sustainability development. The SDG's cover a broad spectrum of issues ranging from decent work and economic growth, climate change and the eradication of poverty to gender equality, and provided firms with concrete frameworks to act (United Nations, 2019). In 2019, the UN published the SDG progress index[2] , where Denmark, Sweden, and Finland were ranked top three, with Norway and Iceland close behind as number eight and fourteen, respectively. This is not surprising, considering respective governments are seen as leaders in the regulation of global and environmental concerns (Kuisma, 2007; Lafferty & Meadowcroft, 2000), which makes the Nordic region particular interesting to study. It seems as the Nordic countries are racing towards becoming more sustainable in various areas, nonetheless within CSR. The Nordic co-operation announced that they are aiming to be best in Europe through the promotion and stimulating of responsible business to conduct shared benefits of Nordic firms and society at large (Nordic Co-operation, 2020). Although sustainability standards differ between countries, Gjølberg (2010) noted that the Nordic region shared the same conceptualization of CSR, which allows for a shared vision.

Despite the long-standing tradition of social responsibility with roots in the Nordic culture (Lenssen et al., 2006), the intensity of the movement suggests that it is connected with corporate governance mechanisms and institutions. As the Nordic countries share political-economic institutions, the Nordic model of corporate governance is expected to be one of the reasons why the region is amongst the most conscientious with regards to CSR practices (Midttun et al., 2015). In 2005, all Nordic stock exchanges had introduced a corporate governance code based on the "comply or explain principle" (Lekvall et al., 2014). Although the code is not legally

[1] The *Global 100 Index* is a ranking of the world's most sustainable firms. It is compiled by Corporate Knights and the latest iteration of the index is released at the World Economic Forum in Davos, Switzerland each year (Simon et al., 2020).

[2] The *SDG Index* is intended as a tool for governments and other stakeholders to measure *progress* on the *Sustainable Development Goals* (*SDGs*) (United Nations, 2019)

binding, the implications for the "comply or explain" principle is that firms deviating from guidelines set in the code must explain why (Moursli, 2020). The introduction of the code included one of the most distinctive features of the Nordic model of corporate governance, which is the independence requirement that requires large firms to have a majority-independent board[3]. As independent directors are more sensitive to the externalities of economic activities and more efficient in the monitoring of management (Hermalin, 2005), it may have fuelled CSR engagement in the Nordics. This is due to the strategic nature of the CSR decision, where board composition and preferences of directors are likely to influence the extent of engagement (Jo & Harjoto, 2012).

The Nordic region is characterized by concentrated ownership, which makes the monitoring of majority shareholders of severe importance. Especially given their control rights and places on the board, which allows them to pursue their interests. (Lekvall et al., 2014) This institutional environment fosters a type-two agency problem between minority and majority shareholders, which, in this context, is more important than the agency problem between management and shareholders (Shleifer & Vishny, 1997). If large shareholders engage in opportunistic behavior at the expense of other stakeholders, they are likely to be reluctant towards an independent board, since it can reduce their expropriation opportunities (La Porta et al., 1999). However, the corporate governance code takes this into account and requires independent directors to be independent of both management and majority owners. Despite this, Lekvall et al. (2014), Ahmad et al. (2014), and Chen and Jaggi (2000) asserts that the effectiveness of independent directors reduces under the influence of a controlling shareholder.

1.2 Problematisation

The research on CSR is quite extensive, focusing mainly on the implications of CSR on financial performance (Waddock & Graves, 1997; Ruf et al., 2001; Dowell et al., 2000; Velte, 2017; McWilliams & Siegel, 2000). Despite the broad interest, the results are inconclusive and mainly focused on the U.S market, discussing primarily agency conflicts between management and shareholders. As no studies to date have looked into how CSR affects financial performance in the Nordic region that are leaders within the field, there is a need to examine this further. In doing so, we will understand if the Nordic engagement in CSR solely derives from social aspects and tradition, or if there are financial arguments for it as well.

[3] The corporate governance models of the Nordic region is discussed further in Chapter 4.

Despite the broad interest in CSR, there is a limited number of studies that have examined the determinants of CSR. Previous research links the legal system and robust corporate governance mechanisms to more CSR, considering its role in mitigating agency conflicts and reduce information asymmetry (Jo & Harjoto, 2012; Fernández-Gago et al., 2014; Mallin & Michelon, 2011). Given the mixed evidence in the literature, showing both a positive and negative relationship between board independence and CSR, it is evident that firm-specific characteristics' are likely to influence the relationship. The ownership structure is one of the traits' that may have an important role. This is because the presence of large shareholders could potentially impact the behavior of independent directors and lead to less CSR engagement if they are seeking private benefits at the expense of other stakeholders' (Chen & Jaggi, 2000). Furthermore, corporate governance mechanisms should not be studied in isolation, and since most literature to date has disregarded the institutional context, there is a need to investigate this further. More specifically, with a sample consisting of all Nordic listed firms, this thesis address how corporate governance mechanisms relate to CSR under the influence of a controlling shareholder. Considering the region is amongst the most conscientious with regards to CSR practices (Lenssen et al., 2006; Midttun et al., 2015), the findings in this thesis act as best practice examples.

1.3 Purpose & Research Questions

The purpose of this thesis is to examine the relationship between CSR and financial performance in the Nordic region. Also, this thesis aims to examine corporate governance mechanisms in connection to ownership structure and CSR

- Is there a positive relationship between CSR and financial performance in the Nordics?
- Do corporate governance mechanisms influence CSR engagement?

1.4 Findings & Contributions

The empirical studies on the relationship of corporate governance mechanisms in the CSR and financial performance relationship in the Nordic context are limited, and the few studies to date lack robustness due to small sample sizes, imperfect variables, and scope of analysis. As most previous studies related to CSR, financial performance, and the determinants of CSR has focused on the U.S market, this thesis will fill a research gap in the Nordic environment. Previous studies also fail to examine corporate governance in connection to institutional context and other firm-specific characteristics' like ownership structure that is likely to affect the decision to invest in CSR. Thus, the study aims to contribute to research within two areas.

Firstly, this study aims to identify the connection between CSR engagement and financial performance in the Nordics. Secondly, this study aims to identify the drivers behind the strategic decision to engage in CSR activities by analyzing corporate governance mechanisms in connection with ownership structure while considering the institutional context.

Our findings display a positive relationship between CSR engagement and financial performance. We also find that having a higher degree of independent directors increases CSR engagement, but find no significant results for a moderating effect of ownership structure on the relationship between board independence and CSR. To the best of our knowledge, this is the first study undertaken in the unique institutional context of the Nordic region. The results provide new insights on how board independence and concentrated ownership relate to each other, CSR and financial performance.

2. Theoretical Background

This chapter presents related theories within the field, essential to understanding the underlying ideas of CSR, financial performance, and the determinants of CSR engagement. It also discusses how the theories relate to our research question and serve as the foundation for our hypothesis-development, which follows in the next chapter.

2.1 CSR & Financial Performance

According to classic neo-liberal theory, the sole purpose of a firm is to maximize shareholder value (Friedman, 1970). Expenditures on social responsibility should not be seen as strategic decisions, but rather as additional costs that would lower net financial performance (Vance, 1975). Following these views, the expectations of a relationship between CSR engagement and firm performance ought to be negative. Further support for a negative relationship is found in Agency theory, introduced by Jensen and Meckling (1976). The theory has its foundation in the principal-agent conflict that arises from the separation between ownership and control. It is further based on the notion of information asymmetry, where information can be purchased, sold, and transferred between parties (Eisenhardt, 1989). It suggests that firms consist of a collection of self-interested opportunistic agents, which are unlikely to safeguard the interests of the principle. Information asymmetry makes it difficult and expensive for the principles to monitor the agent's behaviour. Furthermore, agents and principles could have different financial incentives (ibid). The agents, in the context of a particular firm, might steer the firm to engage in CSR activities to foster their reputation rather than maximizing shareholder wealth (Barnea & Rubin, 2010). This coincides with the views of Friedman (1970), which implied that engaging in CSR leads to extra costs, which will only benefit the managers' reputation through perception, and not the shareholders.

On the other hand, Stakeholder Theory suggests that management must consider the interests of all stakeholders, not only the shareholders (Freeman, 1984). Freeman (1984) defines stakeholders of a firm as "any group or individual who can affect or is affected by the achievement of the organization's objectives." The theory expands the responsibilities of the firm beyond profit maximization and thus include social responsibilities. Dowling and Pfeffer (1975) suggest that the values of a firm need to be in line with the societies to survive. Considering that the costs for a firm with a good reputation are lower, investments in CSR could be viewed as a competitive advantage that could improve financial performance (Cornell & Shapiro, 1987). Firms engaging in sustainability activities are also more likely to attract and retain a higher quality of workforce (Turban & Greening, 1997; Greening & Turban, 2000). In addition, sustainable activities can raise awareness and increase demand for a firm's products,

which reduces price sensitivity among consumers (Sen & Bhattacharya, 2001). These arguments should therefore warrant a positive relationship between CSR engagement and financial performance.

Donaldson and Preston (1995) refined the stakeholder theory and presented the Instrumental Stakeholder Theory as a means to address firms' social responsibilities. The essence of the theory is the cause and effect relationship between stakeholders' relationship and financial performance, where CSR activities taken in the interest of stakeholders' ultimately is beneficial for the shareholders (ibid). Thus, Instrumental Stakeholder Theory link shareholder value maximization through the impact of the firm's CSR engagement on firm value. Similar to the Instrumental Stakeholder Theory, Barnett (2007) introduced the concept of Stakeholder Influence Capacity (SIC), which asserts that CSR investments improve the firms' relationship with its stakeholders, eventually enough to off-set the costs of CSR investments. A distinction between investments to foster managers' reputation and investments aimed to improve stakeholders' relationship was made. According to Barnett (2007), only the latter could have a positive effect on financial performance. SIC refers to "the ability of a firm to identify, act on, and profit from opportunities to improve stakeholder relationships through CSR," but the ability to do so is accumulated from all previous CSR investments (Barnett, 2007; Barnett & Salomon, 2011). If a firm has no previous CSR-related investments, SIC is low, and new sustainability-related investments might be seen as "window-dressing." As more investments are carried out, the capacity increases as trustworthiness increase, which positively affect financial performance in a cumulative manner. This exponential positive impact of CSR on financial performance might, therefore, explain a U-shaped relationship.

Lastly, McWilliams and Siegel (2000) presented a theory to explain a neutral relationship. Management makes rational decisions to maximize profit for the firm, and CSR engagement stems from the demand of society and other stakeholders' (ibid). By investing in CSR, the firm's signal their high quality to the market. This has a positive impact on reputation and can increase sales or lead to better margins through more beneficiary terms with suppliers (McWilliams & Siegel, 2000). However, all firms send similar signals, which reduces their effectiveness. Combined, the theory implies a neutral relationship between investments in CSR and financial performance.

2.2 Board Independence & CSR

Having independent directors on the board is important for two reasons. Firstly, they have an advisory role in supporting the board of directors with expertise (Adams & Weisbach, 2010),

and they mitigate agency costs. Literature investigating independence characteristics conveys that independence among the board of directors enables effective corporate governance mechanisms. According to Agency and Stakeholder theory, boards are installed to mitigate the problems that arise due to separation between ownership and control. The board should safeguard the interest of the shareholders from management's opportunistic behaviour (Donaldson & Preston, 1995). Having a higher degree of independence on the board could contribute to more effective monitoring and control over management, which enables the board to perform its responsibilities to benefit the stakeholders as well as hinder opportunistic behaviour (Birindelli et al., 2018; Hermalin, 2005).

Furthermore, many scholars have argued that corporate governance mechanism affects how the board performs its function. In support of this, Pfeffer and Salancik (1978) developed the Resource Dependency Theory, which views the firm as an open system dependent on constituents in the external environment. The members of the board are chosen to contribute with beneficial resources to strengthen the relationship with the external environment (Hillman et al., 2000). Having more independent directors leads to a more heterogeneous board and will facilitate resources, legitimacy, and information (Mallin & Michelon, 2011). Since their compensation is not tied to financial performance, they will also be more sensitive towards the society's need and thus engage more in CSR (Ibrahim et al., 2003). In addition to this, independent directors are perceived to have a long-term perspective and are likely to exert their influence on managers to safeguard stakeholders' claims. Encouraging CSR is also beneficial from a personal point of view since it favors their personal reputation (Mallin & Michelon, 2011). This will make them even more inclined to pursue CSR initiatives (Ntim & Soobaroyen, 2013). In conclusion, these arguments imply a positive relationship between the independence of the board and CSR investments.

Lastly, Baron et al. (2008) suggested that CSR engagement is dependent on the resources available to managers and the discretion they have to serve their interests. Thus, managerial entrenchment increases with information asymmetry and decreases with external monitoring. This concept is also called Free Cash Flow Theory, which suggests that excess funds above what is needed to invest in NPV-positive investments might be used to invest in projects which serve the managers' personal interest, but is value-destroying for the firm (Jensen & Meckling, 1976). Considering that social activity is related to a high level of managerial discretion, the initial engagement and continuation of social work could be dependent on whether there is a

surplus of financial resources. This notion is also what Fernández-Gago et al. (2014) refer to as the Availability of Funds hypothesis.

2.3 Board Independence, Ownership Concentration & CSR

To understand corporate governance mechanisms, it is vital to take the institutional environment into account simultaneously. Bebchuk and Weisbach (2010) argue that the decision-making process of independent directors is highly dependent on the institutional environment. The implication for this study is the Nordic ownership structure, highly characterized by concentrated ownership (Lekvall et al., 2010). In the presence of a dominating shareholder, a collision of interests may appear between independent directors and majority shareholders' attitudes towards CSR engagement.

Agency theory (Jensen & Meckling, 1976) provides a theoretical description to explain the connection between ownership structure and CSR engagement. Due to the diverging interests between managers and shareholders, as well as information asymmetry, managers might pursue self-serving activities rather than acting in the interests of the shareholders (ibid). The problems arise because of the difficulty for shareholders to monitor management, whose objectives might differ. Investing in CSR satisfies their own preferences as it fosters their reputation (Barnea & Rubin, 2008). In firms with dispersed ownership, the expectations would be that investments in CSR are carried out to a greater extent (Shleifer & Vishny, 1986). Having a higher fraction of ownership concentration can reduce this type of agency conflict, as large shareholders function as a supervision mechanism of management (Jo & Harjoto, 2011), which diminishes the need for CSR disclosure (Fama & Jensen, 1983).

However, it gives rise to a more severe agency conflict between minority and majority shareholders (Moursli, 2020). In the Nordic Corporate Governance model, large shareholders are provided with a lot of control mechanisms that enable them to influence strategic decision-making and take places on the board (Lekvall et al., 2014). The risk is thus that they extract corporate resources to engage in activities that benefit them, and expropriates the interests of minority shareholders. Furthermore, large shareholders are less induced to invest in CSR since they have to bear the cost of expenditures (Barnea & Rubin, 2010). Also, if the majority shareholders engage in opportunistic behavior at the expense of other stakeholders' interests, they might be reluctant towards having independent directors on the board (Moursli, 2020). Particularly since the nature of independent directors is to protect all stakeholders' interests, and having them should reduce expropriate opportunities for controlling shareholders (La Porta et al., 1999).

Finally, Lekvall et al. (2014) suggest that the effectiveness of independent directors in concentrated ownership firms decreases. This is in line with the findings of Chen and Jaggi (2000), that conveyed that independent director under the influence of large shareholders, took decisions in favor of them instead of other stakeholders' interests. From this point of view, the expectations would be that concentrated ownership negatively influences the positive relationship between independence and CSR.

3. Literature Review & Hypothesis Development

This chapter aims to provide a better understanding of previous research related to our topic and how the theories were used to explain the results. As this thesis is constructed from three main hypotheses, it is divided accordingly. At the end of each sub-section, a hypothesis is developed related to that specific sub-topic.

3.1 CSR & Financial Performance

The interest in CSR has increased extensively during the last years and has fostered research on the relationship between CSR and financial performance. Despite the broad interest and several studies, no consensus has been reached on CSR and its financial implications.

One of the earliest studies was conducted by Waddock and Graves (1997), which found empirical support for a positive relationship between CSR and financial performance, using KLD ratings and accounting-based measures on a sample of S&P 500 firms. The positive link was attributed to conscious management that sees firms' social responsibilities as a means to improve operational performance. Ruf et al. (2001) extended their research and examined how CSR and financial performance are related through accounting-based measures. Using a sample of 496 U.S firms, the authors established a positive relationship between CSR and Growth in sales, ROS, and ROE, implying a positive relationship between CSR and financial performance. The effects of Growth in Sales were present in the current and subsequent years, which indicates both short- and long-term benefits of improving CSR. The results rationale is similar to Waddock and Graves (1997), and support the idea that shareholders are beneficial when the firm meet all stakeholders' demand.

Besides, some studies examine CSR and financial performance from a market-view. Dowell et al. (2000) examined firms listed on S&P 500 between 1994 and 1997 and found support of firms with higher global environmental standards having higher market values, measured as Tobin's Q, and therefore being rewarded for engaging in social activities. A more recent study conducted by Velte (2017) incorporated both accounting-based and market-based measures of financial performance, using a sample of 412 firm-year observations from the German prime standard between the years of 2010-2014. The results displayed a positive relationship between ESG-score and ROA but found no impact on Tobin's Q.

Although most studies establish a positive relationship between CSR and financial performance, some findings reveal the opposite. Brammer et al. (2006) examined the link between CSR-engagement and stock performance in 451 firms on the FTSE All-Share Index during 2002. The findings demonstrate that firms with high CSR-ratings underperformed in

comparison to firms with low CSR ratings. The authors relate these findings to the expenditures of social responsibility activities, which destroys shareholder value. Furthermore, they noted that investors accept lower returns when investing in socially conscious firms. In addition, Wagner et al. (2002) found a negative relationship between CSR and financial performance, using data within the pulp and paper industry. Similarly to Brammer et al. (2006), the authors argue that the relationship can be explained by the net-negative effects of mitigating pollution efforts for firms, i.e., the expenditures of pollution abatement measures outweigh the financial benefits gained from the efforts.

López et al. (2007) used a sample of 55 firms included in the Dow Jones Sustainability Index and 55 firms included in the Dow Jones Global Index during the years of 1998 and 2004, to compare differences in financial performance. A negative relationship was established and attributed to the expensive, non-profit generating expenditures of CSR investments. However, the relationship was only present in the first years, indicating a possible diminishing negative relationship, which potentially could turn positive. López et al. (2007) did not confirm a U-shaped relationship, but other studies investigated the possibility. Barnett and Salomon (2011) hypothesized that CSR-expenditures improved stakeholder relationships, and would eventually off-set the heavy expenditures related to CSR investments. More specifically, using a sample of 1.214 publicly listed firms in the US, the authors find that firms with little investments in CSR will see a negative relationship. As investments increase, the relationship turns positive, which implies a U-shaped relationship between CSR and financial performance. The findings were explained through increased trustworthiness with more investments, where there is a breaking point where a firm's investments in CSR is no longer seen as window dressing, but genuine efforts to a more sustainable world.

Lastly, some studies found non-statistically significant results. McWilliams and Siegel (2000) suggested that previous studies are flawed due to failure to include a control variable for R&D since it has long-standing literature linking R&D to financial performance, and by excluding R&D overestimates other variables. After controlling for R&D, they found empirical evidence that CSR does not have a statistically positive effect on financial performance, with a sample of 524 US firms between 1991 and 1996. In line with this result, Nelling and Webb (2008) used time-series data on both accounting-based and market-based measures on 600 US firms from 1993 to 2000 and found that the relationship was much weaker than expected. The results displayed that strong stock performance leads to an increase in investments related to CSR activities focusing on employee relations, but not that CSR itself affects financial performance.

Based on the presented theories and previous findings, we formulate our first hypothesis as follows:

H_1: There is a positive relationship between CSR and Financial Performance

3.2 Board Independence & CSR

Studies examined Board Independence, and CSR engagement has resulted in various outcomes. Shaukat et al. (2015) hypothesized that firms with a larger proportion of independent directors engaged more in CSR, considering the argument of independent directors serving as better monitors of the stakeholders' interests. The study covered UK listed firms and consisted of 2,028 firm-year observations between 2007-2016, and found empirical support for a positive link between Board Independence and CSR engagement. This was in line with previous findings of Ntim and Soobaroyen's (2013), which studied 291 non-financial firms listed on the Johannesburg Stock Exchange between 2002 and 2009. More specifically, the results implied that board independence facilitates legitimacy, efficiency, and increased CSR practice by exerting their influence on managers to safeguard stakeholders' claims. On the same note, Jo and Harjoto (2012) based their study on 12.527 firm-year observations from 1993-2004 in the United States and found a positive connection between independent directors and corporate social performance, linking the effect of independent directors to reduced conflicts among different stakeholders. Furthermore, Pham and Tran (2019) collected a dataset of 244 Fortune World's Most Admired (FWMA) corporations from 2005 to 2011. A positive relationship between board independence and CSR in two-tier firms could be established, but no significance was found for firms with a one-tier board structure.

Fernández-Gago et al. (2014) used a sample of 209 firm-year observations of Spanish listed firms on the IBEX35 for the period 2005 to 2010. Their findings suggest that the percentage of independent directors affects firms' CSR engagement and that the effect is moderated by the resources available to the firm. The authors name the moderation effect of available resources *Availability of Funds hypothesis*, which suggests that even if firms wish to engage in CSR activities, their ability might be limited by their available funds. Similarly, Mallin and Michelon (2011) used independent directors as a measure for corporate governance and its impact on CSR. The sample covered 2005-2007 and included 100 firms from the Best Corporate Citizens firms' index. Their findings demonstrated that having a higher degree of independence enhanced CSR engagement, based on two arguments. Firstly, independent directors exert their influence on management to increase the extent of CSR engagement and reduce agency

conflicts. Secondly, independent directors are motivated to invest in CSR, considering the personal reputational benefits it brings.

Although it seems as most literature agrees on a positive relationship, some studies have found a negative connection between board independence and CSR engagement. Ahmed et al. (2006) examined 450 non-financial firms listed on the main market of Bursa Malaysia from 2008 to 2013 and established a negative relationship. High ownership concentration in Malaysian firms was provided as an explanation, suggesting that independent directors have difficulties executing the monitoring tasks effectively because of the influence of controlling shareholders. Birindelli et al. (2018) found similar results when examining 108 listed banks in Europe and the United States for the period 2011-2016. The negative relationship is justified by suggesting that a higher proportion of independent directors is self-defeating and negatively affects the expertise, experience, and reputation that only insiders could provide. In the same vein, Walls et al. (2012) found support for a negative link between board independence and environmental performance using a data set of 2002 firm-year observations from the S&P 500. Some scholars did not establish any relationship between board independence and CSR performance. Hussain et al. (2016) studied 100 US companies from the Global Fortune 2013 list, collecting data from the period of 2007 to 2011, and found that there is no significant correlation between board independence and CSR.

CSR is a strategic decision made by the board of directors, which can be influenced by corporate governance mechanisms. It can also be dependent on the excess resources available. By combining the insights from theory with the findings of previous literature, we formulate the following two hypothesizes:

H_{2a}: There is a positive relationship between Board Independence and CSR engagement

H_{2b}: The relationship between Board Independence and CSR engagement is impacted by excess funds

3.3 Board Independence, Ownership Concentration & CSR

Ownership concentration is an important factor when it comes to organizational decisions and actions (Blair, 1995). Dam and Scholtens (2012) suggest that it has an effect on both financial returns and the social performance of a company, and a firm's involvement in CSR activities could thus be dependent on the ownership structure of the firm. In a study conducted in 2012, they examined the relationship between ownership concentration and CSR Policies of European Multinational Enterprises. The authors hypothesized a negative relationship due to the trade-

off between social- and financial performance, where the benefits do not outweigh the costs of CSR for large shareholders on a personal level. The study consisted of firm-level data for 700 European firms in 16 countries during 2005 and found empirical evidence that ownership concentration has a negative impact on CSR policies. Moreover, the results implied that the higher percentage of ownership concentration, the worse corporate social performance. This relationship was further examined by Ducassy and Montandraub (2015), using a sample of 41 listed French firms during 2011. In line with the findings of Dam and Scholtens (2012), they found a negative correlation between ownership concentration and CSR. In addition, Walls et al. (2012) reported that ownership concentration harmed environmental performance using a sample of 2.002 firm-year observations. Chen and Jaggi (2000) hypothesized that independent directors in firms with large controlling shareholders may become impaired and that their influence would be weaker than in firms with dispersed ownership, which would lead to less disclosure. By adopting a sample of the 100 largest firms in Hong Kong from 1993-1994, their findings displayed that the effectiveness of independent directors was reduced under the influence of controlling shareholders, which led to less disclosure.

Although most previous literature finds a negative relationship, some studies have found a positive relationship between ownership concentration and CSR. Barnea and Rubin (2010) employed a data set of 3000 U.S Corporations from the Russell 3000 index and hypothesized that large shareholders overinvest in CSR to favor their interests and reputation. By examining the relationship between ownership concentration and CSR, they found empirical evidence for a positive relationship between Ownership concentration and CSR, meaning that firms with larger shareholders tend to invest more in socially responsible activities. Godos-Díez et al. (2014) also hypothesized a positive relationship, considering the long-term perspective of large shareholders. Having a long-time frame enables investments in sustainable projects that will increase profitability over time, instead of focusing on meeting short-term objectives. Furthermore, large owners have an incentive to engage in CSR to maintain and foster their reputation since they are closely connected with the firm they possess. With a sample of 101 unlisted Spanish firms in 2008, the authors were able to establish a positive and significant relationship between ownership concentration and CSR engagement.

The fourth in this study builds on Hypothesis 2a but takes the institutional context of the Nordic region into account. As the authors believe that high ownership concentration affects the independent directors' monitoring of management, we expect that concentrated ownership negatively influences the positive relationship between independent directors and CSR. By

combining the previous insights from the literature review with the theory laid out earlier, we arrive at our final hypothesis of this paper:

H_3: The relationship between board independence and CSR engagement is impacted by ownership concentration

4. The Nordic Institutional Context

In the subsequent chapter, we describe the institutional context of the Nordic region to provide a better understanding of the scope of our study. It brings up the conceptualization of CSR, the Nordic Governance Model, the independence requirement, and ownership structure. Considering this study is carried out using data for four different countries, we also present differences and similarities in terms of formal structure. The similarities are resolute and enable us to analyze the region as a whole in the remaining part of the paper.

4.1 Corporate Social Responsibility in the Nordic Region

Corporate Social Responsibility (CSR) and related disclosures have raised a lot of attention in the academia and business world. With firms' global presence and the associated consequences for society and climate, the idea of CSR has grown more influential in the international economic and political agenda (Gjølberg, 2010). The literature defining and theorizing CSR is broad and cannot be analyzed in-depth here (see Agudelo et al. (2019) for a review). However, The European Commission (2020) defines CSR as the following:

"(...) a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis."

Despite the definition, CSR is no longer limited to the voluntary dimension, as governments across the world have introduced policies to promote CSR, acknowledging its importance in creating a sustainable environment. Gjølberg (2010) investigated the characteristics of CSR policies in the Nordic region and found that the government's policies differed in terms of formal structure. However, the similarities of the conceptualization of CSR in the area were much more durable than the differences. An explanation for this was the institutionalized norms and shared normative basis among the countries. Hence, although there is a lack of a shared CSR policy, the Nordic countries share a normative heritage, which induces a shared Nordic Model of CSR at the conceptual level (ibid).

To measure CSR, this study has used Bloomberg's ESG-score. It is a collective index for all activities that fall within the scope of a firm's CSR activities (Giese et al., 2017). It is based on three pillar scores – environmental, social, and corporate governance (Bloomberg, 2020), where the relative sum of each category is weighted in dimension to its importance. However, there are issues with ESG-score and disclosure. The assessment of a firm's sustainability is a challenging and subjective issue, and ESG measures may be inconsistent due to contextual variations between countries (Buallay, 2019). This necessitates focusing on relatively similar

regions. As the Nordic region share institutionalized norms and heritage, we believe that ESG-score is a suitable proxy for CSR in this paper.

4.2 The Nordic Governance Model

There are vast differences between the Nordic countries in terms of formal structure and ownership identity, but many similarities due to the corporate governance mechanism that is related to law enforcement, political stability, the effectiveness of governance, and accountability (Gjølberg, 2010). Although the regulatory institution forms the basis for the corporate legislation, it builds heavily on self-regulation through corporate governance codes. Denmark introduced the first code in 2001, closely followed by the remaining Nordic countries. In December 2005, all Nordic stock exchanges had a corporate governance code based on the comply or explain principle (Lekvall et al., 2014). It is not legally binding, but if a firm deviates from the guidelines set in the code, they must give an explanation in their annual corporate governance report to why (Moursli, 2020).

One of the most distinctive features of the Nordic corporate governance model is that large owners are given the right to control and take a long-term perspective on the firm effectively (Lekvall et al., 2014). It gives rise to a shortcoming and potential risk of the model, which is the scope of majority shareholders extracting benefits at the expense of minority shareholders (Gilson, 2014). However, the Nordic governance model has a well-developed system of rules to protect the minorities' interest from the abuse of the majority[4] (Thomsen, 2016). The protective system of minority rights is not unique to the Nordic region but has been refined during the years to counterbalance the strong powers given to majority shareholders (Lekvall et al., 2014).

4.3 Ownership structure

The Danish market is characterized by a large number of industrial foundations and non-profit entities that own and operate firms (Eriksson et al., 2001). Norway has substantial government holdings in resource-intense industries such as oil, energy, and banks. More traditional businesses like shipping are controlled by families (La Porta et al., 1999; Oxelheim, 1998). Sweden consists of a few controlling owners, which has been favored from the tradition of

[4] *The principle of equal treatment of shareholder* prohibit the board to take decisions which favour one group of shareholders at the expense at another or the firm. (Lekvall et al., 2014)

The Minority powers to take action principle, enables a minority of shareholders (5% in Denmark and Norway, 10 % in Sweden and Finland) to force resolutions to be taken at the general meeting. (Lekvall et al., 2014)

social democratic governance, labor unions, and family conglomerates (Stafsudd, 2009; Högfeldt, 2005). This has resulted in influential owners that control the board of directors (Carlsson, 2007), where the control has persisted through the usage of dual-class shares[5] (Sinani et al., 2008). Consequently, almost half of the market capitalization is controlled by a few families and institutions. Although foreign and institutional ownership has increased, the owners have been able to hold on to the controlling stakes (Agnblad et al., 2001). The finish stock exchange is characterized by a high fraction of foreign institutional investors. Approximately 43% of the value of the listed companies on Nasdaq Helsinki is owned by foreign investors (Euroclear, 2020). Apart from foreign investors, Finland has large institutional investors, consisting mainly of the Finnish State, pension insurance companies, and investment funds (Lekvall et al., 2014).

4.4 Independence

Board composition is an essential aspect of the Nordic Governance model, and the independence requirement is especially important given the purpose of this study. The concentrated ownership forms a demand for handling issues regarding minority shareholder protection (Jonnergård & Larsson-Olaison, 2016). Although research shows a low extract of private benefits in Sweden (Gilson, 2006), the issue of minority protection needs to be addressed. To counteract opportunistic behavior from large shareholders, Finland, Norway, and Sweden have a distinction between being independent towards the firm and being independent in relation to the largest owners. A majority of the directors should be independent of both the management and the firm. Besides, at least two of the independent directors must be independent of controlling shareholders of the firm that holds 10% of ownership or voting rights (Swedish Corporate Governance Code, 2020; Finnish Corporate Governance Code, 2020; Norwegian Code of Practice for Corporate Governance, 2020). In Denmark, it is recommended that at least half of the directors are independent of the firm, management, and large shareholders (Danish Corporate Governance Committee, 2020)

[5] Dual-class shares give their holders more votes (usually ten) compared with ordinary shares (Cieślak, 2018)

5. Methodology

This chapter aims to provide the reader with the methodology of the study. The chapter begins with a summary of the approach and limitations. Later, a key issue with these kinds of models is discussed before introducing the statistical approach. Finally, specific tests of the data set are presented, which aims to investigate if the statistical approach is suitable given the data of the study.

5.1 Methodological Approach

This thesis first examines the impact of CSR-engagement on the financial performance of firms in the Nordic Region, before investigating Corporate Governance mechanisms which potentially drives firms' CSR engagements. By using theories related to corporate governance mechanisms and firm performance on numerical data, a deductive and quantitative approach has been applied. The foundation of the method is to collect a numerical data set and use it to test one empirically or, as in this case, several hypotheses (Sekaran & Bougie, 2016).

5.2 Delimitations

Considering the limited time-period and scope of this thesis, delimitations have been necessary to carry out the study. Firstly, this study focuses solely on the Nordic region. If possible, it would have been of greater interest to examine the whole European market. However, due to limited data and time constraints, this has not been possible. Thus, our findings apply to firms in the Nordics, but considering the prevailing interest in sustainability in the region, it may not be generalizable. Including more countries would have broadened the statistical inference while increasing the generalisability simultaneously. Secondly, another delimitation concerns our sample, as we only include firms with ESG-ratings for the whole period and only one index of corporate social performance. It would be preferable to construct a new index using primary data to be able to compare the findings. Additionally, our study only included data for five years due to inadequate availability of data. Several variables had to be handpicked from annual reports, a time-consuming matter that limited the studied period.

5.3 Endogeneity

The endogeneity problem is a common issue in econometric models and is defined as a correlation between the error term and explanatory variables in a regression (Wooldridge, 2016). While the problem of endogeneity is more or less present in every econometric study to some degree, there are ways to minimize it. One such solution is to use a Fixed- or Random Effects model in panel-data settings. The fixed-effects model is commonly used in studies within the subject of this paper (Nelling & Webb, 2008; Barnett & Salomon, 2011; Velte, 2017) and controls for time-fixed effects in the error term. More specifically, the fixed effects model

removes the mean of the variables and, therefore, also the part of the error term that does not vary over time (Roberts & Whited, 2012; Wooldridge, 2016). Since the fixed effects model has the ability to reduce the impact of endogeneity, as well as is used by similar studies, fixed-effects models are used in this paper as well.

Another issue caused by endogeneity is the issue of omitted variable bias. As the decision to invest in socially responsible activities and obtaining a higher ESG-score could be dependent on the cost and benefits associated with CSR, there is a likelihood that the decision is based on firm-specific characteristics that are not controlled for in the study. If this is not taken into account, it might result in endogeneity and biased estimates in the included variables as they pick up the effects of variables not included. However, the risk of not adding relevant variables in the statistical model is difficult to eliminate. By including all commonly used variables within the field, the risk is minimized. The mitigation of omitted variables is also especially important, considering that Adams and Ferreira (2009) argue that endogeneity problems arise due to omitted variables that have a mutual impact on both financial performance and the variables explaining its' variation. This issue of omitted variables could be avoided by lagging the explanatory variables with one period, which is what has been done in this study to counter this issue.

By lagging the explanatory variables, the problem of reverse causality is also reduced. Reverse causality is also a problem of endogeneity. It refers to the notion that the dependent variable explains the variation in one of the explanatory variables instead of, what is expected, the other way around (Wooldridge, 2016). Furthermore, we believe that the missing observations in our sample is random over time and do not suffer from selection bias, which also lowers the risk of biased results.

5.4 Econometric Models

The initial hypothesis of this paper concerns the relationship between firms' engagement in CSR activities and financial performance. Following previous literature (Waddock & Graves, 1997; Ruf et al., 2001; López et al., 2007; Dowell et al., 2000; Velte, 2017; Wagner et al., 2002, McWilliams & Siegel, 2000; Nelling & Webb, 2008), this paper conducts several multivariate OLS analyses to test the hypothesis. In this part, financial performance is proxied using Tobin's Q, measured as the market value of a firm's outstanding shares divided by the firm's book value of assets, which aims to capture the premium above the book value awarded to a firm's valuation by the market. To not breach the Gauss-Markov Assumption of normality, the Tobin's Q variable is displayed in Figure 1 to determine if the data follows a normal distribution. As seen

from the figure, the data is heavily skewed to the right (ibid). To address this problem, the natural logarithm of Tobin's Q is used. CSR-engagement is measured through the firm's ESG disclosure score, which is a common way of measuring a firm's commitment to social responsibilities (Velte, 2017). The base regression is the following:

$$Log(Tobin's\ Q)_{i,t} = \beta_0 + \beta_1 ESG_{i,t-1} + Control\ Variables_{i,t-1} + \mu \quad (1)$$

Where i = 1, …243 is the firms included in the final selection, and t = 2014-2018 is the years used in the model. The model shows the effect CSR engagement has on financial performance, measured as Tobin's Q. $ESG_{i,t-1}$ captures the impact that CSR commitment in firm i at time t-1 has on financial performance in firm i at time t. On average, a one-point increase in ESG disclosure score leads to a ($\beta 1 \times 100$) increase in Tobin's Q. Control Variables refer to the control variables used in the regressions, which are discussed in the following chapter.

To analyse what effect board independence in conjunction with excessive funds has CSR engagement, pooled multivariate OLS regressions are used to answer the second hypothesis. The dependent variable to capture a firm's commitment to CSR-activities is the ESG disclosure score, the same variable used to investigate the first hypothesis. The distribution of the ESG variable is visualized in Figure 2. Although it behaves more normally distributed than Tobin's Q, the natural logarithm is used to minimize violations of the Gauss-Markov Assumptions. Board independence and Return on Assets (ROA) are used as main explanatory variables, where ROA is a proxy to capture the effects of a firm's profitability, and by extension, excess funds. As the hypothesis revolves around the impact of board independence on CSR in conjunction with available funds, an interactive term consisting of board independence and ROA is included to investigate whether there is a moderating effect. Since the model contains a moderation variable, the main explanatory variables, Board Independence and ROA, is centered around its' means prior to any regressions in this part of the paper. This does not change any fundamental test values or coefficients. Still, the methodology does reduce multicollinearity between the main explanatory variables and the interactive term, as well as simplifies the interpretation of the regression model (Cohen et al., 2003; Holmbeck, 2002). This is in line with Fernández-Gago et al. (2014), which acts as a comparative paper for this part of the study. What has been described debouches into the following model:

$$Log(ESG)_{i,t} = \beta_0 + \beta_1 Board\ Independence_{i,t-1} + \beta_2 ROA_{i,t-1} + \beta_3 Board\ Independence_{i,t-1} \times ROA_{i,t-1} + Control\ Variables_{i,t-1} + \mu \quad (2)$$

Where i = 1, …243 is the firms included in the final selection, and t = 2014-2018 is the years used in the model. All explanatory variables are lagged following previously stated reasons in section 5.3. Board Independence$_{i,t-1}$ captures the effect that board independence in firm i at time t-1, has on CSR commitment in firm i at time t, while ROAi,$_{t-1}$ captures the impact that profitability, and therefore excess funds, in firm i at time t-1 has on CSR commitment in firm i at time t. Board independence is defined as the percentage of independent directors in relation to the total board members, while ROA is defined as the ratio between operating profit and total assets. Both board independence and ROA is measured as a percentage and are centered around their respective means. This means that the variable's coefficients measure the percentage increase in ESG if one of the main explanatory variables would increase by a certain percentage above its' mean, while the other main explanatory variable remains at its' average value. This means that a percentage increase in board independence above its' average leads to a ($\beta 1$) percentage increase in ESG-score, given an average value of ROA for the firm. Consequently, it also means that a one percentage increase in ROA above its' average leads to a ($\beta 2$) percentage increase in ESG-score when the specific firm has its' average value of board independence. Board Independence$_{i,t-1}$ × ROA$_{i,t-1}$ is the interaction term that captures the effect of board independence moderated with excess funds, which means that its' coefficient displays the additional impact the moderating variable provides – ROA in this case. This entails that for a firm with an additional percentage of both board independence and ROA above average, the ESG-score increases by ($\beta 1+\beta 3$) percentage. Control Variables refers to the control variables which are used in the regression, and are introduced and discussed in the following chapter.

Finally, to test how the relationship between board independence and CSR engagement is affected by ownership concentration, pooled multivariate OLS regressions are applied to answer the last hypothesis. The dependent variable used in this section is the natural logarithm of the ESG disclosure score. The main explanatory variables are Ownership Concentration, defined as the ownership of the largest shareholder in each firm during each year in percentage, and board independence. As ownership concentration is used as a moderating variable for the relationship between board independence and CSR-engagement, an interactive term between ownership concentration and board independence is included. Since the model consists of an interactive term, the two main variables are centered around their means in order to avoid multicollinearity- or interpretation issues. The regression used is the following:

$$Log(ESG)_{i,t} = \beta_0 + \beta_1 Ownership\ Concentration_{i,t-1} + \beta_2 Board\ Independence_{i,t-1} + \beta_3 Ownership\ Concentration_{i,t-1} \times Board\ Independence_{i,t-1} + Control\ Variables_{i,t-1} + \mu \quad (3)$$

Where i = 1, …243 is the firms included in the final selection, and t = 2014-2018 is the years used in the model. The model follows the structure of the previous model, with ROA substituted for ownership structure. Since both variables are measured as a ration, the model has the same interpretation. Control Variables refer to the control variables used in the model, discussed in the following chapter.

Besides normality, tests for potential violations of the other Gauss-Markov Assumptions, as well as other econometrical issues, are conducted. How it is implemented and prevented follows by the next sub-section. The results of the diagnostic tests are presented in Section 7.1.

5.5 Diagnostic Tests

5.5.1 Heteroskedasticity

A White's test for heteroskedasticity has been conducted, i.e., to check that there is no constant variance between the variables and the error term. If heteroskedasticity is present, it will lead to biased estimates indicating that the OLS-results should not be interpreted. The null hypothesis is that the residuals of the regression model are constant for every predicted value of the dependent variable, indicating homoskedasticity. If heteroskedasticity is evident, robust standard errors will be applied to the initial OLS-model before proceeding with further regressions to counteract the issue.

5.5.2 Multicollinearity

Multicollinearity refers to the issue of having perfectly correlated explanatory variables. If this is the case, the model omits one of the variables. Furthermore, the interpretation of the OLS model becomes problematic since it assumes that all other explanatory variables remain constant when a coefficient is interpreted. Since correlated variables depend on each other, it is unreasonable to assume that all other coefficients remain the same when changing one of them. The correlation between the variables is demonstrated through a correlation table, Table 4, ensuring that none of the variables are perfectly correlated.

5.5.3 The Hausman Test

The initial regressions are estimated using pooled OLS multivariate regression analysis. However, the data in this study follow a panel-data structure, and a random- or fixed effects

model is therefore potentially more suitable. Fixed effects models are commonly used in previous studies (Nelling & Webb, 2008; Barnett & Salomon, 2011; Velte, 2017) examining the relationship between CSR and financial performance, equivalent to this study's first hypothesis. By applying fixed effects, unobservable characteristics that vary between firms but are constant over time, are controlled for. This helps to avoid the omittance of variables (Roberts & Whited, 2012; Wooldridge, 2016). In contrast to the fixed-effects model, the random-effects model does not estimate the fixed effects independently for each i. Instead, it assigns all of the unobserved effects to the error term. To determine the most suitable approach for this paper, a Hausman test is conducted. In a panel data set, it investigates whether there is any correlation between the independent variables and unique errors in the model (Wooldridge, 2016). The null hypothesis is that there is no correlation between the two, indicating that a random-effects model is appropriate. If there is, a fixed-effects model is more appropriate (ibid).

6. Data & Descriptive Statistics

The purpose of this chapter is to describe the data used in this study, along with the sources of data. This if followed by a description of the used variables, and descriptive statistics related to respective variable.

6.1 Sample & Source of Data

This paper has examined the period from 2014 to 2018. The sample consists of all publicly listed companies on NASDAQ Nordics, which include firms from Sweden, Finland, Norway, and Denmark. Although Iceland is part of the Nordics, the number of firms on the Icelandic stock exchange with data is limited. Considering most Icelandic firms are cross-listed on other Nordic stock markets, the data has already been accounted for. Therefore, Iceland is excluded from this paper. As seen from Table 1, the original sample contained 4045 firm-year observations, from which some have been removed. The first pruning was to firms missing data for ESG- or Tobin's Q, due to its central role in determining CSR and financial performance. Another pruning removed firms with multiple share classes and cross-listed firms, except for Iceland, to ensure that each firm only was included once. At last, firms operating in the financial- and utility sector were removed due to different business models and regulatory demands. The structure of such firms makes it difficult to compare with other industries, and including them would thus make the results less representative. The final sample consisted of 1215 firm-year observations. All data has been extracted from Bloomberg Terminal, besides the variables Board Independence, Ownership Concentration, and Board Size, which was hand collected from annual reports.

6.2 Variable Definition & Descriptive Statistics

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
Tobin's Q	1 215	2,21	2,24	0,39	20,77
ESG	1 215	34	14	5	71
Leverage	1 215	23,85	18,13	0,00	87,85
Size	1 215	28 475	61 575	4	577 476
R&D Intensity	1 215	111,79	42,03	0,00	450,05
ROA	1 215	0,04	0,16	-1,00	0,95
Board Size	1 215	7	2	3	13
Board Independence	1 215	0,72	0,20	0,22	1,00
Ownership Concentration	1 215	0,26	0,19	0,01	0,83

Table 2: Summary Statistics

6.2.1 Dependent Variables

The dependent variable that test the first hypothesis is Tobin's Q, which is a basic indicator of financial performance. It is defined as a firm market value per dollar of replacement costs of tangible assets and is commonly used in financial economics (Dowell et al., 2000). In contrast to accounting measures that can be short term in nature with too much emphasis on historical data (Hillman & Keim, 2001), Tobin's Q is forward-looking and captures projected future cash flows (Dowell et al., 2000; Carter et al., 2010). Thus, it is a better proxy for firm performance than accounting-based measures (Dezsö & Ross, 2012). As seen in Table 2, the mean of Tobin's Q in the sample is 2.21. A value of 1 means that the market value of the firm's assets is valued the same as the book value of the assets, indicating that the sample, on average, is overvalued compared to the firm's book value. The standard deviation is 2.24, which indicates a large spread as the value is higher than the mean. Furthermore, the maximum value in the sample is 20.7, which indicates extreme outliers. As previously mentioned, the distribution of the variable is heavily skewed to the right. Therefore, the natural logarithm has been applied.

In this study, ESG-ratings is used to measure firms' CSR engagement. The variable acts as the main explanatory variable when investigating Hypothesis 1, and serves as the dependent variable when investigating Hypotheses 2 and 3. Bloomberg provides ESG-ratings for over 10,000 firms and is based on 120 different data points that are compiled into the categories of Environmental, Social, and Governance, which form the basis of the overall rating. The data points range between 0-100 and are weighted in accordance with its relative importance (Bloomberg, 2020). Measuring CSR in practice is a complicated matter, and a wide range of proxies has been used in the literature (Wood, 2010). Instead of using existing CSR indexes, such as ESG or KLD (Waddock & Graves, 1997; Nelling & Webb, 2008), a different approach is to create your own. However, due to time constraints and ESG-ratings frequent use in the literature (Velte, 2017), this paper has used this approach above constructing a new index. Furthermore, most Nordic firms have ESG-ratings available. As demonstrated in Table 2, the average ESG-score of the sample is 34, while the minimum is 5 and the maximum 71. The standard deviation is 14, which shows that it is more normally distributed than Tobin's Q. In comparison to Velte's (2017) findings of an average of 57, these results indicate that German firms, on average, have higher ESG-scores. Furthermore, the minimum in Velte's (2017) is 4.1, whereas the maximum is 96.8, possibly indicating a more extensive spread.

6.2.2 Explanatory Variables

The ESG-rating is used as an explanatory variable in the first hypotheses but used as a dependent in Hypothesis 2 and 3. Thus, it is presented above. The explanatory variables to examine the final hypothesizes are *Board Independence, ROA, and Ownership Concentration*.

Board Independence is used as a main explanatory variable in the second and third hypotheses. In line with previous studies that have examined the influence of governance mechanism on CSR (Fernández-Gago et al., 2014; Ntim & Soobaroyen, 2013; Jo & Harjoto, 2012; Ahmad et al., 2014; Birindelli et al., 2018; Walls et al., 2012; Hussain et al.; 2016), board independence is defined as the percentage of independent directors to total board members. Birindelli et al. (2018) suggest that board independence is the most significant contributor to ensure stakeholders' claims among different board composition characteristics. With reference to previous discussions regarding agency and stakeholder theories, the board serves to mitigate conflicts that arise due to separation between ownership and control. It also ensures the interest of stakeholders from managers' opportunistic behavior (Donaldson & Preston, 1995). Since independent directors' compensation is not tied to short-term performance, boards with a higher degree of independence should be more inclined to invest in CSR related activities (Ibrahim et al., 2003). Also, higher independence reduces conflicts among stakeholders, which encourages management to maximize long-term financial performance (Ahmed et al., 2006). As demonstrated in Table 2, the mean is 0.72, with a standard deviation of 0.22. In comparison to Shaukat et al. 's (2015) study on U.K firms where the independence variable had a mean of 52, our sample shows that listed firms in the Nordic region have more independent boards.

ROA is used to investigate Hypothesis 2b and the availability of funds theory, introduced by Fernández-Gago et al. (2014). ROA is defined as the ratio between operating profit and total assets (Waddock & Graves, 1997; Amato & Amato, 2007; Fernández-Gago et al., 2014). It is included to see if excess funds, measured on the basis of profitability, impact the relationship between board independence and CSR engagement. Although there are other proxies for surplus funds, ROA is used to increase comparability with Fernández-Gago et al. (2014). The average value is 0.04, read as a ROA of 4%. The standard deviation of 0.16 indicates a large variance in the variable, while the minimum of -1.00 and maximum of 0.94 indicates extreme outliers. These outliers are mainly due to the firms' operating in innovation-driven industries with volatile earnings, such as health care or smaller firms in general.

Lastly, in Hypothesis 3, a variable for ownership concentration is included to test how ownership concentration affects the relationship between board independence and commitment

to CSR investments. As discussed in Chapters 2 and 3, the owners' incentives to monitor the board of directors in strategic directors increase with higher ownership concentration (Shleifer & Vishny, 1986; La Porta et al., 1999; Barnea & Rubin, 2010; Lekvall et al., 2014). As laid out, the Nordic Corporate Governance Model gives large shareholders control mechanisms that enable them to influence strategic decision-making and take places on the board (Lekvall et al., 2014). Since large shareholders have to bear the costs of CSR expenditure as shareholders, it might lead to less engagement (Barnea & Rubin, 2010). Following previous studies (Chen & Jaggi, 2000; Dam & Scholtens, 2012; Ducassy & Montandraub, 2015), this study uses the percentage of ownership of the largest block holder in each firm as the proxy for ownership concentration. As seen in Table 2, the largest block holder of the Nordic firms owns, on average, 26% of the shares in the respective firm. The largest owner in the firm with the most disperse ownership structure owns 1% of the firm, while the largest owner in the firm with the most concentrated ownership structure owns 83% of the firm.

6.2.3 Control Variables

Several variables that affect both the relationship between CSR and financial performance, as well as the relationship between corporate governance characteristics and CSR, are included in an attempt to isolate the main explanatory variable's effect on the dependent variable in each model. The paper uses five different control variables, which are traditionally used in previous empirical studies. These are *Size*, *Leverage*, *R&D expenditures, Board size, and Industry*.

Leverage is known to impact the relationship between financial performance and CSR engagement. McWilliams and Siegel (2000) use leverage, defined as long-term debt to total assets, as a proxy for the firm's risk tolerance, which, according to literature, is connected to stakeholder relationships (Waddock & Graves, 1997). According to Ogden et al. (2003), leverage can have both positive and negative impacts of firm value. Debt can serve as a strategy to deter managers from spending resources on value-destroying investments, which would lower firm value. It can also limit the management from taking on value-creating investments due to the burden of debt, which potentially could lead to solvency issues (ibid). In addition, firms with higher ESG-score are perceived to be less risky due to the insurance effect and will be connected to lower costs of capital (Orlitzky & Benjamin, 2001). Dowell et al. (2000) argue that the leverage ratio might determine if a firm has resources available to invest in CSR. As presented in Table 2, the mean of the leverage ratio is 23.85%, showing that the firms in the sample are not very levered. A minimum of 0% indicates that some firms use no debt. Conversely, the highest levered firm has a ratio of 87.85%.

Size is included due to Burke's (1996) findings that small firms engage less in CSR in comparison to large firms. According to Burke, one plausible reason for this could be that larger firms attract more attention and scrutiny from the public and consequently have to respond to stakeholder demands. Waddock and Graves (1997) use a similar argument for controlling for size. Moreover, size often brings economies of scale or scope, which may be difficult to imitate, according to Roberts and Dowling (2002). In line with previous research (Burke, 1996; Waddock & Graves, 1997; Dowell et al., 2000), the size of the firms is measured as the natural logarithm of the firm's total assets. The average size in the sample is 28 475Mkr, as presented in Table 2. The standard deviation in the sample 61 575Mkr, suggesting a large spread. Since the sample consists of all firms in the Nordics, the spread is reasonable since it captures both the largest and smallest firms. The minimum in the sample had a book value of 4Mkr for one year, while the largest firm had assets worth 577 476Mkr during one of the years in this study.

In line with the suggestions of McWilliams and Siegel (2000), a control variable for *R&D expenditures* is included to investigate the first hypothesis concerning its importance in determining firm performance and its effect on CSR. The authors argue that R&D expenditures need to be included in studies examining CSR and firm performance to avoid endogeneity issues. R&D leads to discoveries that can increase productivity, and therefore financial performance (McWilliams & Siegel, 2000). It is defined as R&D expenditures to total sales, following the recommendations of McWilliams & Siegel (2001) and Ruf et al. (2001). As demonstrated in Table 2, the mean is 111.79%, with a standard deviation of 42.03%. While this seems very high, the sample contains many firms within industries that have high R&D expenditures with little or no sales, such as health care. Furthermore, the minimum is 0, while a maximum of 450.05%.

Following prior studies on corporate governance mechanisms (Birindelli et al., 2018; Fernández-Gago et al., 2014; Ntim & Soobaroyen, 2013; Jo & Harjoto, 2012; Walls et al., 2012; Hussain et al., 2016), *Board Size* is used as a control variable for Hypothesises 2 and 3. It is defined as the total number of directors on the board. According to Birindelli et al. (2018), a streamlined board might have less diversification in terms of education, expertise, gender, and stakeholder representation. Also, it can lead to a high workload, which impacts the effectiveness and role of monitors. Conversely, a large board has a higher level of collective expertise and less workload, which allows them to act more effectively. Having more time available could potentially enable the board to pay more attention to engaging in socially responsible behavior, which could improve CSR performance (Birindelli et al., 2018). From Table 2, it is observable

that the largest board in the sample consists of 13 members, while the smallest consists of 3. The average board size consists of 7 members.

Industry is defined using S&P's Global Industry Classification methodology and is separated into 11 different industry groups[6]. Velte (2017) argues that the extent of stakeholder management and performance may vary between sectors, and Waddock and Graves (1997) found empirical evidence that performance and R&D investments differ between industries.

Besides the previously mentioned control variables, *Country* and *Year* effects are included. Country is used as a control variable since this study uses data from four different countries; Sweden, Norway, Finland, and Denmark. As previously stated, Iceland was excluded due to almost no unique observations, although it belongs to the Nordic region. Since this study utilizes panel data, year effects are controlled for from the period of 2014 to 2018.

[6] These categories are: Consumer Staples, Consumer Discretionary, Industrials, Real Estate, Health Care, Financials, Materials, Information Technology, Communication Services, Utilities, Energy.

7. Empirical Results

The purpose of this chapter is to report the results of the study. First, the results of the statistical tests are presented before proceeding with the results of the hypothesizes.

7.1 Results of Diagnostic Tests

7.1.1 Heteroskedasticity

A White's test is applied to the initial model of each hypothesis to test for heteroskedasticity. The results are found in Table 3. The null hypothesis of constant variance is rejected at the 5% level, and heteroskedasticity is thus evident in the initial models. To mitigate the issue, all of the models besides Model 1 use either robust standard errors in pooled OLS regressions or clustered robust in fixed-effects regressions, instead of ordinary standard errors.

7.1.2 Multicollinearity

The correlation matrix visualized in Table 4 is used to examine the presence of multicollinearity between our variables. In absolute terms, the highest correlation of 0.46 is between "R&D Intensity" and "ROA". It is reasonable since the variables aim to capture the same information, using two different approaches. Besides this relationship, the second-highest correlation is 0.44 in absolute values, which indicates that no collinearity issues are present in the data set.

7.1.3 The Hausman Test

To decide whether to use the fixed- or random-effects model for the first hypothesis, a Hausman Test is conducted with the results presented in Supporting Table 5. The test yielded a p-value of 0.0025, indicating that the fixed-effect model is preferable and therefore included in the regressions related to the first hypothesis.

7.2 CSR & Financial Performance

	Hypothesis 1				
	Core Regressions			*Robustness Tests*	
	1	2	3	4	5
VARIABLES	**LogTobinsQ**	**LogTobinsQ**	**LogTobinsQ**	**ROA**	**LogTobinsQ**
Lag ESG	0.0061***	0.0061**	-0.0009	0.0001	-0.0007
	(0.0018)	*(0.0030)*	*(0.0025)*	*(0.0007)*	*(0.0100)*
Lag Leverage	-0.0069***	-0.0069***	-0.0016	-0.0011*	-0.0069***
	(0.0011)	*(0.0023)*	*(0.0013)*	*(0.0006)*	*(0.0023)*
Lag Size	-0.0626***	-0.0626***	-0.1718*	0.0084	-0.0623***
	(0.0131)	*(0.0233)*	*(0.0883)*	*(0.0061)*	*(0.0233)*
Lag R&Dintensity	0.0024***	0.0024**	-0.0001	-0.0016***	0.0024**
	(0.0005)	*(0.0010)*	*(0.0015)*	*(0.0003)*	*(0.0010)*
Lag ESG^2					0.0001
					(0.0001)
Constant	0.6867***	0.6867***	2.0428***	-0.0159	0.7579***
	(0.1756)	*(0.2283)*	*(0.7780)*	*(0.0707)*	*(0.2696)*
Fixed Effects	*No*	*No*	*Yes*	*No*	*No*
Year Effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Industry Effects	*Yes*	*Yes*	-	*Yes*	*Yes*
Country Effects	*Yes*	*Yes*	-	*Yes*	*Yes*
Observations	834	834	834	834	834
R-squared	0.4053	0.4053	0.1042	0.2834	0.4063

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6 – Results attributable to Hypothesis 1

The first is tested for using five different models, where Model 1 is the base model that acts as a benchmark for the following models. Model 1 is a pooled multivariate OLS analysis with normal standard errors with results displayed in Table 6. The model shows a statistically significant positive linear relationship between CSR and Financial Performance. The results are in line with previous studies (Waddock & Graves, 1997; Ruf et al., 2001; López et al., 2007; Dowell et al., 2000; Velte, 2017), and support the first hypothesis of a positive linear relationship. The magnitude of the coefficient is equal to 0.0061, interpreted as a 10-point increase in ESG-score, on average, leads to a 6.1% increase in Tobin's Q, holding everything else constant. The results, therefore, show an economically significant relationship as well.

Leverage and size have negative coefficients, implying that larger- and levered firms have a lower Tobin's Q in this sample. In addition, R&D intensity is positively correlated with Tobin's Q. The results are in with the findings of McWilliams and Siegel (2000), who claimed that excluding R&D intensity would lead to an overestimation of the ESG-rating's effect on financial performance.

As mentioned, a White's test was applied to the initial model to test for heteroskedasticity. The null hypothesis of constant variance is rejected, and heteroskedasticity is thus evident in Model 1, as seen in Table 3. Heteroskedasticity contradicts one of the Gauss-Markov assumptions, and robust standard errors are applied to the remaining models related to the first hypothesis. After adding robust standard errors in Model 2, the coefficients of the variables remain the same while the standard errors increase, which in turn decreases the t-values in the model as displayed in Table 6. The ESG-variables standard errors increased from 0.0018 to 0.0030 and lowered the significance from a 1% level to a 5% level simultaneously. Leverage, Size, and R&D expenditures remain significant, showing robustness in their respective relationships with Tobin's Q.

Due to the panel setting of the data and the results from the Hausman-test, presented in Table 5, the results for Model 3 are displayed after controlling for time fixed effects with cluster robust standard errors in Table 6. The ESG-score is no longer significant and has reversed direction. These results mimic Nelling and Webb (2008). In this case, the ESG-score is no longer a determinant for financial performance, which can be attributed to a reverse causality effect. More specifically, it means that a better performing firm could be inclined to engage more in CSR, and thus receive a higher ESG-score, due to increased scrutiny from the public (Burke et al., 1996). While leverage and R&D expenditures lose its' significance, the magnitude of size increases significantly while only losing some statistical power.

An alternative specification of firm performance has been included to see whether the results are robust when changing the measurement of financial performance. Instead of using a market-based measure, an accounting-based measure is used. In line with Waddock and Graves (1997), and Nelling and Webb (2008), ROA is used as an alternative measurement of financial performance. The output from Model 4 is displayed in Table 6. When using ROA as the dependent variable, the coefficient of the ESG-variable changes to 0.0001, but lacks statistical significance. Considering the coefficient and significance of our base model, this suggests that the ESG-score is a better explanatory variable for market-based performance measures than accounting-based performance measures. The result can potentially be explained via market perception, where firms with good CSR-policies are rewarded by increasing the firm's share price and, by extension, Tobin's Q. Since ROA is based on accounting-numbers, it will not be affected by the market perception. Size is not statistically significant in this model and no longer explain variation in financial performance. However, leverage and R&D expenditures are still statistically significant.

As an alternative robustness check, a test is conducted to see if the linear relationship between CSR and financial performance holds, or if it is U-shaped as predicted by Barnett and Salomon (2011) and Nollet et al. (2016). Following their methodology, a quadratic version of the ESG-variable is used. The results from the regression are presented in Model 5, found in Table 6. The inclusion of the quadratic variable reverses the direction of the ESG-score coefficient and changes to -0.0007. A 10-point increase in ESG-score, on average, leads to a decrease of 0.7% in Tobin's Q, holding everything else constant. Besides, both the main explanatory variable and the quadratic variable lacks significance. Based on this, the best model to estimate the relationship is still linear, which contradicts the findings of a U-shaped relationship (Barnett & Salomon, 2011; Nollet et al., 2016).

7.3 Board Independence & CSR

	Hypothesis 2		
	6	7	8
VARIABLES	**LogESG**	**LogESG**	**LogESG**
Lag Board Independence	0.1927**	0.1957**	0.1933**
	(0.0856)	*(0.0855)*	*(0.0858)*
Lag ROA		0.0791	0.0426
		(0.0981)	*(0.3348)*
Lag Board Independence × Lag ROA			0.0490
			(0.4244)
Lag Leverage	-0.0036***	-0.0034***	-0.0034***
	(0.0011)	*(0.0011)*	*(0.0011)*
Lag Size	0.1350***	0.1331***	0.1331***
	(0.0100)	*(0.0105)*	*(0.0106)*
Lag Board Size	0.0158	0.0161	0.0160
	(0.0102)	*(0.0103)*	*(0.0104)*
Constant	2.5166***	2.0116***	2.0127***
	(0.1637)	(0.1624)	(0.1626)
Fixed Effects	*No*	*No*	*No*
Year Effects	*Yes*	*Yes*	*Yes*
Industry Effects	*Yes*	*Yes*	*Yes*
Country Effects	*Yes*	*Yes*	*Yes*
Observations	955	955	955
R-squared	*0.5813*	*0.5816*	*0.5816*

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7 – Results attributable to Hypothesis 2

To investigate the relationship between board independence and CSR engagement, and if excess profitability plays a moderating effect in the relation, the results of the regression are presented in steps, following Fernández-Gago et al. (2014). The results are presented in Table

7. As previously mentioned, the natural logarithm of the ESG-score is used over the level version of ESG to avoid normality issues. Furthermore, all regressions are run with robust standard errors to mitigate heteroskedasticity, and the main explanatory variables are centered around their respective mean.

An initial regression is done to see if board independence explains variation in the ESG-score of the firms within the sample. As seen in Model 6, the results indicate a statistically significant positive linear relationship between board independence and the ESG-score of the firms. These results are in line with the study performed by Fernández-Gago et al. (2014), as well as with Hypothesis 2a. The magnitude of the board independence variable is 0.1927, interpreted as a one percentage increase in board independence leads to a 0.1927 percentage increase in ESG on average, holding everything else constant. This result is, therefore, to be considered economically significant. Regarding the control variables; leverage is negatively related to ESG, and size is positively related to ESG, while board size lacks statistical significance.

Furthermore, this paper aims to investigate the moderating effect of excess profitability on the relationship between board independence and CSR-engagement. To do this, two additional regressions are run to test the possibility. Per Fernández-Gago et al. (2014), the second regression includes ROA as a proxy for excess profitability. The results containing the inclusion of ROA is displayed in Model 7. The magnitude of the coefficient is 0.0791, indicating a positive relationship between increased profitability and CSR engagement. In contrast to Fernández-Gago et al. (2014), the results are not statistically significant. Nonetheless, the direction of the coefficient is the same. The relationship between the control variables and ESG-score shows little change, as the directions and statistical power remain unchanged.

Finally, an interactive variable between board independence and ROA is included in Model 8. The centered board independence variable remains statistically significant at the 5% significance level. The magnitude of the coefficient is 0.1933, which therefore shows a positive linear relationship between board independence and ESG-score. When including an interactive variable, the board independence variable should be interpreted as a firm with the average percentage of ROA, and the average percentage of board independence, which increases its board independence solely by one percentage, will see an increase of 1,37%[7] in ESG-score,

[7] Calculated using LogESG = 0,1933 × Board Independence + 0,0490 × Interaction Variable, by calculating the differences between a firm with average board independence and average ROA which increases solely board independence with one percentage, and a firm with average board independence and average ROA. Assuming everything else constant.

ignoring every other variable. The coefficient of the interaction term refers to the effect ROA has on the relationship between board independence and CSR engagement of firms. The magnitude is 0.0490, which, in combination with the individual coefficient of the board independence variable, is interpreted as a firm with average board independence and average ROA, which increases both by one percentage will see an increase of 1,72%[8] in ESG-score, ignoring all other variables. In this case, the change in ESG-score is greater than the difference in ESG-score when only increasing board independence. This indicates that ROA has a positive moderating impact on the relationship between board independence and ESG-score. However, the interactive variable lacks statistical significance. Thus, this paper cannot provide definitive support for a moderating effect, unlike Fernández-Gago et al. (2014), and therefore reject Hypothesis 2b. In line with the previous model, the control variables remain robust

7.4 Board Independence, Ownership Concentration & CSR

	Hypothesis 3		
	Core Regressions		
	9	**10**	**11**
VARIABLES	**LogESG**	**LogESG**	**LogESG**
Lag Ownership Concentration	-0.2287**	-0.1825*	-0.3041
	(0.1035)	*(0.1041)*	*(0.3173)*
Lag Board Independence		0.1372	0.0918
		(0.0847)	*(0.1333)*
Lag B. Ind. × Own. Conc.			0.1720
			(0.4079)
Lag Leverage	-0.0035***	-0.0035***	-0.0035***
	(0.0011)	*(0.0011)*	*(0.0011)*
Lag Size	0.1426***	0.1396***	0.1395***
	(0.0109)	*(0.0105)*	*(0.0105)*
Lag Board Size	0.0134	0.0146	0.0148
	(0.0104)	*(0.0102)*	*(0.0103)*
Constant	2.1564***	2.0495***	2.0834***
	(0.1497)	*(0.1696)*	*(0.1928)*
Fixed Effects	*No*	*No*	*No*
Year Effects	*Yes*	*Yes*	*Yes*
Industry Effects	*Yes*	*Yes*	*Yes*
Country Effects	*Yes*	*Yes*	*Yes*
Observations	954	954	954
R-squared	0.5817	0.5843	0.5845

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8 – Results attributable to Hypothesis 3

[8] Calculated using LogESG = 0,1933 × Board Independence + 0,0490 × Interaction Variable, by calculating the differences between a firm with average board independence and average ROA which increases both board independence and ROA with one percentage, and a firm with average board independence and average ROA. Assuming everything else constant.

This section examines if ownership concentration negatively affects the relationship between board independence and CSR engagement with the results presented in Table 8. As before, the natural logarithm of the ESG-score is used over the level version to avoid normality issues. Moreover, all regressions are run with robust standard errors to mitigate heteroskedasticity, and the main explanatory variables are centered around their respective mean. Following the same approach as with Hypothesis 2, the variables are introduced in steps and presented accordingly. In the first model, the natural logarithm of ESG is regressed on ownership concentration and the control variables alone, to confirm that ownership concentration explains variations in ESG. The results can be seen in Model 9, showing a statistically significant negative linear relationship between Ownership Concentration and the ESG-score. These results are in line with the expectations, based on previous literature (Dam & Scholtens, 2012; Ducassy & Montandraub, 2015). The magnitude of the coefficient is -0.2287, which is interpreted as a one percentage increase in ownership concentration leads to, on average, a 0.2287 percentage decrease in ESG-score, holding everything else constant. The percentage change of ownership concentration is, therefore, to be considered economically significant. Two of the control variables are significant, namely, leverage and size. The coefficients suggest that large firms and less levered firms have higher ESG-scores. Board size lacks statistical significance.

The second regression reintroduces board independence to see the relationship between the variables and ESG-score independently, and therefore how the relationship between ownership concentration and ESG-score changes with board independence. Model 10 in Table 8 displays the results with the additional variable. Ownership concentration loses magnitude and significance when board independence is included. The linear relationship remains negative at a 10% significance level. It is interpreted as a one percentage increase in ownership concentration leads to, on average, a 0.1825 percentage decrease in ESG, holding everything else constant. Board independence retains the positive relationship with ESG as in models 6-8, but with less magnitude and no significance when controlling for ownership concentration.

Model 11, displayed in Table 8, includes an interactive term between board independence and ownership concentration. The results show that the magnitude of board independence lessens further while the magnitude of ownership concentration increase, compared to Model 10. The coefficient of ownership concentration increases. However, the standard errors increase simultaneously, which results in a lack of statistical significance at any reasonable level for the individual variable. With the introduction of the interactive term, the centered ownership concentration variable can be interpreted as a firm with the average percentage of board

independence and the average percentage of ownership concentration which only increase ownership concentration by one percentage will experience a 6.79%[9] decrease in ESG-score, exemplified by ignoring all other variables. The coefficient of the two interacted terms refers to the impact which board independence has on the relationship between ownership concentration and CSR engagement. When combining the effect of the interaction term with the individual effect of ownership concentration, the results can be interpreted as a firm with the average percentage of board independence and the average percentage of ownership concentration which increases both of the ratios by one percentage will see a decrease in ESG-score by only 2.95%[10], exemplified by ignoring all other variables. Using these exemplified interpretations, the coefficients of the results suggest that, by taking the moderating effect of board independence into account, the negative impact of a higher ownership concentration on ESG is lessened as a firm's board independence increases. Consequently, this also suggests that the positive relationship between board independence and ESG-score decrease when ownership concentration in a firm increases. However, as all of the main explanatory variables in this version of the model lacks statistical significance, this study finds no definitive evidence of Hypothesis 3.

[9] Calculated using LogESG = -0.3041 × Ownership Concentration + 0,1720 × Interaction Variable, by calculating the differences between a firm with average ownership concentration and average board independence which increases solely ownership concentration with one percentage, and a firm with average ownership concentration and average board independence. Assuming everything else constant.

[10] Calculated using LogESG = -0.3041 × Ownership Concentration + 0,1720 × Interaction Variable, by calculating the differences between a firm with average ownership concentration and average board independence which increases both ownership concentration and board independence with one percentage, and a firm with average ownership concentration and average board independence. Assuming everything else constant.

8. Discussion & Analysis

The purpose of this chapter is to discuss the results and compare them with the findings, as well as previous research. This paper is constructed following three hypotheses, and the results are presented accordingly.

8.1 CSR & Financial Performance

This study has attempted to address whether CSR is linked to financial performance, and if, what direction the causation has. In undertaking this study, Bloomberg's ESG-score is used as a measurement for CSR and is evaluated as both an independent and dependent variable. Our dataset included all firms listed on Nasdaq Nordics between 2014 and 2018. In total, the study consisted of 1215 firm-year observations.

In line with previous findings (Waddock & Graves, 1997; Ruf et al., 2001; López et al., 2007; Dowell et al., 2000; Velte, 2017), our results confirm a positive relationship between CSR and financial performance in the Nordic region. This is consistent with the theoretical frameworks presented by Brown and Frazer (2006) and Dowling and Pfeffer (1975), supporting the rationale behind stakeholder theory that firms have to keep up with all stakeholder demands to remain profitable. Although there are expenditures related to CSR engagement, the investments in CSR could be viewed as a means to improve financial performance. The costs for firms with a great reputation is lower (Cornell & Shapiro, 1987), and it's presumably easier to retain a customer-base if the values of the firm are in line with those of the society (Dowling & Pfeffer, 1975). Especially since the Nordic governments are cited as leaders in environmental and social regulations, and that firms in the region show a strong tradition within these areas (Kuisma, 2007; Lafferty & Meadowcroft, 2000). If the firms' deviate from the institutionalized norms, stakeholders' might be reluctant to associate with them since it affects their perception simultaneously. This will reduce financial performance. As stated by Sen and Bhattacharya (2001), the definite link could also be explained through raised awareness of the firm's products, which reduces price sensitivity among consumers. It indicates that consumers are willing to pay more for products that are fairly produced, which would lead to improved financial performance. In addition, the reputational benefits of sustainability include employee retention and attraction, which leads to enhanced productivity and reduced recruiting costs (Turban & Greening, 1997; Greening & Turban, 2000).

Furthermore, the positive link between CSR and financial performance in the Nordics supports the views of instrumental stakeholder theory, which focuses on the cause and effect relationship between stakeholders' and financial performance. Institutional and cultural factors could be one

of the contributors to our findings since the Nordics have a long-standing tradition of high stakeholder engagement, which supports a cooperative approach to businesses where stakeholders are involved in decision-making. Engaging in sustainable activities has several implications for the relationship to stakeholders, which benefits the shareholders simultaneously. For instance, it builds trust and reduces the incentives for management to engage in opportunistic behavior. Maintaining a good relationship with external stakeholders, thus reduce transaction costs and risk, improves financial performance (Barnett, 2007). Furthermore, continuous investments in CSR increase stakeholder influence capacity and increase trustworthiness. This can impact the perception of the firm, which ultimately will affect financial performance in a cumulative manner (Barnett, 2007).

Lastly, as already addressed, we cannot rule out that there is a causal relationship between CSR and financial performance. By using the causality approach, as suggested by Nelling and Webb (2008), we can see from Table 6 that ESG-score is no longer significant and have a reverse direction when controlling for time fixed effects. This indicates that there is a possibility that financial performance drives CSR engagement and not the other way around.

8.2 Board Independence & CSR

After the establishment of a positive relationship between CSR and financial performance, this thesis examines how corporate governance mechanisms, measured as Board Independence, relates to CSR. Since the board of directors plays a vital role in strategic decision-making, the composition of the board is likely to influence firms' strategic decisions. In line with previous findings (Jo & Harjoto, 2012; Pham & Tran, 2019; Fernández-Gago et al., 2014), we find empirical support for a positive relationship between CSR engagement and Board Independence. This implies that higher independence reduces information asymmetry and agency costs, as proposed by agency theory. The presence of independent directors in Nordic boards leads to more effective monitoring of management, which enables the board to perform its responsibilities to benefit all stakeholders (Birindelli et al., 2018; Hermalin, 2005), which leads to more CSR engagements. This is because management cannot engage in opportunistic behavior at the expense of other stakeholders' interests. Also, having independent directors leads to a more heterogeneous board, which facilitates resources, legitimacy, and information. This strengthens the firm's relationship with the external environment. Furthermore, independent directors' compensation is not tied to financial performance (Ibrahim et al., 2003), which allows them to have a long-term perspective on the firm. As a result, they are more sensitive towards the needs of the society' which has positive implications on CSR engagement.

However, one of the most important aspects of the Nordic region is the personal reputational benefits of engaging in CSR. Since social and environmental values are deeply rooted in the Nordic tradition, it is vital to have documented actions of supporting the society as a whole for future duties. To sum up, our findings reveal that firms with a higher degree of independence invest more in CSR, and the results can be attributed to reduced agency conflicts as well as the arguments from Resource Dependency Theory, and Stakeholder Theory.

The second part of the hypothesis investigates if excess funds have a positive impact on the relationship between independent directors and CSR engagements. As previously mentioned, this study finds that the direction of both the individual ROA variable as well as the interaction term between board independence and ROA have a positive coefficient. While the results suggest that ROA has a positive impact on the relationship between board independence and CSR engagement, ROA and the interaction term lack statistical significance, which means that the results in this study cannot confirm the findings of Fernández-Gago et al. (2014). The proxy for excess funds is not significant, and the findings suggest that firms in the Nordic are not dependent on excess funds/profitability to invest in CSR-related matters. This is not surprising, considering the Nordic region is amongst the most distinguished within CSR practices (Midttun et al., 2015; United Nations, 2019), and therefore, instead of relying on excess funds, invests in CSR activities regardless of financial performance. From the viewpoint of the Free Cash Flow hypothesis, this might be a self-serving action by the managers as their reputation as business leaders improves as investments into CSR-related matters expands. Another possibility is that ROA is not a suitable proxy for excess funds. Although higher profitability should lead to excess funds, assuming everything else constant, it is still a measure of profitability and not necessarily a measurement of available funds, which may be spent on other investments. Consequently, ROA might not capture the effect of the resources available to the firm accurately in this context.

8.3 Board Independence, Ownership & CSR

In line with our predictions, the effect of independent directors on CSR engagement in Nordic firms decreases with a higher degree of concentrated ownership, which supports the findings of Ahmad et al. (2014), and the results of Chen and Jaggi (2000). Although we do not find statistical significance, the coefficient has the same direction as expected, which contains useful information for the purpose of this study.

As the behavior of independent directors changes under the influence of a controlling shareholder, the institutional environment seems to have a vital role in the independent

director's decision-making process, as hypothesized by Bebchuk and Weisbach (2010). Although independent directors can serve as a substitute for investor protection in countries with weak corporate governance mechanisms (Jo & Harjoto, 2012; Fernández-Gago et al., 2014; Mallin & Michelon, 2011), their monitoring of management is more efficient in countries with dispersed ownership (Gjølberg, 2010). In firms with dispersed ownership, they can assert their influence and stake all stakeholders' interests into account, while reducing agency costs and information asymmetry (Birindelli et al., 2018; Hermalin, 2005). However, the sample within this paper shows a high degree of ownership concentration in the Nordic region, where the largest shareholder, on average, holds 26% of the shares. The Nordic institutional environment actualizes an agency problem between minority and majority shareholders, which is more severe than between management and shareholders (Shleifer & Vishny, 1997).

Large owners are favored in the Nordic corporate governance model, which allows them to take a long-term perspective on the firm to pursue their interests (Lekvall et al., 2014). This has resulted in influential owners that control the board of directors. As large shareholders are given seats on the board and participate in daily operations, they gain access to information from their position, which diminishes the need for CSR disclosure (Fama & Jensen, 1983). This results in information asymmetry to minority owners and enables them to extract corporate resources at their expense. Due to their large stakes in the firm, they are less inclined to invest in CSR as they have to bear the expenditure costs as shareholders, which is in line with the arguments of Barnea and Rubin (2010). Our results suggest that there is a trade-off between social and financial performance, where the latter appears to be the most important in firms with concentrated ownership. It seems that the benefits of CSR do not outweigh the costs on a personal level, as Dam and Scholtens (2012) conveyed.

To counteract large shareholders' expropriation of minority shareholders' interest, the Nordic Corporate Governance model has a well-developed framework to protect the minority from abuse. The independence requirement makes a distinction from being independent of management and towards large shareholders (Lekvall et al., 2014), where a majority of the directors are required to be independent of both, and at least two directors should be independent of the controlling shareholder. However, in the presence of a dominating shareholder, a collision of interests appears between independent directors and majority shareholders (Chen & Jaggi, 2000). Since the nature of independent directors is to take all stakeholders' interests into account and reduce the expropriation behavior of large shareholders (La Porta et al., 1999), their presence should lead to more CSR following previous

argumentation. Nevertheless, regardless of the protection mechanisms of minority rights in the Nordic region, our results imply that independent directors do not monitor as efficiently in the presence of large shareholders, as Chen and Jaggi (2000), and Lekvall et al. (2014) conveyed. The previously established positive influence independent directors have on CSR engagement reduces as the concentration of ownership increase in the Nordic region. Hence, it seems as large shareholders on the board influence independent directors to the extent that they foresee other stakeholders' interests. With reference to this, the protection mechanism of large shareholders in the Nordic region appears to be stronger than for the minority.

Although we reject Hypothesis 3 due to insignificance in the interaction variable, our findings imply that the positive influence of independent directors on CSR engagement in the Nordic region decreases as the ownership concentration variable is included in the model.

9. Conclusion

There has been a significant increase in research within the CSR field in the past few decades. Scholars have mainly analyzed the implications of CSR on firm performance, especially in the U.S market. Although comprehensive research on CSR, this thesis presents new evidence and valuable contributions. The purpose of this thesis was to examine the relationship between CSR and financial performance in the Nordic region. Also, this thesis aimed to investigate corporate governance mechanisms in connection to ownership structure and CSR. The study was performed using a sample of 1215 firm-year observations of listed firms in the Nordic region during the time period from 2014 to 2018 with data retrieved from Bloomberg and handpicked from annual reports.

Empirically, we find a statistically significant relationship between CSR engagement and firm performance from a market-based perspective. As robustness-checks, we test the relationship using accounting-based measures, as well as a u-shaped relationship, but find no significance. This reveals that the relationship between CSR and financial performance is difficult to assess and can be dependent on the measure used, which confirms our findings on variabilities across studies. Despite the broad research on CSR and financial performance, we provide new empirical evidence on the relationship in the Nordics. The results of our study coincide with the stakeholder theory and support the rationale behind instrumental stakeholder theory. Engaging in sustainable activities supports all stakeholders' interests, which reduces agency conflicts and seems to improves financial performance. Furthermore, it has several reputational benefits, as the costs for firms with a good reputation are lower, which goes in line with the strong social and environmental traditions of the region.

Our study also extends the literature on CSR by showing how the board of director's characteristics determine the extent of CSR engagement in the Nordic region. We examine corporate governance mechanisms and account for the institutional environment simultaneously. We find that having a higher degree of independence on the board leads to more CSR engagement. Independent directors tend to take all stakeholders into account and demonstrate their responsibility towards society. Due to the strong social norms in the Nordics, they also have incentives to do so, since it fosters their reputation on a personal level.

Since previous studies are inconclusive regarding the relationship between board independence and CSR, we extend the literature by analyzing firm-specific characteristics' to see if there is a moderating effect. More specifically, we analyze the role of independent directors in the

presence of large shareholders and CSR. Although our results lack statistical significance, it contributes to new insights, since the coefficient has the same direction as expected. This implies that independent directors change their behavior in the presence of a dominant shareholder. The positive influence of independent directors on CSR engagement decreases as ownership concentration increases. Despite the strong protection mechanisms of minority rights in the Nordic region, our results suggest that independent directors do not monitor as effectively in the presence of majority shareholders. The control rights of large shareholders are thus more efficient than the ones' protecting the minorities' interest. These findings can help policymakers and regulators in making the Nordic Governance Model more robust to make large shareholders responsible to all stakeholders, and ensure that they behave ethically to fulfill the demand for more CSR engagement.

Our findings should be interpreted carefully, as they are subject to several limitations. For instance, the sample is restricted to a limited time period and region. It would be of interest to replicate the study for the whole European area and include a more extended time period, as it would result in more observations and take different institutional environments into account. Furthermore, the ESG-variable in this study used to measure the extent of CSR is based on the firms' own disclosure, which aids the fact that the stated CSR-activities cannot be adequately verified. This is an exposure towards biased results if there are reported CSR activities that are not implemented in reality. Although future studies could overcome these limitations, there are areas within the scope of our paper that would benefit from further research. Firstly, the inclusion of more than one variable as a measure for CSR would lead to more robust results. Adding variables of other characteristics' such as audit committee and CEO duality could also add new insights and contributions, as it could potentially impact the decision to invest in CSR. In addition, it would be interesting to separate ownership concentration into institutional investors, government, and foreign ownership to see if it is not only the concentration of ownership that matters but the nature of ownership.

References

Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of financial economics*, *94*(2), 291-309.

Adams, R., Hermalin, B. E., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature*, 48, 58–107.

Agnblad, J., Berglöf, E., Högfeldt, P., Svancar, H. (2001). Ownership and Control in Sweden: Strong Owners, Weak Minorities, and Social Control. Chapter 9. The control of corporate Europe. London: Oxford University Press.

Agudelo, M. A. L., Jóhannsdóttir, L., & Davídsdóttir, B. (2019). A literature review of the history and evolution of corporate social responsibility. *International Journal of Corporate Social Responsibility*, *4*(1), 1.

Ahmed, K., Hossain, M., & Adams, M. (2006). The Effects of Board Composition and Board Size on the Informativeness of Annual Accounting Earnings. *Corporate Governance: An International Review*, *14*(5), 418-431.

Amato, L. and Amato, C. (2007). The Effects of Firm Size and Industry on Corporate Giving. *Journal of Business Ethics*, 72(3), 229-241.

Barnea, A. and Rubin, A. (2010). Corporate Social Responsibility as a Conflict Between Shareholders. *Journal of Business Ethics*, 97(1), 71-86.

Barnett, M. (2007). Stakeholder influence capacity and the variability of financial returns to corporate social responsibility, *Academy of Management Review*, 32(3), 794-816.

Barnett, M. and Salomon, R. (2011). Does it pay to be really good? addressing the shape of the relationship between social and financial performance. *Strategic Management Journal*, 33(11), 1304-1320.

Baron, D., Harjoto, M. and Jo, H. (2008). The Economics and Politics of Corporate Social Performance. *Business and Politics*, 13(2), 1-46.

Bebchuk, L. A., & Weisbach, M. S. (2010). The state of corporate governance research. *The review of financial studies*, 23(3), 939-961.

Birindelli, G., Dell'Atti, S., Iannuzzi, A. and Savioli, M. (2018). Composition and Activity of the Board of Directors: Impact on ESG Performance in the Banking System. *Sustainability*, 10(12), 4699.

Blair, M. M. (1995). Rethinking assumptions behind corporate governance. Challenge, 38(6), 12-17.

Bloomberg (2020). [online] Available at: https://www.bloomberg.com/impact/products/esg-data [Accessed 15 May 2020].

Brammer, S., Brooks, C. and Pavelin, S. (2006). Corporate Social Performance and Stock Returns: UK Evidence from Disaggregate Measures. Financial Management, 35(3), 97-116.

Brown, J., and Frazer M. (2006). Approaches and Perspectives in Social and Environmental Accounting: an Overview of the Conceptual Landscape, *Business Strategy and the Environment*, 15, 103–117.

Buallay, A. (2019). Is Sustainability Reporting (ESG) Associated with Performance? Evidence from the European Banking Sector. Management of Environmental Quality: An International Journal, 30 (1), 98-115.

Burke, L. and Logsdon, J. (1996). How corporate social responsibility pays off. Long Range Planning, 29(4), 495-502.

Carlsson, R. (2007). Swedish corporate governance and value creation: Owners still in the driver's seat. Corporate Governance, 15(6), 1038–1055.

Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The Gender and Ethnic Diversity of US Boards and Board Committees and Firm Financial Performance, *Corporate Governance: An International Review*, 18(5), 396-414.

Chen, C. and Jaggi, B. (2000). Association between independent non-executive directors, family control and financial disclosures in Hong Kong. Journal of Accounting and Public Policy, 19(4-5), 285-310.

Cieślak, K. (2018). Agency conflicts, executive compensation regulations and CEO pay-performance sensitivity: evidence from Sweden. Journal of Management and Governance, 22(3), 535-563.

Cohen J, Cohen P, West SG, Aiken LS (2003) Applied multiple regression/correlation analysis for the behavioural sciences, 3rd ed. Lawrence Erlbaum Associates Inc. Publishers, Mahwah

Cornell, B. and Shapiro, A. (1987). Corporate Stakeholders and Corporate Finance. *Financial Management*, 16(1), 5.

Dam, L. and Scholtens, B., (2012). Does Ownership Type Matter for Corporate Social Responsibility? *Corporate Governance: An International Review*, 20(3), pp.233-252.

Danish Corporate Governance Committee (2020). Corporate Governance. English. [online] Available at: <https://corporategovernance.dk/english> [Accessed 27 May 2020]

Dezsö, C. L., & Ross, D. G. (2012). Does female representation in top management improve firm performance? A panel data investigation. *Strategic management journal*, *33*(9), 1072-1089.

Donaldson, T., & Preston, L. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications, *Academy of Management Review*, 20(1), 65-91.

Dowell, G., Hart, S. and Yeung, B. (2000). Do Corporate Global Environmental Standards Create or Destroy Market Value? *Management Science*, 46(8), 1059-1074.

Dowling, J. and Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *The Pacific Sociological Review*, 18(1), 122-136.

Ducassy, I. and Montandrau, S. (2015). Corporate social performance, ownership structure, and corporate governance in France. *Research in International Business and Finance*, 34, 383-396.

Eisenhardt, K. (1989). Agency Theory: An Assessment and Review. Academy of Management Review, 14(1), 57-74.

Euroclear (2020). Foreign Owners 2020. [online] Available at: https://www.euroclear.com/dam/EFi/Statistics/ForeignOwners/ForeignOwners2020/Foreign_ownership_20200430.pdf. [Accessed 10 May 2020].

Fama, E. and Jensen, M. (1983). Separation of Ownership and Control. *The Journal of Law and Economics*, 26(2), 301-325.

Fernández-Gago, R., Cabeza-García, L. and Nieto, M. (2014). Corporate social responsibility, board of directors, and firm performance: an analysis of their relationships. *Review of Managerial Science*, 10(1), 85-104.

Finnish Securities Market Association (2020). Finnish Corporate Governance Code. [online] Available at: <https://cgfinland.fi/wp-content/uploads/sites/39/2019/11/corporate-governance-code-2020.pdf> [Accessed 25 May 2020].

Freeman, R. E. (1984). Strategic Management: A Stakeholder Approach, Boston: Pitman.

Friedman, M. (1970). The social responsibility of business is to increase its profits, *New York Times Magazine*, September 13, 122-126

Giese, G., Lee, L., Melas, D., Nagy, Z., & Nishikawa, L. (2017). Foundations of ESG Investing: How ESG Affects Equity Valuation, Risk, and Performance. *The Journal Of Portfolio Management*, *45*(5), 69-83.

Gilson, R. J. (2006). Controlling Shareholders and Corporate Governance: Complicating the Comparative Taxonomy. *Harvard Law Review*, 119, 1642–1679.

Gilson, R. J. (2014). The Nordic model in an international perspective: the role of ownership.

Gjølberg, M. (2010). Varieties of corporate social responsibility (CSR): CSR meets the "Nordic Model". *Regulation & Governance*, 4(2), 203-229.

Godos-Díez, J., Fernández-Gago, R., Cabeza-García, L. and Martínez-Campillo, A. (2014). Determinants of CSR practices: analysis of the influence of ownership and the management profile mediating effect. *Spanish Journal of Finance and Accounting,* 43(1), 47-68.

Greening, D. W.,and Turban, D. B. (2000), Corporate social performance as a competitive advantage in attracting a quality workforce, *Business & Society*, 39(3), 254-280.

Hermalin, B. (2005). Trends in Corporate Governance. *The Journal of Finance*, 60(5), 2351-2384.

Hillman, A., Cannella, A. and Paetzold, R. (2000). The Resource Dependence Role of Corporate Directors: Strategic Adaptation of Board Composition in Response to Environmental Change. *Journal of Management Studies*, 37(2), 235-256.

Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic management journal*, 22(2), 125-139.

Holmbeck, G. N. (2002). Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *Journal of pediatric psychology*, 27(1), 87-96.

Hussain, N., Rigoni, U. and Orij, R. (2016). Corporate Governance and Sustainability Performance: Analysis of Triple Bottom Line Performance. *Journal of Business Ethics*, 149(2), 411-432.

Högfeldt, P. (2005). The history and policies of corporate ownership in Sweden. In Morck, R.K. (ed.) A history of corporate governance around the world: Family business group to professional managers. Chicago: Chicago University Press.

Ibrahim N. A., D. Howard, J. P. Angelidis (2003). Board Members in the Service Industry: An Empirical Examination of the Relationship Between Corporate Social Responsibility Orientation and Directorial Type. *Journal of Business Ethics*, 47, 393–401

Jensen, M. and Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.

Jo, H. and Harjoto, M. (2011). Corporate Governance and Firm Value: The Impact of Corporate Social Responsibility. *Journal of Business Ethics*, 103(3), 351-383.

Jo, H. and Harjoto, M. (2012). The Causal Effect of Corporate Governance on Corporate Social Responsibility. *Journal of Business Ethics*, 106(1), 53-72.

Jonnergård, K., & Larsson-Olaison, U. (2016). Stubborn Swedes: The Persistence of the Swedish Corporate Governance System under International Reform. *Nordic Journal of Business*, 65(1).

Kuisma, M. (2007). Social Democratic Internationalism and the Welfare State After the 'Golden Age'. *Cooperation And Conflict*, 42(1), 9-26.

La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance*, 54, 471–517.

Lekvall, P., Gilson, R. J., Hansen, J. L., Lønfeldt, C., Airaksinen, M., Berglund, T., ... & Sjöman, E. (2014). The Nordic corporate governance model. *The Nordic Corporate Governance Model, Per Lekvall, ed., SNS Förlag, Stockholm.*

Lenssen, G., Gasdparski, W., Rok, B., Lacy, P., Midttun, A., Gautesen, K., & Gjølberg, M. (2006). The political economy of CSR in Western Europe. Corporate Governance: The International Journal Of Business In Society, 6(4), 369-385.

López, M., Garcia, A. and Rodriguez, L. (2007). Sustainable Development and Corporate Performance: A Study Based on the Dow Jones Sustainability Index. *Journal of Business Ethics*, 75(3), 285-300.

Mallin, C. A., & Michelon, G. (2011). Board reputation attributes and corporate social performance: An empirical investigation of the US Best Corporate Citizens. *Accounting and Business Research*, 41(2), 119–144.

McWilliams, A. and Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification? *Strategic Management Journal*, 21(5), 603-609.

Midttun, A., Gjølberg, M., Kourula, A., Sweet, S., & Vallentin, S. (2015). Public policies for corporate social responsibility in four Nordic countries: Harmony of goals and conflict of means. Business & Society, 54(4), 464-500.

Moursli, R. M. (2020). The effects of board independence on busy directors and firm value: Evidence from regulatory changes in Sweden. Corporate Governance: *An International Review*, 28(1), 23-46.

Nelling, E. and Webb, E. (2008). Corporate social responsibility and financial performance: the "virtuous circle" revisited. *Review of Quantitative Finance and Accounting*, 32(2), 197-209.

Nordic Co-operation (2020). Nordic Strategy for Corporate Social Responsibility. [online] Available at: http://norden.diva-portal.org/smash/get/diva2:701351/FULLTEXT01.pdf [Accessed 12 May 2020].

Nollet, J., Filis, G., & Mitrokostas, E. (2016). Corporate social responsibility and financial performance: A non-linear and disaggregated approach. *Economic Modelling*, *52*, 400-407.

Norwegian Corporate Governance Board (2020). The Norwegian Code Of Practice For Corporate Governance. [online] Available at: <https://nues.no/eierstyring-og-selskapsledelse-engelsk/> [Accessed 27 May 2020].

Ntim, C. and Soobaroyen, T. (2013). Corporate Governance and Performance in Socially Responsible Corporations: New Empirical Insights from a Neo-Institutional Framework. *Corporate Governance: An International Review*, 21(5), 468-494.

Ogden, J. P., Jen, F. C., & O'Connor, P. F. (2003). *Advanced corporate finance: policies and strategies*. Pearson College Division.

Orlitzky, M., & Benjamin, J. D. (2001). Corporate social performance and firm risk: A meta-analytic review. *Business & Society*, 40(4), 369-396.

Oxelheim, L., & Randøy, T. (2003). The impact of foreign board membership on firm value. *Journal of Banking & Finance*, 27(12), 2369-2392.

Pfeffer, J. and Salancik, G. R. (1978). The External Control of Organizations: A Resource Dependence Perspective, Harper & Row, New York.

Pham, H. and Tran, H. (2019). Board and corporate social responsibility disclosure of multinational corporations. *Multinational Business Review*, 27(1), 77-98.

Ruf, Bernadette & Muralidhar, Krish & Brown, Robert & Janney, Jay & Paul, Karen. (2001). An Empirical Investigation of the Relationship Between Change in Corporate Social Performance and Financial Performance: A Stakeholder Theory Perspective. *Journal of Business Ethics,* 32, 143-156.

Roberts, P. W., & Dowling, G. R. (2002). Corporate reputation and sustained superior financial performance. *Strategic management journal*, 23(12), 1077-1093.

Roberts, M. and Whited, T., 2011. Endogeneity in Empirical Corporate Finance. *SSRN Electronic Journal*,.

Sen, S., and Bhattacharya, C.B. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility, *Journal of Marketing Research*, 38(2) 225--243.

Sekaran, U. & Bougie, R. (2016). Research Methods for Business, West Sussex: John Wiley & Sons Ltd.

Shaukat, A., Qiu, Y. and Trojanowski, G. (2015). Board Attributes, Corporate Social Responsibility Strategy, and Corporate Environmental and Social Performance. *Journal of Business Ethics*, 135(3), 569-585.

Shleifer, A. and Vishny, R. (1986). Large Shareholders and Corporate Control. *Journal of Political Economy*, 94(3), 461-488.

Shleifer, A. and Vishny, R. (1997). A Survey of Corporate Governance. *The Journal of Finance*, 52(2), 737-783.

Simon, B., Staff, C., Lewington, J., McCarthy, S., MacInnis, J., Hicks, G., Heaps, T., Corley, R., Gladu, J., Vasil, A., Forman, G. and Spence, R. (2020). 2020 Global 100 Issue. Corporate Knights.

Sinani, E., Stafsudd, A., Thomsen, S., Edling, C., & Randøy, T. (2008). Corporate governance in Scandinavia: Comparing networks and formal institutions. *European Management Review*, 5(1), 27-40.

Stafsudd, A. (2009). Corporate networks as informal governance mechanisms: a small world's approach to Sweden. *Corporate Governance: An International Review,* 17(1), 62–76

Swedish Corporate Governance Code (2020). Swedish Code of Corporate Governance. [online] Available at: http://www.bolagsstyrning.se/UserFiles/Koden/2020/Svensk_kod_for_bolagsstyrning_gallande_fran_1_januari_2020_00000002.pdf [Accessed 27 May 2020].

Thomsen, S. (2016). Nordic Corporate Governance Revisited. *Nordic Journal of Business*, 65(1), 4-12.

Turban, D.B., and Greening, D.W. (1997). Corporate social performance and organizational attractiveness to prospective employees, *The Academy of Management Journal*, 40(3), 658-672.

United Nations (2019). Sustainable Development Report 2019.

Vance, S. (1975). Are Socially Responsible Corporations Good Investment Risks? *Managerial Review*, 64, 18-24.

Velte, P. (2017). Does ESG performance have an impact on financial performance? Evidence from Germany. *Journal of Global Responsibility*, 8(2), 169-178.

Waddock, S. and Graves, S., (1997). The corporate social performance-financial performance link. *Strategic Management Journal*, 18(4), 303-319.

Wagner, M., Van Phu, N., Azomahou, T. and Wehrmeyer, W. (2002). The relationship between the environmental and economic performance of firms: an empirical analysis of the European paper industry. *Corporate Social Responsibility and Environmental Management*, 9(3), 133-146.

Walls, J., Berrone, P. and Phan, P. (2012). Corporate governance and environmental performance: is there really a link? *Strategic Management Journal*, 33(8), 885-913.

Wood, D. J. (2010). Measuring corporate social performance: A review. *International journal of management reviews*, 12(1), 50-84.

Wooldridge, J.M. (2016). Introductory Econometrics -A Modern Approach, Boston: Cengage Learning

Supporting Tables

Table 1: Selection Summary

	Sweden	Norway	Finland	Denmark	Total
Raw Sample	368	177	134	130	809
Missing due to ESG Data	220	92	77	81	470
Missing due to Tobin's Q Data	3	0	3	2	8
Missing due to Both	15	5	1	0	21
Initial Selection	**130**	**80**	**53**	**47**	**310**
Multiple Share Classes	23	6	7	5	41
Financials & Utility	5	5	1	3	14
Cross Listings	8	2	2	0	12
Final Selection	**94**	**67**	**43**	**39**	**243**

This table shows the initial sample size as it was when the data was extracted from the database, in total, and the number of firms from each country, as well as the reason why firms were excluded from the final sample used in the models. "Missing due to both" refers to the firms that had data for neither Tobin's Q nor ESG-score. As can be seen from the table, the most exclusion was due to missing ESG data.

Table 3: White's Tests for Heteroskedasticity

	White's Tests for H_0 : Homoskedasticity		
	Hypothesis 1	Hypothesis 2	Hypothesis 3
Chi2(159)	387.67	287.57	296.58
Prob > Chi2	0.0000	0.0000	0.0000

This table displays the results of the tests for heteroskedasticity in each hypothesis testing's base model. The null hypothesis is that no heteroskedasticity is present in the model, indicating homoskedasticity. As seen in the results, the null hypothesis is rejected in each base model, meaning that there is heteroskedasticity present in the models. Therefore, the regressions following the base models in each hypothesis testing are run with robust standard errors (cluster robust in models using fixed effects).

Table 4: Correlation Matrix

	Tobin's Q	*ESG*	*Leverage*	*Size*	*R&D Intensity*	*ROA*	*Board Size*	*B. Ind.*	*Own. Con.*
Tobin's Q	1,00								
ESG	-0,16	1,00							
Leverage	-0,33	-0,11	1,00						
Size	-0,10	0,29	0,03	1,00					
R&D Intensity	0,31	-0,21	-0,18	-0,07	1,00				
ROA	0,18	0,19	-0,10	0,06	-0,46	1,00			
Board Size	-0,04	0,44	-0,10	0,31	-0,08	0,15	1,00		
Board Independence	0,00	0,18	-0,04	-0,02	0,06	-0,02	0,01	1,00	
Ownership Concentr.	-0,12	-0,01	0,14	0,15	-0,08	0,01	-0,06	-0,25	1,00

This table shows the standalone correlations between two variables, for each combination of variables. The table is used solely to investigate that problematic multicollinearity exists in the model. The strongest correlation between two isolated variables is -0.46, indicating that there is no problematic multicollinearity amongst the variables used in this paper.

Table 5: The Hausman Test

	Coefficients			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	Fixed	*Random*	*Difference*	*S.E.*
Lag ESG	-0,001	0,002	-0,003	0,001
Lag Lev	-0,002	-0,004	0,003	0,001
Lag Size	-0,174	-0,083	-0,090	0,030
Lag R&D	0,000	0,000	0,000	0,000
Y_2	0,069	0,095	-0,026	0,007
Y_3	0,080	0,099	-0,019	0,005
Y_4	0,104	0,112	-0,009	0,003

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

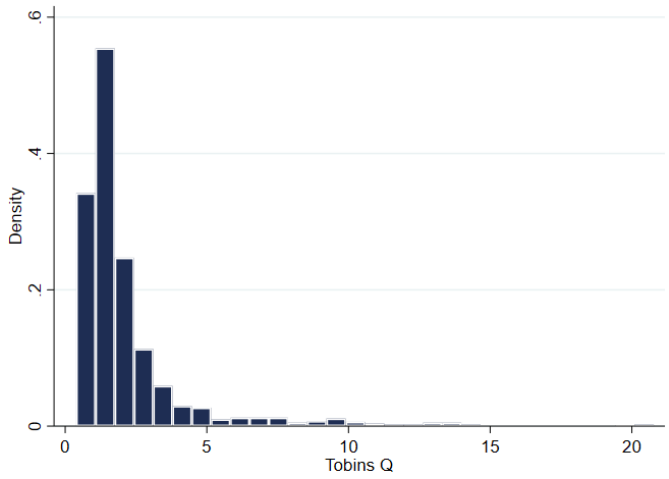
Test: Ho: difference in coefficients not systematic

chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 20.27
Prob>chi2 = 0.0025

This table displays the test results of the Hausman test, which is run in order to test if a Fixed- or Random-effects model is more appropriate for the data-set. The test is run as a part of the process of testing Hypothesis 1 and investigates if there is a correlation between the unique errors in the error term and the regressors. The null hypothesis of the test in a panel data set is that a Random Effects model is appropriate. As the null hypothesis is rejected, indicated by the chi2-value, a fixed model is used.

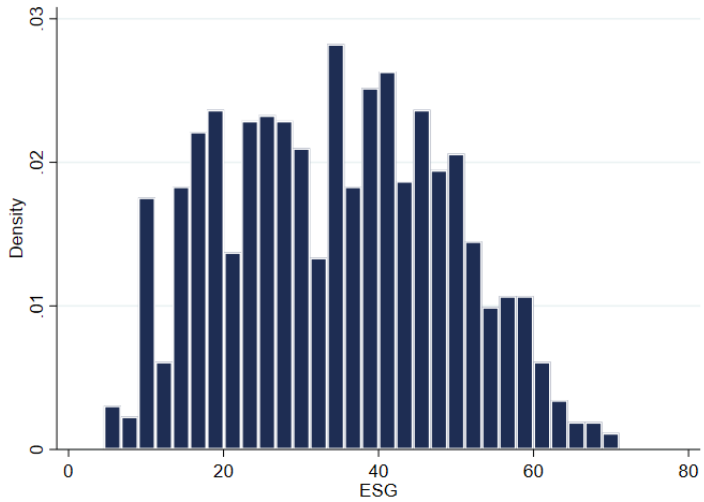
Supporting Figures

Figure 1: Distribution – Tobin's Q



This figure shows the distribution of frequency of firm's for every given value of Tobin's Q. As seen in the histogram, the distribution is skewed to the right and potential outliers are most likely present. As stated in the paper, the natural logarithm is therefore used instead.

Figure 2: Distribution – ESG



This figure shows the distribution of the frequency of firms for every given value of ESG. As seen in the histogram, the distribution is more normally distributed than Tobin's Q. But as stated in the text, the natural logarithm of ESG is used instead of the levels version of the variable during the parts of the paper when ESG is used as the dependent variable.