THE ROLE OF CORPORATE GOVERNANCE IN CRISIS MANAGEMENT: EVIDENCE FROM NORDIC FINANCIALS FOLLOWING THE COVID-19 CRISIS

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ABSTRACT

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Abstract

This master's thesis evaluates whether there is a relationship between the corporate governance ratings of Nordic financials and their ability to navigate through the COVID-19 crisis. The aim of this thesis is to analyze the Nordic corporate governance model and its connections to the organizations' crisis management capabilities.

The study utilizes a linear regression model to assess the relationship between the independent variable of governance score rating, and two alternative dependent variables of financial ratios ROA and ROE. The corporate governance ratings of the sample companies have been extracted from the independent ESG-rating provider Institutional Shareholder Services. ROA and ROE are captured as YoY changes between 2019 and 2020 when the pandemic emerged. This YoY ratio indicates how much negative events impacted the sample companies' profitability. Furthermore, the YoY differences in ROA and ROE between 2020 and 2021 are also utilized as alternative dependent variables to evaluate whether the corporate governance rating of the company had an impact on how quickly the corporations started recovering from the crisis caused by the pandemic.

According to the empirical findings of this thesis, the corporate governance rankings are not linked to the companies' ROA and ROE developments during and after the COVID-19 shock, although coefficients for ROA were significant. However, this does not mean that the linkage does not exist. Therefore, this thesis calls for further research on the impacts of good corporate governance practices in crisis management. Additionally, the new regulatory developments in the field of ESG will make new studies on ESG-rating divergence relevant during the upcoming years.

Key words

Corporate Governance, ESG-ratings, Crisis Management

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Tiivistelmä Tämä pro gradu -tutkielma käsittelee pohjoismaista yhtiöiden hallintamallia, ja hallinnoinnin laadun vaikutusta yhtiön kriisinhallintakykyihin. Yhtiöiden kriisinhallintakykyä tutkittiin tarkastelemalla COVID-19 kriisin vaikutusta kannattavuusmittareihin otosyhtiöissä. Tutkimuksessa käytetyt tunnusluvut ovat kokonaispääoman tuottoprosentti (ROA) ja oman pääoman tuottoprosentti (ROE). COVID-19 pandemian vaikutusta tutkittiin tarkastelemalla yhtiöiden vuosittaisia vaihteluja tunnusluvuissa vuosien 2019 ja 2020 välillä, kun COVID-19 kriisin vaikutus alkoi markkinoilla. Samojen tunnuslukujen kehitystä tarkasteltiin myös vuosien 2020 ja 2021 välillä, kun markkinat alkoivat elpyä pandemian aiheuttamasta shokista. Yhtiöiden hallintatavan laadun määrittelyyn käytettiin ESG-riskiluokittelija Institutional Shareholder Servicesin palvelua (Governance QualityScore), joka pisteyttää eri yritysten hallintotavat samalle indeksille. Yhtiöiden hallintaluokitusta käytettiin selittävänä muuttujana, ja tunnuslukujen muutokset toimivat vaihtoehtoisina selitettävinä muuttujina. Tässä pro-gradussa käytettiin lineaarista regressioanalyysiä muuttujien välisen suhteen tutkimiseen. Tutkimustulokset eivät osoittaneet yrityksen hallintaluokituksen ja kriisiajan kannattavuusmittareiden välillä olevan suhdetta. Tämä ei tarkoita, ettei suhdetta olisi olemassa, mutta tämän tutkimuksen viitekehys ei ollut soveltuva sen todistamiseen. Tulevaisuudessa olisi hyödyllistä selvittää, vähentävätkö uudet ESG-toimialan säännökset eroja eri arvioijayhtiöiden antamissa arvosanoissa otosyhtiöissä.	
Asiasanat Hallintatapa, ESG-pisteytys, Kriisinhallinta	
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1 INTRODUCTION

Corporate governance has been a widely discussed topic among scholars and professionals during the past few decades. In today's society, the subject of corporate governance also frequently pops up in regular day-to-day conversations between individuals at casual places such as restaurants and bars. One of the core reasons behind the increased interest in corporate governance is the rise of media, which has brought more attention to the governance practices of corporations since the 1970s. Companies such as Enron, WorldCom, and Lehman Brothers are globally known mainly due to the corporate scandals that their poor corporate governance practices caused. Moreover, each of these companies have once been responsible for a misconduct that impacts negatively large masses of individuals and communities. The rising interest in the subject matter can be noted by looking at data on past news publications, as the term ''corporate governance'' was mentioned in 69 news articles published in New York Times in 2000, but the number multiplied up to 426 news stories published two years later in 2002, following the leakage of huge corporate scandals (Bhagat et al., 2008). This is a good indicator of how corporate scandals and media have brought attention to the topic of governance. When it comes to broader consideration of environmental, social, and governance (ESG) factors, the increased interest in ESG among investors can be also noticed, and since the launch of Principles for Responsible Investment (PRI) by United Nations in 2006, the number of signatories has doubled from 734 in 2010 to 1384 in 2015, and further up to 3038 in 2020 (Avramov, D. et al., 2022). ESG integration in asset management is particularly popular in Europe, where most of the world's ESG funds and other responsible investing products are held.

Earlier in history, during the seventies, when theories of corporate governance and overall corporate social responsibility started emerging, the role of corporations in our societies was seen as quite straightforward and uncomplicated. Before the term corporate governance was widely used, the definitions of corporate responsibility focused mostly on companies' responsibilities to generate profits and provide products and services to societies. One could argue that the most well-known statement made on the responsibilities of corporations from this era is the Friedman doctrine. Moreover, this normative theory represents the social responsibility of companies to be increasing profits and maximizing the returns for the shareholders (Friedman, 1970). Therefore, the social responsibilities of companies do not extend to factors such as their employees or the communities and environment in which they operate in. Instead, the doctrine argues that the shareholders of a responsible corporation can conduct any socially responsible or philanthropic activities independently and separately from the operations of the company. Supporters of the Friedman doctrine argue that shareholders of a responsible company can freely choose how they participate in socially responsible activities based on their personal desires instead of having company executives make choices for them. Additionally, the company that is being socially responsible and maximizing shareholder returns, enables its shareholders to have the means and resources to participate in these types of activities.

Friedman's doctrine has received criticism widely, especially from Millennials and Gen-Z during the modern era and the rise of activities related to ESG performance. However, theories with differing viewpoints on the social responsibilities of corporations have already existed since the 20th century. One very well-established framework is the stakeholder theory, which has been formed to its modern state after Stanford Research Institute first introduced the concept of stakeholders in 1963. The father of the stakeholder theory, Edward Freeman, argued that corporations should aim to generate value for their broad scope of stakeholders, and not just the shareholders (Freeman, 1984). On top of investors, the firm’s stakeholders include their employees, customer, and suppliers. Especially during the modern era, the concept of stakeholder has also been extended to cover a list of more distant parties, such as local communities, governments, and trade associations. Therefore, this theory assigns way broader scope of responsibilities to the corporation compared to the Friedman doctrine.

The modern consensus of corporations’ social responsibilities is that providing shareholder profits alone does not mean that the company is socially responsible. For example, a company that is financially profitable but causes significant harm to the environment, biodiversity or communities is seen as an unresponsible business, and nowadays this kind of company usually gets called out in the media due to increased transparency. This can cause stakeholders such as investors, suppliers, and customers to boycott the firm and therefore restrict company’s access to funding or at least increase their cost of capital. This can result in once a profitable company to quickly start generating losses following such a scandal.

The topic of interest in this master’s thesis is whether corporations with higher quality of corporate governance practices in place can recover from unforeseeable crises, such as the COVID-19 pandemic, better than companies with poorer corporate governance practices. Analysing the relationship between corporate governance practices and companies’ ability to recover from a crisis allows us to have a better understanding of how sufficiently risk and crisis management tools and strategies are covered in existing corporate governance codes and standards. The Organisation for Economic Co-operation and Development (OECD) states that corporate governance standards should put adequate emphasis on the identification of risks before they occur. Both financial and non-financial risks should be considered, and a corporation’s risk management should cover both strategic and operational risks (OECD, 2014). According to these standards, good corporate governance practices should indeed incorporate tools for crisis management and thus make corporations more resilient.

The unforeseeable harmful event considered in this research is the COVID-19 pandemic which caused large financial distress to many companies between 2020 and 2022 worldwide, and many businesses are still currently recovering from these events in 2023. Therefore, it is the most recent crisis with a wide global impact, and hence scrutinizing this event offers novel information that can be very useful when it comes to the development of corporate governance and crisis management abilities of the corporation.

To evaluate each company's resilience and financial performance during the COVID-19 crisis, this research utilizes ratio analysis. Data on two profitability ratios, the Return-on-Assets (RoA) and Return-on-Equity (RoE) are collected, and their year-on-year (YoY) changes are evaluated for each sample company. These changes in ratios are comparable, given that all the sample companies are financial institutions operating in the same industry sector and market. The aim is to evaluate the company performance in the beginning of the pandemic, when the majority of the companies' performance ratios declined. Additionally, the study also considers the recovery phase of the COVID-19 crisis, when most of the companies were able to improve their performance ratios again.

The quality of the corporate governance practices among corporations is measured and compared by utilizing Governance QualityScores (GQS) provided by independent investment advisory firm and ESG rating agency Institutional Shareholder Services (ISS). Secondary data-driven governance screening and scoring are utilized because assessing the governance practices of the sample companies would be very challenging and time-consuming, and industry experts at ISS likely have better tools and resources available. Furthermore, the relationship between these two variables, financial performance and the quality of corporate governance, is evaluated by using statistical tools such as regression analysis.

This master's thesis is structured to begin with the theoretical framework and literature review around the key concepts and theories on corporate governance and crisis management. These chapters are followed by descriptions of the data and methodology used in this research. The chapter aims to provide thorough explanations of research data and methodology that are required to fully understand the research conducted and its results. After that, the findings of this master's thesis are presented and analyzed. Lastly, the concluding remarks and suggestions for future research are made.

2 THEORETICAL FRAMEWORK

2.1 Corporate governance

Corporate governance has been given various definitions in numerous dictionaries throughout decades and the opinions on which different factors should be included in the concept vary. However, the definitions are usually based on the accountability of the corporation and its ways of exercising authority over the business. The governance practices of the business are impacted by both the legal governance criteria imposed by the authorities, as well as the companies' voluntary efforts toward better governance.

The degree of governance regulation varies highly by market and industry. For example, the United States has been an early adopter of governance standards, and thus NYSE and NASDAQ listing standards have some of the strictest and most detailed governance criteria. Firstly, the U.S. passed the Sarbanes Oxley Act (SOX) in 2002, and shortly after the country adopted the governance standards set by the Securities and Exchange Commission (SEC). The SOX increased the directors' responsibilities and strengthened internal controls of the companies, which lead to decreased corporate risk-taking among the businesses (Sayari & Marcum, 2018). In 2003 NYSE and NASDAQ listing criteria were reviewed, and this resulted in approximately 30% of U.S. industrial corporations having to change their boardroom practices to comply with the revised standards (Aggarwal et al., 2019). Therefore, for U.S. companies it is mandatory to invest resources in good corporate governance practices, especially if they wish to get listed.

When it comes to emerging and developing countries, the standards are less stringent, and there is less reliable research information available on governance practices. Developing countries lack strong and well-organized authorities that monitor companies and their corporate governance practices, and in some countries, corruption levels are high among authoritarian bodies. The lack of control leads to good corporate governance practices relying on voluntary efforts of corporations in many third-world countries. Additionally, the ownership structure and distribution of power are very different in emerging markets. Many emerging markets would massively improve the quality of their aggregate corporate governance by appointing outsider directors on the boards and by supporting board committees (Sayari & Marcum, 2018). However, this can be challenging as large portions of companies in emerging countries are owned and controlled by families, and the company boards primarily consist of family members or other insiders.

Corporate governance criteria and the importance of corporate governance also vary by industry within the same country. Due to these differences between sectors, some industries are largely covered by academic research, meanwhile, gaps exist in other industries. For example, the hospitality industry has not had well-defined governance legislation, and the number of academic research publications on the topic is very low. Additionally, past findings of governance research on hospitality sector have been inconclusive. This can be seen as governance researchers in the hospitality and tourism industry have published contradicting reports, including a report stating that there is a positive relationship between equity compensation and firm value, whereas another research finds this relationship to be insignificant (Li & Singal, 2022). Therefore, there is a need for additional governance research concluded in these underrepresented industries.

An example of an industry with a large scope of corporate governance regulation as well as past governance research is the banking industry and other financial institutions. Following the financial crisis of 2008, authorities across the globe realized that poor corporate governance practices of a few individual banks can cause the whole financial system to collapse, which in return can cause distress and chaos in entire economies. Therefore, many countries have applied a code of conducts for banks specifically followed by the crisis. For example, the Banking Code set up by the Netherlands Bankers' Association in 2010 defines regulations on the composition and experience of board members, monitoring of their actions, and their compensation (de Haan & Vlahu, 2016). These regulations are far stricter for banks than the rules applied to most of the other industries in the Netherlands. Due to the nature of the financial industry and numerous specific corporate governance codes that financial institutions have to comply with, banks are often excluded from other industries in governance research and data. However, this is compromised by a large amount of academic research on banks and their governance practices specifically, especially during the post-financial crisis era. Given that financial corporations are extremely carefully supervised in developed countries nowadays, it is easy to find reliable corporate governance data on them when compared to most other sectors.

The interest of this research is the financial industry, as their stringent governance regulation unifies the governance practices and thus the voluntary efforts mostly set them apart from their peers. The aim is to study whether these voluntary governance efforts make businesses more resilient in unforeseeable crisis. Additionally, given the importance and size of the financial sector worldwide, this selection of the sector aims to make the research results material.

2.2 Nordic corporate governance

Given the focus of this thesis is on the corporate governance practices of Nordic financial companies, it is useful to discuss the characteristics of corporate governance in the Nordic region. In the past decades, Nordic countries have been declared to be economically stable jurisdictions with strong stock markets and social welfare systems. The whole group of Nordic economies is well-developed democracies with high GDP per capita, and thus corruption and cronyism are less worrying than in emerging countries. Additionally, the populations of Nordic countries are relatively small and thus the reputation of companies is considered important in these trust-based societies. Therefore, this region has developed its own governance practices, sometimes referred to as the Nordic governance model.

Although Nordic stock exchanges do not have as stringent listing rules on governance as the United States for example, the Nordic civil law fosters good governance practices. It has been studied, that compared to other European countries and the U.S., the Nordic countries have a higher level of investor protection, including stricter control of directors, better private control of self-dealing in related party transactions, and more stringent enforcement of minority rights in such transactions by utilizing fines and other sanctions (Thomsen, 2016). Increased investor protection likely contributes to the fact that the Nordic economies have relatively large stock markets, as more investors feel confident enough to invest in equities. Globalization has also brought increased levels of foreign investments into the region.

Nordic countries tend to share similar characteristics, but numerous differences can also be discovered. Although legislation among different Nordic countries is quite unified, Arranz (2016) argues that the Governance Code and Regulations of Finland give more freedom to Finnish companies, which results in a more diverse pool of governance practices than in other Nordic countries. When it comes to similarities in corporate governance characteristic within the region, Nordic entities are likely to have a concentrated ownership structure. Moreover, the majority of the shares in Nordic companies are typically held by fewer shareholders than companies in countries such as the UK, Australia, and the U.S. However, concentrated ownership is not unique to the Nordic countries, as many other jurisdictions also have similar ownership structures. For example, emerging markets favour family-owned companies, where external shareholders are either missing completely or holding a small portion of the shares. Even though, some family-owned businesses exist in the Nordics, this ownership structure is not as common as in the emerging markets. Concentrated ownership is seen as a potential threat to good corporate governance practices and the rights of minority shareholders. However, the difference between the Nordic region and emerging economies is that the corporate governance shortcomings are more closely monitored in the Nordics. Furthermore, due to social pressure and legal protection of minority shareholders in the Nordic economies, majority shareholders seem to act responsibly for the most part and they extract fewer private benefits from ownership compared to majority shareholders in the U.S., UK, and other economies (Thomsen, 2016). Therefore, Nordic countries seem to be able to manage governance issues around concentrated ownership relatively well.

In Nordics, the identities of majority shareholders vary. Thomsen (2016) states that the typical structure is bank-based in Sweden, whereas the typical Norwegian structure is a state-owned enterprise. Furthermore, owner identities in Finland are mostly investors, and in Denmark foundation ownership is common. Therefore, concentrated ownership is visible throughout the Nordic region, although in different forms blended together.

The board structure of Nordic companies is similar to the German two-tier model that separates the board of directors and executive management. However, this separation of power in Nordics is not as strict as in Germany, and thus the Nordic board structure is frequently described to be semi-two-tier (Thomsen, 2016). This flexibility is observed in each of the Nordic countries, and often the executive board of the company may consist of just one individual. Additionally, Sweden, Norway, and Denmark appoint up to 1/3 of employee representation on company boards, but Finland has abolished this structure (Thomsen, 2016). This fact demonstrates how Finnish corporations can have more variety in their governance practices compared to other countries in the region. Nonetheless, the representation of employees on the boards of companies in these three Scandinavian countries with this regulation is still less compared to the German model, where the employee representation is up to ½ and mandatory, unlike in the Nordics.

Nomination committees are a characteristic that is specific to Nordic companies. These external or internal committees are elected at annual shareholder meetings, and their purpose is to evaluate the performance of the board and nominate board member candidates to be elected by shareholders. Usually, the members of the nomination committee are a combination of shareholders that own large stakes in the company, minority investors, and the chairman of the board. Arranz (2016) compared the impact of external and internal nomination committees on board compositions between 2008 and 2013 in Finland, and the study found that meanwhile, external committees have more females as directors on their boards, they are less diverse when it comes to the tenure, age, and other demographics of the individuals. Moreover, the study concluded that the method of appointing the director candidates does not impact the final board composition significantly. Therefore, the harmonization of EU governance practices may have an impact on the recognition of nomination committees in the future, if the EU sees them as unnecessary and causing dissonance among governance practices.

2.3 Measuring corporate governance practices

Corporate governance can be very challenging to measure objectively and comparing the practices of different companies can be tricky as well. This is because the measures rely on the information that the company shares on their internal governance efforts. This information can be very misleading at times as companies tend to aim achieving a desirable reputation in the eyes of investors and other stakeholders. Therefore, many companies state publicly their governance practices to be better than they are in reality. Additionally, companies might be hiding corporate governance shortcomings to avoid public scandals. However, transparency has increased in the past few decades due to the rapid spreading of information, increased consumer awareness, and stricter governance regulation, which makes it more difficult for corporations to hide such flaws.

Another reason that makes rating corporate governance difficult is the subjective definitions of good corporate governance practices. Moreover, different individuals and entities might have completely divergent views on what aspects and policies should companies focus on in their governance practices. The governance efforts can vary highly, especially in jurisdictions that do not have unified corporate governance codes and enforced regulations. For example, one might view the most important area of corporate governance being audit oversight, whereas others might argue that it is the shareholder rights. Thus, it can be challenging to give appropriate weights to different components of corporate governance when evaluating the businesses. It is widely known and accepted that the industry of sustainable investing is suffering from ESG-rating uncertainty, where different providers may rate the same company completely differently. It has been concluded that this uncertainty about companies' truthful ESG-profiles leads to higher perceived market risk, higher market premium, as well as lower investor demand (Avramov, D. et al., 2022). Academics and professionals have also studied the possible root causes for this ESG rating divergence between companies. Further, it has been found out, that the main driver is specifically the measurement divergence among rating providers, and not so much the differences between weighting of different governance aspects (Berg et al., 2022). One possible solution for ESG rating divergence could be the policy makers and their efforts to establish common and clear taxonomy on sustainability reporting and other areas of ESG. This area has seen some recent developments especially in the EU-area, but most of the world is lacking sound taxonomy rules on ESG matters.

Although universal taxonomy policies in sustainability reporting are not currently implemented, one popular way to rate and compare corporate governance practices of corporations is the creation of corporate governance indices. This means that economists, researchers, and different service providers generate measures that capture the quality of corporate governance practices in a simplified measure based on numbers, letters, or colours. The idea of the corporate indices is to benchmark a corporation's governance practices against what the index constructor regards to be the best practices (Bhagat et al., 2008). Moreover, corporate governance indices can be industry-specific with different standards. It can be challenging to incorporate the numerous dimensions of corporate governance into one simplified figure or rating, but these indices are simple and easy to understand when needed in the decision-making of investors and other stakeholders. Further, investors may conveniently use them as guidance to see which companies they should investigate more in detail due to the increased corporate governance risk.

Past findings of academic research have been contradicting when it comes to corporate governance indices. Bhagat et al., (2008) along with many other research papers have advised that there is no consistent relationship between corporate governance indices and the performance of the company. Moreover, the findings suggest that governance indices generated for both academic and commercial purposes are poor indicators of the future performance of corporations. Bhagat et al., (2008) state that the best measures for governance practices differ from one company to another and thus a single index is not an appropriate method to describe the status of a company's governance efforts.

There have also been study results that defend the usefulness of the corporate governance indexes. For example, two of these authors have been Arora & Bodhanwala (2018), who concluded that there was a significant positive relationship between the corporate governance index (CGI) and firm performance in India. The authors announce that this relationship is causal and emphasize that successful governance practices lower the company's cost of funding. However, Bhagat et al., (2008) argue that although index providers such as GIM, BCF, and Brown and Caylor have previously examined positive relationships between their indices and firm performance, the correlations are not causation. They also state that using these indices seems appropriate when mandatory, given the lack of good alternatives. The interest of this study is to study one sector in one geographical area where transparent information is widely available, which hopefully minimizes the negative aspects of corporate governance indices and their divergence.

Past academic literature as well as commercial providers of corporate governance ratings have evaluated the corporate governance practices of Nordic companies and how they compare to businesses operating in other geographical areas. One of the world's largest governance datasets is obtained by the World Bank, and Table 1 below illustrates the global percentile ranks of Nordic countries in different components of corporate governance. These five components of corporate governance according to the World Bank are political stability or absence of violence and terrorism, rule of law, control of corruption, government effectiveness, regulatory quality, and voice and accountability. The graph shows that Nordic countries excel in global governance rankings, as they rank among the highest percentiles in all categories. One could argue that this is the result of Nordic countries simply having strong economies, but this phenomenon has also been researched previously. Thomsen (2016) compared the corporate governance data from the World Bank database and controlled GDP per capita. The study found that even after controlling the GDP per capita, the Nordic countries led significantly in most areas of corporate governance. When comparing the governance percentiles ranks of Nordic countries to the ranks of the U.S. and UK, the latter countries' percentiles are significantly lower in most of the areas. Therefore, it can be concluded that Nordic corporate governance model is very efficient, or at least that it suits Nordic countries very well.

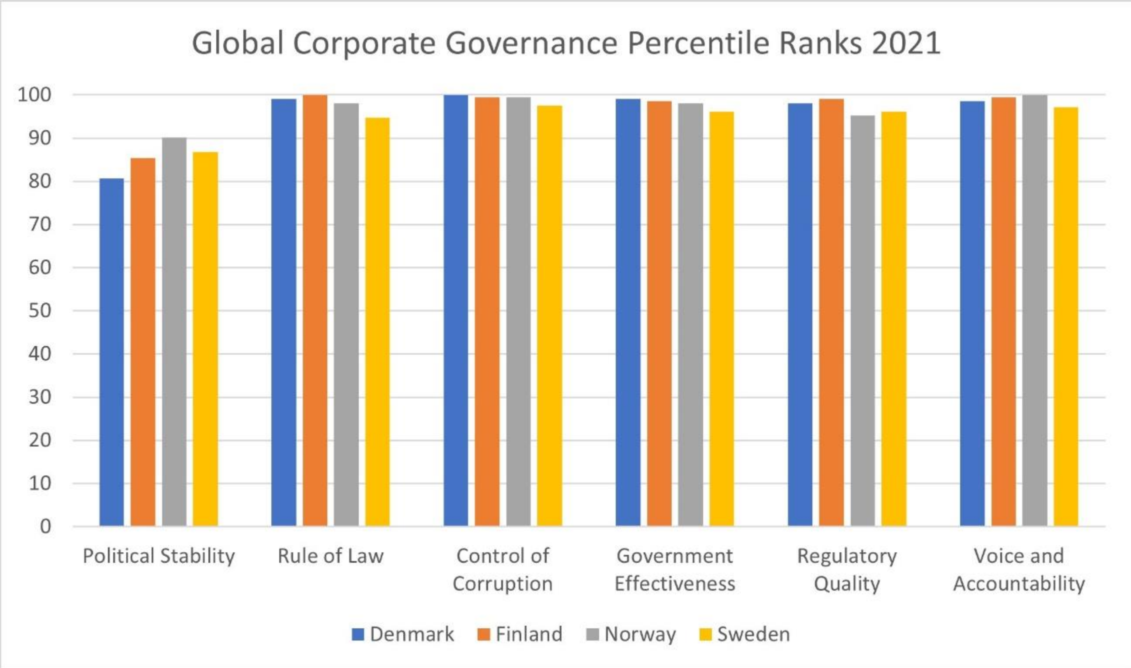

Table 1: Global corporate governance percentile ranks of Nordic countries in 2021

Although the World Bank focuses on country-specific aggregate data on corporate governance performance, it is also possible to compare the corporate governance practices of individual Nordic companies. These company-specific ratings are usually provided by commercial rating agencies and proxy voting advisors. For example, the Nordic financial services provider Nordea has constructed ESG scores for Nordic companies since 2020, currently covering around 250 companies. Since governance is one component of ESG, the companies' governance can be studied from these reports. However, the depth of governance research that goes into ESG reports varies among companies being rated as well as the rating entities. Investment and proxy voting advisor Institutional Shareholder Services (ISS) produces a Governance QualityScore for each listed Nordic company. These reports are divided into four categories, these being Board Structure, Compensation, Shareholder Rights, and Audit & Risk Oversight. ISS ranks the governance risks possessed by each company in decile-based scores, and thus this method seems appropriate when comparing the governance practices of individual companies.

It is possible to utilize multiple different data providers when studying corporate governance of individual companies, as long as one acknowledges the risks of data divergence among governance rating providers. Additionally, an important factor to consider when using data offered by a commercial provider is to ensure they are acting independently. There could be numerous incentives for providers to produce biased reviews. For example, some providers may have conflicts of interests and issue more favourable ratings for investments in their own portfolio, which would cause the research results to be skewed. In addition, an unfair company in corrupted business environment might offer the rating agency monetary benefits for publishing a positive report on their governance efforts.

2.4 Company’s commercial performance

The commercial performance of the company can be defined and measured in various ways. In this study, company performance refers to its ability to profit from the resources and achieve its objectives. Meanwhile corporate governance ratings measure company’s efforts and success from the corporate governance perspective, company performance is measured in financial terms.

One could argue that measuring the financial success or the company is easier and less subjective than measuring company’s corporate governance practices. However, financial performance and accounting practices can vary highly from one method to another. Furthermore, different techniques can lead to very different views on the company’s performance.

It is very easy to obtain financial statements of public companies, and these statements include a lot of information. However, values in financial statements, such as in the balance sheet, are expressed in absolute values and thus it can be difficult to compare the results across companies. Additionally, the accounting practices as well as currencies can differ among corporations, and the statements can contain a lot of noise.

Financial ratios are one very popular method of measuring different aspects of company’s financial performance. Bordeianu & Radu (2020) state that financial ratios present relationship between financial statement items, and they are a powerful tool to help summarize financial statements. Furthermore, a financial ratio as a stand-alone figure is rarely very useful, but these ratios become meaningful when compared to industry averages and historical data. They are relatively easy to understand and comparable across of different companies, and thus they have been popular in the studies around companies' financial performance.

Bordeianu & Radu (2020) have divided most common ratios into three categories, these being liquidity ratios, solvency ratios, and profitability ratios. Firstly, liquidity ratios refer to the company's ability to survive its financial obligations and maintaining safe margins. The authors state that the most common liquidity ratio is current ratio, which is current assets divided by current liabilities. Moreover, current ratio acts as a good indicator on whether the business is able to pay its short-term liabilities, such as accounts payable, salaries, and taxes payable. Expected values for current ratio can vary from industry to another, but Bordeianu & Radu (2020) state that the in international regulations, the current ratio should be generally around 2 (respectively 200%), which means that the company should be able to cover all their short-term liabilities with their working capital.

Secondly, solvency ratios relate to the degree of which the company's assets cover its liabilities. From solvency ratios, Bordeianu & Radu (2020) list two key ratios, which are the debt-to-asset ratio and the debt-to-equity ratio. Solvency ratios assist in evaluating the leverage ratio as well as the degree of which a business is financing its operations through debt versus wholly owned capital. Further, these ratios can be used to assess the company's ability to meet their medium- and long-term liabilities.

Lastly, profitability ratios refer to the company's ability to generate profits from its assets and operations. Bordeianu & Radu (2020) list some of the most prominent profitability ratios, including gross profit margin, EBITDA margin, net profit margin, return on assets, and return on equity. These ratios indicate the ability of the business to generate earnings against cost during a certain period of time. Further, different industries may have very different profitability ratio averages in general, but these ratios are very useful when comparing companies of similar nature.

Another popular financial ratio is Tobin's Q, which measures the market value of a company divided by the replacement value of the firm's assets. This ratio can assist analyst to understand, whether the company's stock is undervalued or overvalued. The relationship between Tobin's Q and corporate governance has been studied before. Singh et al. (2018) studied the relationship between corporate governance and organizational performance utilizing Tobin's Q as the measure. The sample was collected from 324 Pakistani listed companies, and Singh et al. (2018) found that board size, number of board committees and ownership concentration are positively linked with high Tobin's Q ratio, whereas board independence and CEO duality display a negative relationship. Therefore, this relationship seems complex with various corporate governance factors impacting organizational performance in different ways. Additionally, it is good to remember that results between emerging markets and developed markets can be inconsistent with each other, and the same way the studies conducted in different industries can lead to very different views.

On top of financial measures, the companies' performance can be evaluated also by setting up alternative key performance indicators (KPIs). One way of setting up KPIs for the business is logistic approach, in which the business is evaluated by factors that relate to the level of efficiency in managing how resources are acquired, stored, and delivered to the end destination. Logistics-based KPI system allows the companies to analyze the current status and prospects of activities, notice supply chain development trends, and quickly respond to emerging problems, as well as bridge and gaps between the current strategy and its implementation (Voronova & Berezhnaya, 2020). However, logistic KPI tracking can include factors that can only be accessed by the management of the company, such as labour productivity, warehouse turnover, and vehicle efficiency rates. Therefore, some forms of KPI tracking are not suitable for external stakeholders, and thus these parties usually rely on financial measures, such as ratio analysis, instead.

2.5 Crisis management

Recent years have been quite impactful for societies and businesses, following the outcome of a few major crises in the 2020s that have had a global impact. Firstly, the COVID-19 pandemic sparked in 2020 and it has caused massive losses for many businesses, some of which are still recovering as of now in 2023. Large populations of people were forced to stay in their houses socially distancing for months, and therefore consumer behavior changed massively. Additionally, many businesses were forced to shut down their operations due to restrictions or issues in the supply chain, and many companies introduced remote working models, which impacted the use of commercial real estate. This crisis was particularly impactful, as it was unforeseen and caused some of the largest impacts in the developed western world. Shu et al. (2021) studied that the four major stock indices in the U.S. lost more than a third of their total values in a matter of five weeks during the COVID pandemic crisis in 2020. Although the root cause of this crisis was different, this crisis reminded the masses of the global financial crisis experienced in 2008.

Another major crisis that has impacted developed countries in the Western world is the Russian invasion to Ukraine that started in February 2022. This conflict and human rights violation is still going on more than a year later. Although the actual warzone has not expanded outside the borders of Russia and Ukraine, the conflict has had much more widespread effect on businesses. Federle et al. (2022) state in their working paper that on average the countries neighbouring Russia and Ukraine experienced abnormal losses of 23.1% in their equity indices within four weeks from the start of the war. This conflict is particularly relevant to Nordic countries, considering the proximity of the events and the border that Finland and Norway share with Russia. Moreover, especially companies with ties to Russia suffered from this crisis due to sanctions and boycotts. Additionally, many companies needed to make changes in their supply chains, given that importing goods from Ukraine and Russia has become restricted. This has also expanded the crisis to the energy sector.

As recent years have shown, unexpected negative events can be very harmful or even too much to handle for many businesses. Therefore, companies need to consider their crisis management strategies. To assist in the creation and evaluation of crisis management strategies, many frameworks for crisis management have been created. Coombs & Laufer (2018) alongside many academics determine crisis management to be a three-phase process. According to the authors, the first phase is the pre-crisis phase, which includes crisis prevention and preparation. In practice this phase can include activities such as appointing a crisis management officer, constructing a crisis management plan, and testing it in potential crisis scenarios. Coombs & Laufer (2018) define the second phase of crisis management to be the actual crisis phase, which occurs when the company's response to the crisis can be seen. Lastly, the authors state that the third phase is called the post-crisis phase, in which the company is learning from the past crisis and revising its crisis management model.

Given that corporate governance practices and crisis management efforts both relate to the way that the business is controlled, one could argue that there should be a linkage between good corporate governance and a company's ability to manage a crisis event. Alpaslan et al. (2009) argue that if companies implement the principles of stakeholder theory in their governance model, they can manage crises better. This is because the company will put more emphasis on a broader pool of potentially impacted parties, and they conduct more proactive crisis management activities. Moreover, if the company is considering additional stakeholders such as employees when conducting crisis management, the outcome ultimately leads to more benefits for shareholders in many instances. On the other hand, if the governance model of the company is based on the Friedman doctrine where the company is only responsible to its shareholders, the crisis management tools of the corporation might lack complexity and influence other stakeholders not to support the business in the event of a crisis. Additionally, the crisis management strategy of the company that is governed according to the Friedman doctrine can be too passive and thus not monitor the possible upcoming crises sufficiently.

Models for crisis management have been developed to standardize the principles for the execution of functional crisis management systems. Many of these models function on a feedback loop basis and are closely tied to the risk management process. Bénaben (2016) divided modern and software-based crisis management framework into three sections, these being crisis definition, crisis analysis, and crisis management. First is the phase of crisis definition, where potential crises are evaluated by the function they would impact, the gravity of the intrinsic risk involved, and what is at the stake in that specific area of business operations. Secondly, Bénaben (2016) identifies the aim of the step involving crisis analysis to describe items such as the location and perimeter of the crisis, partners involved in crisis management, and the emerging risks arising from the crisis. Further, these first two steps allow companies to form objectives or missions for the last step, which is crisis management. Bénaben (2016) highlights that this last step is highly interconnected to the previous steps, and it includes defining the response, realizing the response, and maintaining the response.

Elsubbaugh et al. (2004) designed a crisis preparedness model, that includes three phases further divided into six steps. According to the author, the first phase is the general preparation phase, in which cultural and strategic preparedness are implemented in the organization. Elsubbaugh et al. (2004) state that the second phase is early warning signal detection. Lastly, the phase of crisis management or specific preparedness phase includes quick decision responses, resource mobilization, and efficient information flow. However, Elsubbaugh et al. (2004) emphasize the importance of organizational culture in crisis management, arguing that legislation and written policies are not efficient if the company culture and values do not support strategic crisis management. Therefore, this crisis management makes a close connection to corporate governance of the business, which is the same linkage as the topic of interest in this study. Additionally, according to this author, crisis management can also be linked to stakeholder theory.

Another greatly appreciated crisis model was constructed by Sahin et al. (2015), in which the crisis management process has been divided into five steps. The process starts with prediction, as crises usually send some early warning signals before they happen. Secondly, Sahin et al. (2015) state that the step of prevention and preparation is important for the overall process, and it includes creating a positive approach to crisis management and improving policies to prevent potential crises. Therefore, this step is closely related to the corporate governance practices of the company. Further, the authors state the third step of the process is the control phase which includes employing crisis management procedures that generate motivation among personnel meanwhile avoiding policies that can cause stress and anxiety. This indicates that the authors put a lot of weight on employee well-being during the crisis, which is closely related to corporate governance practices and stakeholder theory. As the fourth step of the process, Sahin et al. (2015) have described being the recovery phase, in which short- and middle-term recovery mechanisms, such as replacement of losses should be employed. Lastly, the authors argue to be the phase of learning and evaluation, which includes organizing systematic training for all employees, preparing strategic reports, and rehabilitating the working environment. This is quite a classical approach to the crisis models, as it is essentially a more detailed version of one of the most original crisis models constructed by Mitroff and Pearson (1993). Further, Table 2 has been constructed based on the theory of Mitroff and Pearson (1993) to illustrate traditionally used circular model for crisis management.

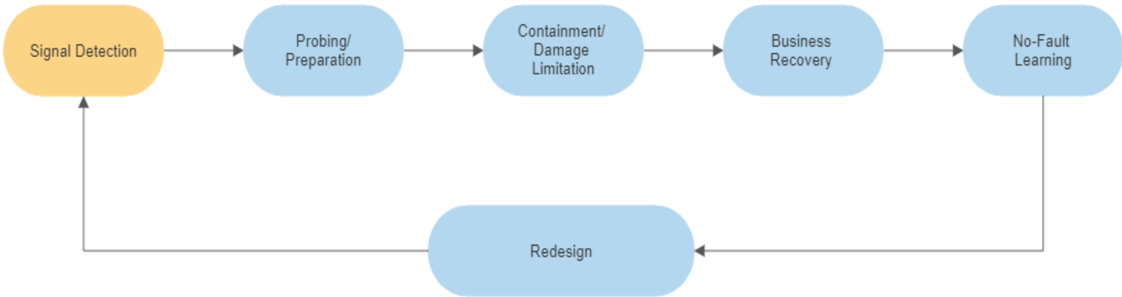

Table 2: Mitroff and Pearson's five-stages of crisis management

2.6 Evaluating crisis management

Measuring and objectively evaluating a corporation's crisis management efforts can be tricky, as this would usually require evaluating how the businesses survived past crises or simulating potential crises. When looking at past crises, the results may not be very forward-looking, as future crises may come in a very different form. For example, a company that was well-prepared for the financial crisis might not be sufficiently prepared for the cyber-attacks of the 2020s. On the other hand, simulating crises and estimating their potential damages can be challenging and far from reality.

Different authors have utilized different types of criteria for measuring the quality of crisis management. Mallak (1998) developed six criteria to evaluate the resilience of the business, these being goal-directed solution seeking, risk avoidance, critical situational understanding, the ability of team members to fill multiple roles, degree of reliance on information sources, and access to resources. Further, many academics and professionals have utilized Mallak's index when measuring the abilities of businesses to manage crises. Somers (2009) generated a questionnaire based on these six factors and asked the responders to rate their organization on each question on a scale from one to ten. Moreover, he argues that his research results suggest that instead of following step-by-step crisis management models, corporations should focus on creating organizational processes and internal structures that develop latent resilience companies so that they are conditioned for positive adaptive practices when experiencing a crisis or stressful situation.

Swartz et al. (2010) emphasize the importance of testing the company's business continuity plan and crisis management practices. Further, the authors identified five different types of tests that vary in their complexity and thus how often they should be concluded. Moreover, the tests with lower level of complexity are conducted more frequently compared to the assessments with a higher level of complexity. Firstly, Swartz et al. (2010) present that the most simple and frequent test to be concluded should be a desk test, in which the risk officer checks that the crisis management plan contents are still up to date. For example, the contact details of key personnel involved in crisis management need to be kept up to date. Secondly, Swartz et al. (2010) state that a walk-through test should be conducted frequently. This test involves going through the different roles of the main participants in the crisis management plan and ensuring that the interaction between different parties within an organization is seamless. The authors state the simulation test to be the third most frequently concluded test. In the simulation, all employees are affected by a prior declared event, such as a simulated fire hazard. Moreover, this kind of exercise will teach each team member their role in crisis management in a controlled environment. It is important to conclude frequent testing, especially if the average tenure for employees is short in the organization. Swartz et al. (2010) state that the fifth test is called the functional or operational test, in which very few areas of businesses are impacted and forced to relocate their operations to a new place at the time. This offers different business units a more thorough understanding of how they would ensure business continuity in practice in the event of crisis and relocation. Lastly, Swartz et al. (2010) state that the most complex, expensive, and time-consuming crisis management test is full exercise, in which the company is being tested at the broadest scope possible. For example, the entire company might be forced to relocate, and different units may set their own recovery time goals. Based on different types of crisis management testing methods, corporations can set up testing schedules that are in harmony with their business cycle and operational needs. However, it is important that more complex crisis management testing is concluded at least annually, otherwise, company's governance practices may be in a bad form.

3 DATA AND METHODOLOGY

3.1 Sample selection

In this thesis, the Nordic countries cover the geographic area of Fennoscandia, including Norway, Sweden, Denmark, and Finland. Moreover, Iceland is not included in the consideration of the study, given that it is geographically much more isolated from the other Nordic countries, and thus the COVID-19 pandemic most likely impacted it very differently compared to other Nordic countries. Further, Iceland's population is a fraction of the populations in other Nordic countries, and as a remote island its economy is subjected to its own unique factors.

To select an appropriate sample to represent Nordic institutions in the financial sector, the sample used in this study has been gathered based on industry sector categorization. Further, the Global Industry Classification Standard (GICS) industry taxonomy developed by MSCI and S&P has been utilized in this research. Nordic companies with sector listings identified as financials have been subjected to the sample selection. The financial sector under GICS has been further divided into three industry groups, these being banks, diversified financials, and insurance. Therefore, this research takes into consideration all of these industry groups as they are considered similar enough to be compared on a study of this nature.

Another criterion for the sample selection was data availability, particularly in corporate governance ratings. Therefore, only the major Nordic indices of publicly held companies were covered in the sample to ensure that the corporate governance data is sufficient and reliable enough for the entire sample. It is possibly to find corporate governance data on smaller privately held companies, but the risk is that these ratings are based on very low number of unreliable data points. Please refer to the Chapter 3.2 to find out more about the governance data coverage in the Nordics.

The sample size in this study is a total of 48 Nordic listed companies in the financial sector. Moreover, the sample consists of 16 Danish companies, 6 Finnish, 7 Norwegian, and 18 Swedish businesses. These financials have industries listed as banks, insurance, capital markets, consumer finance, and diversified financial services. Furthermore, both financial and corporate governance data are available for the entire sample of companies.

3.2 Corporate governance data

This study utilizes secondary data in corporate governance ratings as forming comparable ratings for the required sample size would be difficult and very time-consuming. The research relies on the Governance QualityScores constructed by ESG-ratings provider ISS. Table 3 presents the coverage of Nordic indices in the universe of Governance QualityScore, and it seems suitable for the purpose of this study. It can be noted that all the major Nordic indices have been covered. Additionally, the components of QualityScores being Board Structure, Compensation, Shareholder Rights, and Audit & Risk Oversight appear to give a holistic view of the governance practices, and this overview suits the purpose of this research.

When constructing these Governance QualityScores, ISS utilizes materials such as proxies, annual reports, meeting notices, as well as other public information. Additionally, ISS employs their proprietary analyses and actively engage with corporations. The combination of methods leads to a library of 280 governance factors, of which up to 193 are used to assess the quality of the issuers' corporate governance. Please see Appendix 1 to see a sample report extracted from ISS Governance QualityScore brochure. Additionally, Appendix 2 shows categories and subcategories implemented in this score more in detail. More specific methodology used in the score is transparent and the detailed information can be found publicly available on the website of ISS.

GOVERNANCE QUALITYSCORE REGION	COUNTRY	COVERAGE
Nordic	Denmark	OMX Copenhagen 25 and Nasdaq Nordic Large Cap+ ⅄
Nordic	Finland	OMX Helsinki 25 and Nasdaq Nordic Large Cap+ ⅄
Nordic	Norway	OBX 25 and Nasdaq Nordic Large Cap+ ⅄
Nordic	Sweden	OMX Stockholm 30 Index+ ⅄

Table 3: ISS Governance QualityScore coverage in the Nordics

ISS Governance QualityScore is a numeric, and decile-based score that identifies the company's relative corporate governance risk compared to its index and region. Companies in the first decile or with a QualityScore of 1 are rated to have relatively higher quality corporate governance procedures and lower corporate governance risk than their peers with a higher decile- rank. Given these scores are holistic assessments of corporations relative to their industry and indices, this method seems particularly appropriate for measuring and comparing the governance practices of Nordic businesses in the financial sector, given the relevant industries and indices would be similar for the whole population of interest. ISS compares these sample companies as peers when constructing the corporate governance ratings given that they all share the geographical location as well as the industry sector.

When looking at the Governance QualityScores of the sample companies described in the previous chapter, the average corporate governance score for the sample is 4.8. The sample includes at least one corporation for each score class between 1 and 10, apart from score of 8 which is not represented in the sample. Given that the companies operate in the same industry and geographical area, they are benchmarked against each other in this decile-based scoring which makes the scores comparable. Thus, this sample seems appropriate to represent the quality of governance practices in the population of Nordic financial corporations. The sample data and these dynamic Governance QualityScores were extracted in February 2023, which is ideal timing as ISS ESG research employs additional research resources at the beginning of the year to have company reports published ahead of the European proxy season that starts in March, when the majority of corporations start having their AGMs. Thus, the corporate governance data used is as current as possible to achieve the most accurate results on governance practices.

3.3 Firm performance data

On this study the firm performance is evaluated by utilizing financial ratios. Financial ratios are very convenient to compare values between different companies, as well as on year-on-year basis. However, benchmark ratios for different industries and geographical locations can vary a lot, and thus ratios should not be compared too loosely across industries and economies globally. Given that the whole sample of companies are financials operating in the Nordic region, comparability of ratios should be appropriate. Further, the average industry changes in ratios would be same for the whole sample. Additionally, financial ratios are straightforward to obtain for the purpose of this study, given that the sample companies are all public entities listed in the Nordic stock markets. All the financial data utilized on this study and listed below have been collected from the financial database PitchBook™.

This study utilizes Year-on-Year (YoY) changes on financial ratios instead of standalone ratios. Further, this is to evaluate the extent of which the initial COVID-19 crisis harmed the ratios of the sample companies. These figures act as an indication on which companies were well-prepared to the crisis with preexisting policies and practices in their crisis management strategy and corporate governance. Additionally, this study will consider the YoY change on the same ratios between the initial shock year and the year later. Moreover, this data will show that which companies recovered more rapidly from the crisis than others. These companies can be considered to be able to make quick decisions with positive impact, which is extremely beneficial in crisis management, and sometimes ignored in corporate governance, which tends to aim to the organization's longevity.

First financial ratio to be used is Return on Assets (ROA), which is a profitability ratio, which allows us to examine how efficiently the sample companies are able to generate income from their assets. On average, the ROA of the sample decreased by 1.84% between the financial year 2019 and financial year 2020, when the COVID-crisis hit the Western world. Moreover, ROA of the sample increased on average by 2.78% between financial year 2020 and 2021 as the economies started recovering from the initial COVID-shock. The following formula has been used for ROA in this study:

$$\textit{Return on Assets} = \frac{\textit{Net Income}}{\textit{Total Assets}}$$

Another profitability ratio utilized in this study is Return on Equity (ROE). This ratio assesses how well corporations are managing the funds that shareholders have invested in it. On average, ROE of the sample decreased by 3.06% during the financial year of 2020. Moreover, the change from 2020 to the end of financial year 2021 was 5.72% in the sample. The formula used to determine ROA in this study is as follows:

$$\textit{Return on Equity} = \frac{\textit{Net Income}}{\textit{Total Equity}}$$

The interest in utilizing two different profitability ratios in this study is based on the opportunity to assess whether the results divert from one profitability ratio to another. Further, this could allow drawing conclusions on the strength of the relationship between corporate governance and crisis management skills of the company, varying based on which profitability measure is being used to evaluate the company's ability to manage through crises.

3.4 Statistical methodology

Considering that this research evaluates the relationship between the corporate governance scores of the companies and how their financial ratios performed before and following the COVID-19 shock, linear regression analysis is utilized. Moreover, the relationship between corporate governance practices and financial ratios are obtained by utilizing separate simple regression models. Further, to evaluate the adverse impacts that the sample companies suffered from the initial COVID-19 shock, the difference on financial ratios between the end of financial years 2019 and 2020 has been recorded. At worst, the sample companies' ROE decreased by -39.96%, meanwhile the strongest performer in the sample had an increase of 41.36% in ROE during the financial year of the COVID-19 crisis in 2020. When it comes to ROA, the maximum loss in sample was -20.66%, while the strongest participant in the sample increased their ROA by 17.59%. The correlation between ROA and ROE is between 0.57 and 0.67 throughout the sample, depending on the financial year.

To further evaluate the relationship between corporate governance scores and financial ratios, simple linear regression is also considered between the corporate governance scores and year-on-year change in financial ratios a year later, between financial years 2020 and 2021. This is to examine whether there was relationship between corporate governance scores and how well the sample companies recovered from the crisis a year after the initial pandemic shocks were experienced across economies. There were still some large movements in financial ratios during 2021, as the largest drop in ROE was -27.74% and in ROA -26.48%. Additionally, some sample companies improved their ratios largely, as the highest increases in ROE and ROA were 38.71% and 38.69%, respectively.

From the statistical summary on Table 4 below, it can be noted that both financial ratios decreased on average during the financial year of 2020, and then increased during the year of 2021 as the economies started recovering from the initial pandemic shock. From ROA and ROE, it can be noted that ROA was generally more stable than ROE, as the average increase and decrease on ROA was lower than for ROE. This means that on average, the companies' ROE fell more than ROA following the COVID-19 crisis, but it also recovered at higher rate a year later. Moreover, the standard deviation on ROE fluctuations was also higher than in ROA.

Name of the Variable	N	Min	Max	Average	St. Deviation
Corp. Gov. Score	46	1	10	4.85%	3.27
ROA Change 19-20	46	-20.66%	17.59%	-1.84%	0.11
ROE Change 19-20	46	-39.96%	41.36%	-3.06%	0.13
ROA Change 20-21	46	-26.48%	38.69%	2.78%	0.09
ROE Change 20-21	46	-27.74%	38.71%	5.72%	0.12
Correlation between ROA & ROE		0.57	0.67	0.63	0.05

Table 4: Statistical summary of the variables used in the study

3.5 Hypothesis

The main purpose of this thesis is to evaluate the role of corporate governance in crisis management. The research question of this study is formed as follows:

Is there a relationship between a Nordic financial company's corporate governance rating and how resilient the company's performance was to the COVID-19 crisis?

There are three possible broad outcomes in this research. Firstly, there may be a positive relationship between corporate governance score and the company's financial performance during the pandemic. Authors such as Arora & Bodhanwala (2018) have found evidence on the relationship between a company's corporate governance score and their performance. Further, there is even more evidence on the relationship between corporate social responsibility and firm performance, and corporate governance is linked to the concept. Lins et al. (2017) found evidence on companies with higher corporate social responsibility intensity having stock returns that were four to seven percentage points higher than companies with low social capital during the financial crisis. In the context of crisis management, this would mean that companies with higher quality of corporate governance practices in place were more resilient to the crisis caused by the COVID-19 pandemic compared to the companies with less desirable corporate governance efforts. If this this study can find evidence to support this theory, it would indicate that good corporate governance practices indeed increase the crisis management abilities of the company, which can be seen as one of the aims in corporate governance.

Secondly, this relationship between the quality of corporate governance practices and financial performance during the pandemic could also be negative. This would imply that companies with higher rank in corporate governance were less resilient to the crisis caused by the pandemic. Results of this nature would be possible considering that companies with better corporate governance practices need to use additional resources in implementing and maintaining their strict corporate governance policies to satisfy the stakeholders as well as rating agencies. Furthermore, these resources could be used more efficiently elsewhere focusing on the operations and financial performance of the company, instead of creating and maintaining practices that can be costly and restrictive for the company and its employees. Additionally, having multiple governance controls in place can slow down the decision-making in the company, as any proposed changes need to pass through multiple approval stages. This can be harmful in an event such as pandemic, where quick decision-making gives advantages to companies. Bansal et al. (2022) presented evidence that supports this theory, as they concluded that highly socially responsible company stocks outperformed less socially responsible stocks during good economic times with high market wealth and valuation but underperformed during economic recession. Since the COVID-19 period has many similar characteristics as ordinary economic recession, it is possible that corporations with high corporate governance ratings performed poorly during this crisis compared to their less responsible peers.

Thirdly, it is possible that this study cannot prove a statistically significant relationship between the variables. Authors such as Bhagat et al., (2008) have stated that there is no consistent relationship between corporate governance indices and the performance of the company. This option can also be called the null hypothesis *H0*. It is possible that the *H0* cannot be rejected, as the qualitative factors of corporate governance are difficult to measure and thus comparing companies in different countries accurately can be challenging. Additionally, the COVID-19 crisis period is historically speaking quite short and in 2023 the economies are still recovering from the pandemic, and thus it may turn problematic to draw conclusions from low frequency data considering such short period of time. This outcome would not mean that there is no relationship between the variable, but it would mean that this research is not an appropriate fit to prove a relationship of any kind.

Given that the past research findings on the relationship between corporate governance or ESG and stock performance have been non-conclusive, and the results have varied a lot based on the market of interest and study approach, I believe that it is quite optimistic to hypothesize a strong relationship between these variables. The recent occurrence of the events limits the research possibilities which also presents challenges to the study. However, my hypothesis is formed as follows:

There is a positive relationship between good governance practices and how resilient the company was throughout the COVID-19 crisis.

I justify this hypothesis given that certain components of corporate governance relate seemingly closely to crisis management during events such as pandemic. ISS Governance QualityScore rates aspects such as companies' audit and risk oversight, and one would think that if the company has put efforts into their risk management policy and procedures, they would be more resilient during this kind of turbulent periods. Risk oversight could mean hiring a risk management officer or taking an insurance policy, which can be helpful during the pandemic. Moreover, companies experiencing financial hardship have historically often been linked to shortcomings in their corporate governance practices, and thus it would be sensible that the companies with poor corporate governance experienced more financial challenges during the COVID-19 pandemic than their peers that had more control mechanisms in place.

It would be comforting to find out that corporations investing in their corporate governance practices have benefits such as better resources to navigate through crises like the COVID-19 pandemic. This is because regulatory requirements have been increasing, and it can be costly for businesses to comply with the rules and even exceed the minimum requirements. Therefore, it would be desirable to provide business leaders concrete evidence on the benefits of good corporate governance practices and doing the right thing. This could encourage more and more companies to make ethically appropriate decisions, which would further develop the business environment in the Nordics to be safer for investors. Furthermore, the benefits of ethically sound and well-governed companies can extend to the whole communities where they operate in.

In order for the hypothesis to be correct, corporate governance ratings need to be accurate and consistent throughout the sample. This can turn into the downfall of this study, as it can be challenging to measure the companies' governance performance objectively, hence the rating divergency within the ESG-rating industry. Additionally, if the good corporate governance practices of Nordic companies are focused on other areas than risk- and crisis management practices, the companies can still achieve a reasonably good score, although their corporate governance practices are not preparing them for a crisis.

Given that the sample companies are public Nordic companies that disclose their financials publicly, the financial data seems reliable. Nordic region is known for low levels of corruption and fraud with high levels of control, and thus it is rare that financial statements are manipulated. However, there is always a possibility that some companies manipulate their financial figures to look more desirable and attract investors. Further, during the time of a crisis and when the companies are desperate for funding, this can become more common.

4 RESULTS AND ANALYSIS

In this section, the results of the study will be presented as well as analysed. This section is divided into sub-sections of 4.1. Results of the Linear Regression Model and 4.2. Findings of the Thesis. Chapter 4.1. presents the results of the linear regression model through the four assumptions of linear regression and presents the relevant tables. Moreover, Chapter 4.2. further analyses the findings of this thesis and the significance of the results.

4.1 Results of the Linear Regression Model

The results of this study are evaluated through four assumptions of linear regression, which are linearity, homoscedasticity, independence, and normality. The results of the regression analyses can be found in Tables 5-8 below. From Table 5 and Table 6, it can be concluded that coefficients for Corporate Governance QualityScore and ROA YoY changes were significant in both instances, 2019-2020 and 2020-2021. This factor can be assessed by comparing the p-values of the linear regression models to the usual significance level a, which is 0.05. When looking at regression analyses on ROA, the p-value for a model of the initial COVID-19 period (Table 5) is 0.002, which is lower than the a, and thus the assumption of linearity holds in this set of data. Further, the p-value for the ROA changes during the COVID-19 recovery period (Table 6) was 0.016, which is also below the usual significance level and thus normality holds, and the results are significant.

The p-values for the ROE regressions during the COVID-19 shock year and recovery year were 0.391 and 0.119 (Table 7 & Table 8), respectively. Given that both values exceed the significance level a, these regression analyses with ROE as a variable violate the assumption of normality, and it can be concluded that the data does not follow a normal distribution, and thus these results are insignificant.

Although the p-values of regressions considering ROAs are significant, one should notice that the R^2 values in Table 5 and Table 6 are 0.197 and 0.124, respectively. This means that 19.7% and 12.4% of the observations fall on the regression lines, and thus the majority of values do not fit the regression analysis models. This may indicate that the model does not predict the values adequately and thus one should interpret the results of the models with caution.

SUMMARY OUTPUT - ROA YoY CHANGE 2019-2020

Regression Statistics	
Multiple R	0.4438753
R Square	0.1970253
Adjusted R Squa	0.1787758
Standard Error	0.054174
Observations	46

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.031685059	0.03169	10.7962	0.00200175
Residual	44	0.129132176	0.00293		
Total	45	0.160817235			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.0209084	0.014384585	1.45353	0.15317	-0.0080818	0.0498986
GQS	-0.008108	0.002467725	-3.2858	0.002	-0.0130817	-0.003135

Table 5: Relationship between corporate governance score and YoY change in ROA 2019-2020

SUMMARY OUTPUT - ROA YoY CHANGE 2020-2021

Regression Statistics	
Multiple R	0.3523909
R Square	0.1241793
Adjusted R Squa	0.1042743
Standard Error	0.0891409
Observations	46

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.049572468	0.04957	6.23859	0.0163118
Residual	44	0.349628213	0.00795		
Total	45	0.399200681			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	-0.02141	0.023669187	-0.9046	0.37063	-0.0691123	0.0262919
GQS	0.0101421	0.00406053	2.49772	0.01631	0.0019586	0.0183255

Table 6: Relationship between corporate governance score and YoY change in ROA 2020-2021

SUMMARY OUTPUT - ROE YoY CHANGE 2019-2020

Regression Statistics	
Multiple R	0.1293972
R Square	0.0167436
Adjusted R Squa	-0.005603
Standard Error	0.1338293
Observations	46

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.013419541	0.01342	0.74926	0.3914044
Residual	44	0.78805214	0.01791		
Total	45	0.801471681			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	-0.004972	0.035535103	-0.1399	0.88936	-0.0765883	0.0666443
GQS	-0.005277	0.006096169	-0.8656	0.3914	-0.0175629	0.0070092

Table 7: Relationship between corporate governance score and YoY change in ROE 2019-2020

SUMMARY OUTPUT - ROE YoY CHANGE 2020-2021

Regression Statistics	
Multiple R	0.2332321
R Square	0.0543972
Adjusted R Squa	0.0329062
Standard Error	0.1133006
Observations	46

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.03249261	0.03249	2.53117	0.11877789
Residual	44	0.564828745	0.01284		
Total	45	0.597321354			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.0173949	0.030084202	0.57821	0.56607	-0.0432359	0.0780256
GQS	0.008211	0.005161048	1.59096	0.11878	-0.0021904	0.0186124

Table 8: Relationship between corporate governance score and YoY change in ROE 2020-2021

Linearity between independent variable of corporate governance score and dependent variables ROA and ROE can be evaluated by significance of the coefficients, and it can be visually represented utilizing scatter plot graphs presented in Figures 9-12. Given that regression analyses with ROA as a variable had significant coefficients, the linearity holds in these models. However, regression analyses with ROE have insignificant coefficients and thus the linearity does not hold. Due to the differences in linearity, observations on the relationship between ROA and GQS presented in Figure 9 and Figure 10 are distributed more evenly around the trendline, compared to ROE regressions presented in Figure 11 and Figure 12. Moreover, from both Table 11 and Table 12, it can be observed that the values are unsystematically located around the linear trendline. Further, it can be stated that the model violates the assumption of linearity, and thus the findings of the model must be interpreted with caution due to high probability of model not being an appropriate measure of the relationship between the variables.

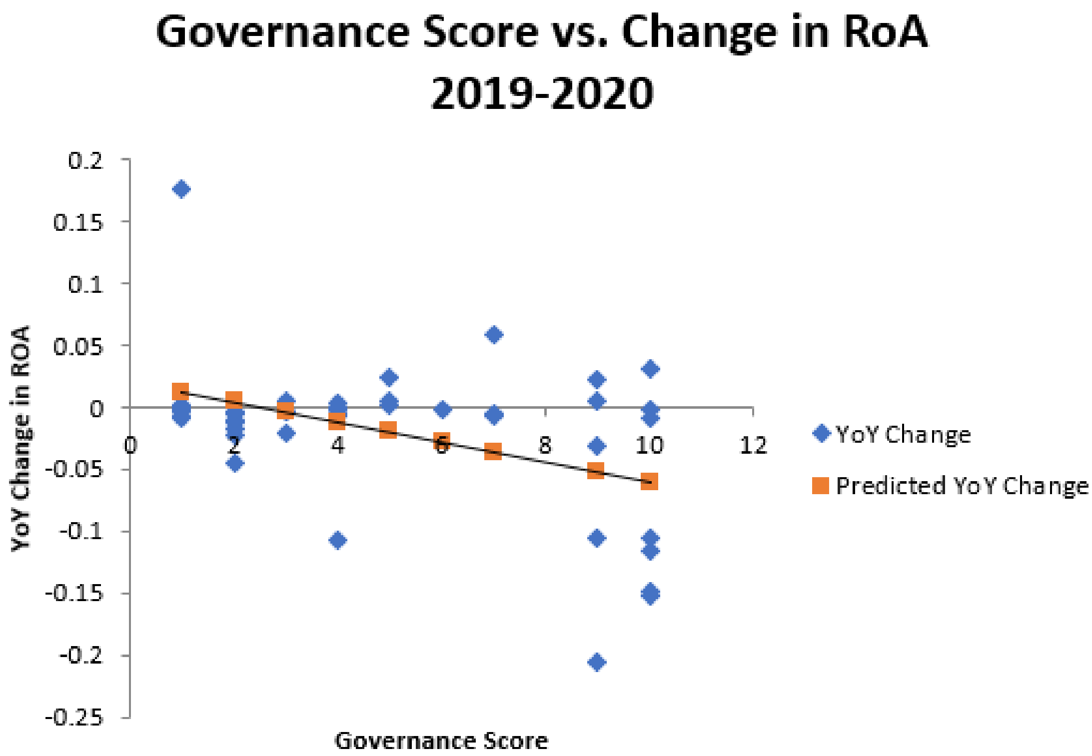

Figure 9: Relationship between corporate governance score and YoY change in ROA 2019-2020

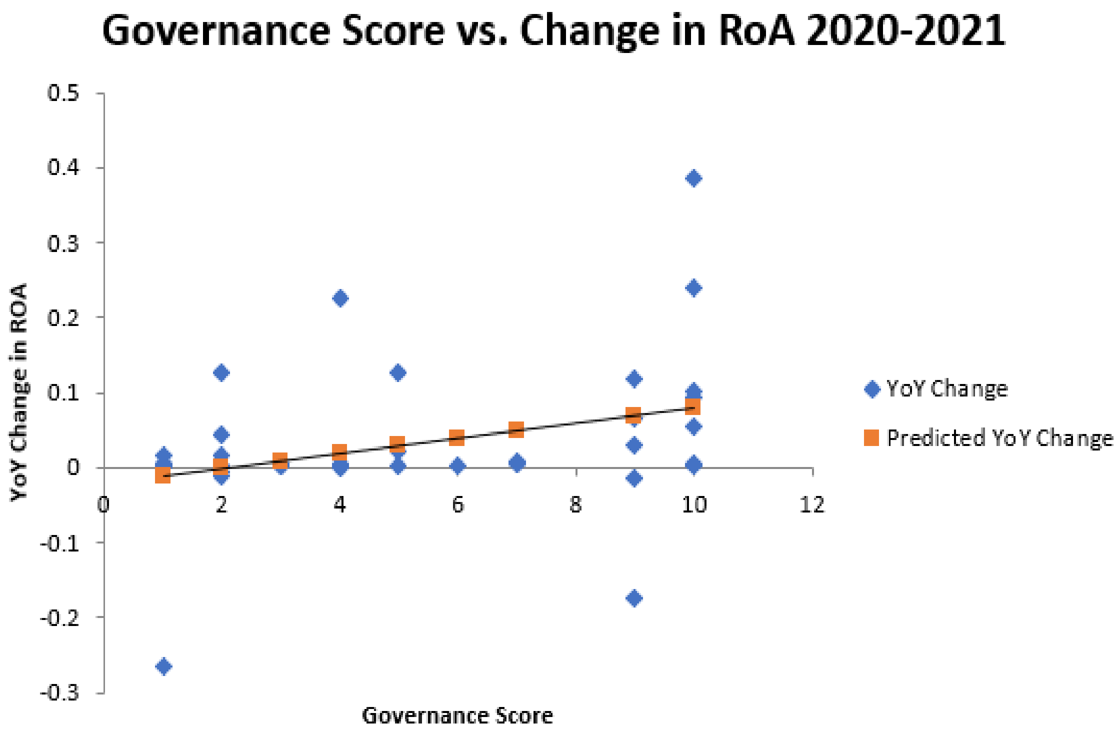

Figure 10: Relationship between corporate governance score and YoY change in ROA 2020-2021

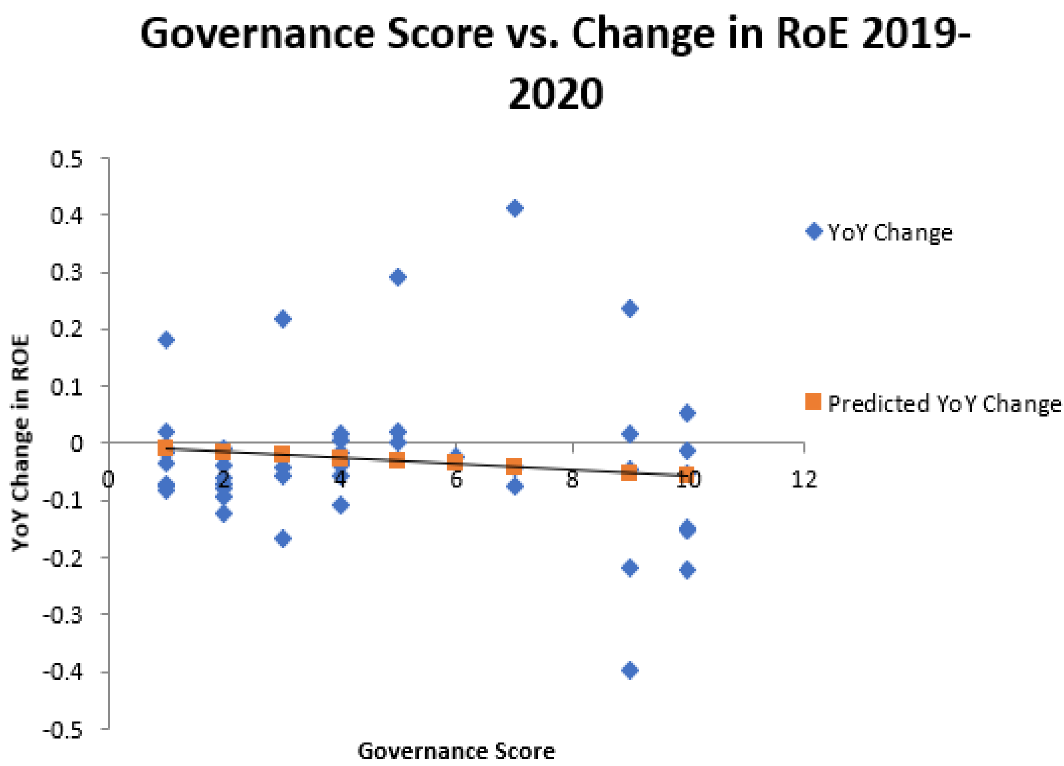

Figure 11: Relationship between corporate governance score and YoY change in ROE 2019-2020

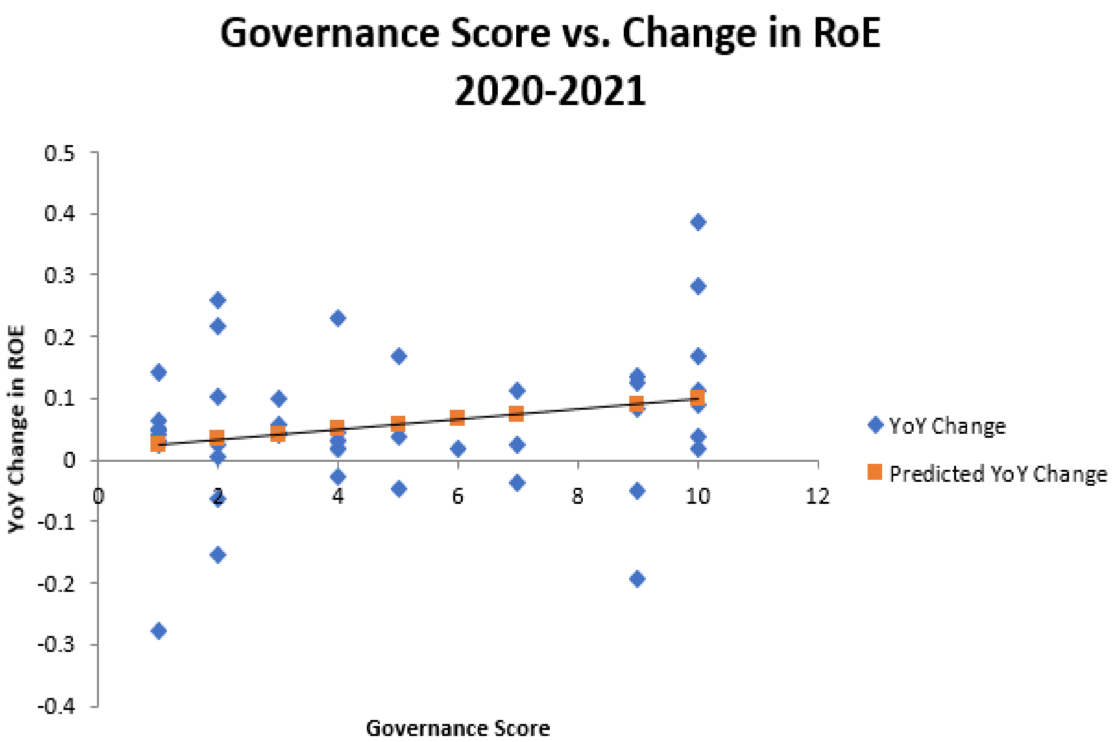

Figure 12: Relationship between corporate governance score and YoY change in ROE 2020-2021

Another assumption of linear regression is homoscedasticity, which refers to the criteria of error variance being constant. One rule of a thumb when evaluating homoscedasticity of linear regression models is that the ratio of the largest variance to the smallest variance among model groups should be 1.5 or below to prove heteroscedasticity. For all models in this study, the ratio between the CGS groups with highest and lowest variances exceed 1.5, and thus these models show heteroscedasticity.

The assumption of homoscedasticity can also be evaluated by considering the scatter plots. Figure 9 shows some heteroscedasticity, as the vertical spread of data significantly narrows down for smaller corporate governance scores, apart from one outliner in the data. Therefore, there is a significantly higher variation in YoY change in ROA between 2019 and 2020 in companies that were ranked with a high corporate governance score, compared to their peers with lower corporate governance scores. The model seems to be more appropriate fit in lower corporate governance class ratings, but inconsistency begins to show in corporate governance scores that exceed the value of six.

In Figure 10, the observations for each value of corporate governance scores are more evenly distributed from the trendline, but there is still some level of heteroscedasticity. The graph shows that the sample companies with either very high or very low corporate governance scores have higher variances in ROA changes than the companies with middle-level values of 6 or 7.

Figure 11 shows a few values of corporate governance scores, for which there was very little variation in the independent variable, these being corporate governance values of two, four, and six. Given that other values have much higher levels of variation from the trendlines as well as uneven distribution, this model is also violating the assumption of homoscedasticity to some degree.

Lastly, Figure 12 looks quite similar to Figure 10 with the same degree of heteroscedasticity due to the difference in the vertical spread of the scatters between the middle values in corporate governance rating and the values at the top and the bottom of the scale. From the comparison of Figure 10 and Figure 12, it can be interpreted that the regression lines on ROA and ROE during the year 2020 looked very similar, and thus these ratios recovered in a similar manner after the pandemic emerged. Due to heteroscedasticity observed in these models, this study cannot provide evidence on the relationship.

Independence is another assumption of linear regression, and it states that the observations are not related to each other. Further, this study utilized single regression models, as this assumption could be violated in multiple regression analysis, because YoY changes in ROA and ROE have a high level of correlation. For example, by comparing Figure 10 and Figure 12, these figures for ROA and ROE changes in 2020 resemble each other, and correlation statistics can also be found in Table 4. Therefore, given that the data is analyzed in separate regressions, one set of observations does not impact another set, and thus the assumption of independence holds. To conclude this kind of study with multiple regression analysis, an alternative combination of dependent variables could be used to ensure that they are not related one to another.

Summarized regression results presented in Table 13 allow the comparison of the regression analyses. The results for both ROA regressions are significant to some degree, meanwhile, the results of ROE regressions are not. There can be various reasons behind the difference in significance between these two ratios, and this study does not reveal the specific reasons. However, one reason could be that ROE compares net income against equity, and thus it does not consider how well companies use their financing from borrowing and issuing bonds. In contrast, the denominator of ROA consists of both debt and equity, based on the main accounting equation *Assets* = *Liabilities* + *Equity*. Therefore, one could argue that ROAs indicated more accurately how well companies were able to utilize shareholders' wealth compared to ROE, and hence only the results for ROA were significant. This phenomenon does call for further research.

	△ROA 19-20	△ ROA 20-21	△ROE 19-20	△ROE 20-21
Governance Score	-0.008**	0.010*	-0.05	0.008
Standard Error	(0.002)	(0.004)	(0.006)	(0.005)
Observations	46	46	46	46
R^2	0.197	0.352	0.017	0.054
Adjusted R^2	0.179	0.104	-0.005	0.033

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table 13: Summarized results of regression analyses

Another finding from Table 13 is that the coefficient for the relationship between ROA change 2019-2020 and GQS is negative, whereas the coefficient for the period of 2020-2021 is positive. This indicates that a higher corporate governance score caused sample companies to experience higher ROA losses on average at the beginning of the pandemic. Additionally, the coefficient is positive for the 2020-2021 YoY change, meaning that corporations with higher governance scores experienced slightly higher recovery rates in their ROAs during the following time period.

Although coefficients for regression analyses ran with ROE are not significant, it can be noticed that they have the same signs for the corresponding periods as regressions ran with ROA. Furthermore, higher GQS had a negative relationship with ROE change between 2019 and 2020, whereas the relationship was positive with the YoY change between 2020 and 2021. These findings indicate that on average, these ratios were declining more for companies with higher GQS during the first year of the pandemic. Additionally, these ratios were rising at a higher rate for companies with better GQS ranking a year later. This relationship can be very complex and there can be multiple reasons behind the findings, but the results indicate that the higher governance ranking made companies' ratios decline more in the beginning of the crisis. However, once the crisis recovery phase started, companies with higher governance rankings recovered at a faster pace. One reason behind this could be that companies with a high level of corporate governance practices and controls in place were not able to react to the initial shock quickly enough, but they managed to survive better in a long-term crisis with the help of established policies and practices. Another theory would be that high corporate governance rating made the ratios more vulnerable to the COVID-19 crisis overall, and the only reason why the relationship between GQS and ratios was positive between 2020 and 2021 is that the companies with higher GQS experienced a larger decline in ratios a year before, and thus there was more room for recovery a year later when compared to companies with lower corporate governance ratings. This theory does call for more research, as this study does not specify the reasoning.

4.2 Discussion of the Results

From interpreting the results of the linear regression analysis, it can be concluded that this study is unable to reject the null hypothesis *H0*, meaning that the independent variable and dependent variables did not have a linear relationship in this instance. Although coefficients for regression analyses on ROA change and GQS were significant, this is not enough evidence to prove that higher GQS made the firms more resilient during the pandemic crisis, or the other way around. This does not mean that the linkage between corporate governance ratings and the crisis management abilities of the company does not exist, but it shows that this research was not a suitable fit to provide sufficient evidence on it.

The results of this study align with Bhagat et al., (2008), who concluded that single corporate governance index is not a sufficient predictor of the firm performance, as this study showed that corporate governance rating does not seem to predict the firm performance during crisis either. There are multiple possible reasons behind the study not being able to reject the null hypothesis. Firstly, as widely discussed in this study, corporate governance ratings of the companies may be subjective, and it is challenging to measure numerous qualitative factors linked to these scores. Additionally, these scores incorporate many other aspects than risk oversight and other topics that directly relate to the crisis management abilities of the company. Although some companies have overall better corporate governance practices than others, it does not mean that they have specifically targeted measures that relate to crisis management.

Given that the null hypothesis was not rejected in this thesis, there was no supporting evidence on good corporate governance rating making corporations' ROE and ROA more or less vulnerable to crises. Although the coefficients for YoY changes in ROA were significant, they showed both inverse and direct relationships depending on the period of crisis. These findings alone are not enough to reject the null hypothesis. Given that the relationship between the variables is not evident, the benefits of good corporate governance may relate to factors that were not captured by this study. Non-financial benefits such as reputation, customer loyalty, and sustainable operations are some examples of the benefits that good corporate governance may offer, although these factors cannot be proven in this study.

ESG-rating divergence is a core issue in the field of ESG research currently, as objective ESG-ratings may be difficult or even impossible to obtain. One upcoming development area that could assist in reducing ESG-rating divergence is new taxonomy developments and regulations. One of them is the EU Action Plan for Financing Sustainable Growth which was initially published by the European Commission in 2018. Although this initiative relates to the entire concept of ESG with the aim of directing capital flows toward sustainable investments, it does have regulatory pillars for corporate governance. One of the three areas lined out in the Action Plan is to foster transparency and long-termism in financial and economic activity (The European Commission, 2020). There have been multiple reforms developed under this topic, and the aim of the Commission is to enforce sustainable corporate governance and strengthen sustainability disclosures and accounting rules. This is a meaningful initiative, as the European Union has started enforcing the regulations from 2023 onwards, although some mandates are still being reviewed. Additionally, the scope of businesses that have to comply with each of the standards is still being reviewed, but European Union has proposed to expand the scope to all large companies and all EU-listed companies. Therefore, it is likely that we will see sustainability reporting and transparency in corporate governance to become more unified and regulated, especially in the EU area. Further, this will help ESG-rating agencies to rate companies more objectively, which can assist in finding evidence on the relationship between corporate governance and the crisis management abilities of the company.

Another recent development in the regulatory field that will hopefully have a positive impact on the reliability of ESG ratings is Task Force on Climate-Related Financial Disclosures (TCFD). The Financial Stability Board created TCFD with the aim to tackle the impacts of climate change, and the framework includes recommendations on organizations' governance disclosure around climate-related risks and opportunities (The Financial Stability Board, 2023). Although it has been voluntary for companies to comply with TCFD-framework, this framework is becoming more and more influential, and for example, the government of the United Kingdom has announced that as of April 2022, more than 1,300 of the largest companies registered in the UK will be required to disclose climate-related financial information according to TCFD guidelines (Department for Business, Energy & Industrial Strategy, 2022). Although the UK was the first G20 country to make this regulation mandatory, it is likely that other countries will follow the trend at some point in the future. Therefore, societies expect to witness more unified and transparent disclosure of companies' board oversight and management's role in climate-related risks and opportunities, which will improve the quality of corporate governance data. Further, this will assist ESG-rating providers to assess the quality of governance practices more objectively, which in turn can improve the chances of future research to be able to prove the relationship between corporate governance and the crisis management abilities of the organization.

These new upcoming developments in the regulatory environment call for future research in ESG ratings. Once the mandates have been enforced more widely, it would be interesting to study whether more unified and transparent ESG data disclosed by companies have an impact on ESG ratings and how objective they are. Moreover, one could study whether the ESG-rating divergence reduced between different providers following the new mandatory disclosures required from the organizations. Ideally, this would be noted when comparing older ESG ratings to more recent ones, as this would mean that the regulatory developments are serving their purpose efficiently. However, for us to see the full effect of these new regulations, it will likely take a few more years.

It is also possible that the linkage between corporate governance ratings and companies' ability to manage crises can be found by using different dependent variables. Instead of profitability ratios ROA and ROE, the companies' ability to survive a crisis such as COVID-19 could be evaluated with factors such as excess returns, short-term liabilities, or Tobin's Q. It is also possible, that organizations with better corporate governance practices survived the COVID-19 better when evaluating non-financial measures, such as customer satisfaction and employee retention. Future research should take into consideration new possibilities for measuring the crisis management abilities of organizations, as well as different approaches in corporate governance ratings. Moreover, testing new datasets would possibly allow us to draw new conclusions on the impact of good corporate governance, and tie studies to newer and more relevant crises, such as Russia's invasion of Ukraine.

One should remember that each major crisis has its unique effects and timelines. It is possible that if similar research was conducted on a different crisis, such as the financial crisis of 2007-2008, the results could be very different. Additionally, this study only considered YoY changes in financial ratios during two time periods and assumed all sample companies to be part of the same industry group, which can give unrealistic results on which companies actually recovered from the pandemic well. Moreover, this is because the recovery among organizations continued past the year 2021, and some companies are still recovering from the impacts of the crisis. Therefore, it would be useful to research different types of crises in the future to evaluate whether companies' corporate governance ratings had an impact on the organization's crisis management abilities. Perhaps one could find out that the linkage depends on the nature of the crisis that the company is going through. Additionally, one should consider an adequately long time period after the crisis, or use higher frequency data, when evaluating the abilities of the sample companies to overcome the crisis. In this thesis, the recent occurrence of COVID-19 was the limiting factor on the time frame considered, as the financial reports for the year 2022 were not available yet at the time the study was concluded.

Another thought-provoking topic for future research is to further compare the Nordic corporate governance model to the models of other countries. It would be interesting to see, whether the Nordic corporate governance practices had an impact on how well the Nordic companies survived crises such as COVID-19 compared to organizations operating in other countries, where the corporate governance models are different. Moreover, this would assist in further developing Nordic corporate governance regulations and recommendations to make the region attractive for businesses, investors, employees, and other stakeholders which will bring more opportunities and funding to the area.

5 CONCLUSIONS

In this master's thesis, the focus was on corporate governance and its role in crisis management in the Nordics. From the literature review, it became evident that although the Nordic region consists of trust-based societies with a relatively low degree of governance regulation, their governance model is effective in the Nordic business environment. This can be concluded by looking at the statistics of the World Bank, which ranks Nordic countries in the very top percentile ranks across all themes in corporate governance. Additionally, it has been researched in the past that even when controlling the GDP per capita, Nordic countries had significantly better corporate governance in most areas compared to their peer countries in the Western developed world.

The interest in this study was to further evaluate, whether differences among Nordic companies' corporate governance practices had an impact on their crisis management abilities in the financial sector. The aim of the research was to select the most current crisis, and hence the COVID-19 pandemic was studied as an unforeseen event with large impacts on companies.

To evaluate and rank the Nordic financials based on the quality of their corporate governance practices, secondary data was utilized in the form of corporate governance rankings. From multiple existing providers, Institutional Shareholder Services was selected as the data provider, and more specifically their product Governance QualityScore was utilized. This measure seemed the most appropriate as it benchmarks Nordic financials against each other and thus the ratings should be comparable from one corporation to another.

For the measurement of the sample companies' crisis management abilities, financial ratio analysis was used through profitability ratios. Further, data on ROE and ROA was collected as YoY-changes to evaluate the magnitude that the initial COVID-19 crisis impacted the profitability of sample companies, and at what rate they started recovering after the initial crisis. Therefore, the first YoY-change in these ratios was recorded between 2019 and 2020 to see how the first year when we experienced the impacts of the pandemic affected the ratios of the sample companies. Secondly, the YoY-change in these ratios was also taken between 2020 and 2021 to evaluate how swiftly the companies started recovering after the initial shock year. It was noticed that indeed on average, the profitability ratios of Nordic financials decreased during 2019 and recovered in 2020, but the sample also contained a few outliners that experienced the opposite movements in ratios, which was quite interesting to discover.

Given that good corporate governance practices can be seen as a desirable characteristic and something that the companies operating in Nordic region also focus on, it would have been exciting to find a connection between the organization's abilities to survive crises such as the COVID-19 pandemic. Further, findings like this could encourage more organizations and business leaders to foster transparency and good corporate governance practices, which would eventually benefit the business environment of the region. However, it was also considered as a possible outcome that corporations with high-quality corporate governance practices would be less resilient to crises, due to more capital tied to implementing and maintaining policies. Additionally, strict controls and policies around corporate governance can make the decision-making in the company slower as proposed changes need to pass through additional stages for approval, reviewing, and testing.

This study was concluded by utilizing simple linear regression models to evaluate the relationship between the independent variable of corporate governance rating and the dependent variables of YoY changes in ROA and ROE. The regression analyses were done for both time periods, at the beginning of the crisis as well as at the recovery phase a year later.

Although the results showed significant coefficients for both regressions involving ROA, the overall results of this study did not provide evidence on the linkage between corporate governance ratings and companies' resilience to the financial impacts of the COVID-19 crisis. This can be concluded as the data sets can be found to violate multiple assumptions of linear regression. Therefore, although it is possible to draw some conclusions from the data, one should interpret the results with caution.

The outcome of the results does not however mean that the relationship between corporate governance and crisis management abilities is non-existent, but it means that this study was not an appropriate fit to prove it. There are multiple possible reasons behind this, one being the divergence in ESG ratings, which has caused controversy in the field of ESG. This is because due to a lack of regulation and transparency, it is challenging for the rating agencies to rate companies' corporate governance practices objectively. Moreover, this leads to different rating agencies scoring the same company very differently, and it is a challenging task to decide which independent provider's ratings should be trusted and considered for research. Additionally, the ratings on different companies published by one provider might not be comparable due to the lack of reliable data points.

Another possible reason for the results of this study to be non-conclusive is the time period considered as well as the use of low-frequency data. Further, by looking at the YoY changes of the two periods, it is challenging to conclude that certain companies survived the COVID-19 crisis better than others. This is because the recovery from the pandemic has lasted longer than until the end of 2021, and some organizations are still recovering from its impacts on their business. The length of the time frame considered in this thesis was limited due to data availability, as the financial reports for the year 2022 were not yet available at the time this research was conducted. Additionally, ratio analysis might not be appropriate measure for the companies' ability to manage risks.

In future research, I would recommend similar studies be conducted to evaluate the relationship between corporate governance ratings and crisis management abilities. The studies may employ different criteria to measure the companies' abilities to overcome crises, as well as consider datasets of longer time periods. It would be useful to also run similar studies using corporate governance data from different independent providers to see if that would have an impact on the study results. Additionally, future research may wish to consider the companies' ESG score as a whole instead of extracting just the area of corporate governance for the rating.

One extremely important topic for future studies in the area of ESG is whether new regulatory developments such as TCFD and the EU Action Plan succeed to reduce the rating divergence among ESG ratings. This would increase the likelihood of ESG reports being objective and reliable, and this type of study could be conducted with more reliability in the variables that relate to ESG ratings. This would also further advance the field of ESG, which would in turn drive more investors to incorporate ESG into their investment as a whole, which can have a positive impact on societies, biodiversity, and the environment in the long term.

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APPENDIX 1: SAMPLE OF QUALITYSCORE-CORPORATE GOVERNANCE REPORTS USED IN THIS RESEARCH.

QualityScore | Governance Profile Report ISS ESG

ABCDE International Corporation (ABCDE)

ABCDE International Corporation, through its subsidiaries, owns and operates a portfolio of regulated and non-regulated generation, distribution, and transmission utility assets in Canada and the United States.
https://www.abcdeinternational.com

REGION: CANADA	LAST MEETING DATE: 04 Dec 2019
COUNTRY: CANADA	LAST DATA PROFILE UPDATE: 30 Dec 2021
INDUSTRY GROUP: Utilities	SCORES AS OF: 30 Dec 2021

QUALITYSCORE OVERVIEW

Board Structure 3
- ★ Board Composition
- ⚑ Key Committee Composition
- ★ Board Policies
- ● Board Commitments
- ★ Board Practices
- ⚑ Related-Party Transactions
- ★ Diversity, Equity, and Inclusion
- ● Board Structure Controversies

QualityScore 3

Low Risk — High Risk

Scores indicate decile rank relative to index or region. A decile score of 1 indicates lower governance risk, while a 10 indicates higher governance risk.

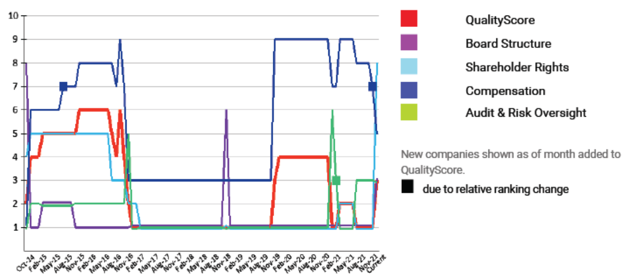
Compensation 5
- ⚑ Pay-For-Performance
- ● Non-Performance-based Pay
- ★ Use of Equity
- ⚑ Equity Risk Mitigation
- ★ Communications and Disclosure
- ★ Termination
- ⚑ Compensation Controversies

Shareholder Rights 8
- ⚑ One Share, One Vote
- ★ Takeover Defenses
- ● Litigation Rights
- ★ Meeting and Voting-related Issues
- ● Shareholder Rights - Other Issues

Audit & Risk Oversight 3
- ● Environmental and Social Risk Management
- ● Environmental and Social Risk Oversight
- ● External Auditor
- ● Audit and Accounting Controversies
- ⚑ Information Security Risk Oversight
- ● Information Security Risk Management
- ★ Audit - Other Issues

★ (⚑) denotes positive (negative) absolute score impact, while ● denotes neutral impact.

SCORE HISTORY



KEY RISKS

Shareholder Rights

- There is no information to assess the percentage of multiple voting rights or voting certificates relative to total voting rights. (Q57)
- There is no information to assess the percentage of issued share capital composed of non-voting shares. (Q63)
- The company does not disclose whether it has an unequal voting structure. (Q56)

Board Structure

- The company has not disclosed sufficient information on the classification of the chair of the nomination committee. (Q23)
- The company has not disclosed sufficient information on whether or not executives serve on the nomination committee. (Q306)

The Key Risks section is company specific and highlights the most concerning issues at this company. This section will be different for each company and include factors where there is a potential misalignment with ISS policy and/or common market practices.

MORE ABOUT THE COMPANY

Market Data Snapshot	
Market Cap (mm)	1,208,068.40
Shares Outstanding (mm)	7,606.05
Closing Price	158.83
52-Week High	190.70
52-Week Low	114.59
Annual Dividend	1.94

Earnings	2020	2019
Revenue (mm)	143,015.00	125,843.00
Net income(mm)	44,281.00	39,240.00
EBITDA(mm)	65,259.00	54,559.00
EPS	5.82	5.11

Profitability	2020	2019
Net Margin (%)	37.10	34.70
EBITDA Margin (%)	45.60	43.40
Return on Equity (%)	37.40	38.30
Return on Assets (%)	14.70	13.70
Return on Invested Capital (%)	22.80	21.60

Source: Compustat, As of March 13, 2020. All Currency in USD.

APPENDIX 2: ISS QUALITYSCORE CATEGORIES AND SUB-CATEGORIES.

BOARD STRUCTURE	COMPENSATION	SHAREHOLDER RIGHTS	AUDIT & RISK OVERSIGHT
Board Commitments	Communications and Disclosure	Litigation Rights	Audit and Accounting Controversies
Board Composition	Compensation Controversies	Meeting and Voting-related Issues	Audit - Other Issues
Board Policies	Equity Risk Mitigation	One Share, One Vote	Environmental and Social Risk Management
Board Practices	Non-Executive Pay	Shareholder Rights - Other Issues	Environmental and Social Risk Oversight
Board Structure Controversies	Non-Performance-based Pay	Takeover Defenses	External Auditor
Diversity, Equity, and Inclusion	Pay-For-Performance		Information Security Risk Management
Key Committee Composition	Termination		Information Security Risk Oversight
Related-Party Transactions	Use of Equity		Risk Oversight - Other Issues