TALLINN UNIVERSITY OF TECHNOLOGY

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BOARD NATIONALITY DIVERSITY AND FIRM PERFORMANCE: EMPIRICAL EVIDENCE FROM OMX HELSINKI

Bachelor's thesis

International Business Administration, Finance and Accounting

Supervisor: Associate Professor, PhD, Karin Jõeveer

Tallinn 2021

I hereby declare that I have compiled the thesis independently

and all works, important standpoints and data by other authors

have been properly referenced and the same paper

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The document length is 8179 words from the introduction to the end of conclusion.

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ABSTRACT

This study examines Finnish large-capitalization companies and how board nationality diversity affects their performance. Companies used in this study are listed in the Nasdaq OMX Helsinki with large capitalization specification. The study uses cross-sectional data from years 2015 and 2019 due to relatively stable fiscal conditions in given years. The study is conducted with correlation analysis and regression model to examine set hypotheses. Many previous studies have shown a connection between board diversity and firm performance. Previous studies have examined board diversity with different variables. This study adds important information, particularly on how nationality diversity in boards affects firm performance. Results of the study indicated that there could be a relationship between board nationality diversity and firm performance, but the results were insignificant. To examine the topic more accurately, larger sample size and broader regression models should be used.

Keywords: Nationality diversity, firm performance, corporate governance, board of directors.

INTRODUCTION

"If you are looking for the safe choice, you should not be supporting a black guy named Barack Obama to be the next leader of the free world." (Obama). Raising diversity in today's world changes the assumption that a successful team is a homogenous party. This trend leads to a change in our beliefs and attitudes towards doing business. Companies, through history, have looked for ways to improve their operational and financial performance.

Almost 40% of the board of director members are born outside of Finland in Finnish large capitalization companies. (Halttula, Saikkonen, 2020). Yet, in the latest study by Finnish Tilastokeskus, there were only 6% foreigners in all of the workforce in Finland. (Tilastokeskus, 2014). There is a clear pattern that other nationalities are over-presented in the board of directors, compared to the overall workforce percent. Previous academics have suggested that composing an effective board, the selection committee shall look for members who have different religious, cultural, and educational backgrounds. (Carter, Simkins, Simpson, 2003). This can explain the fact that other nationalities are presented heavily in Finnish firms' boards.

A high number of other nationalities in the board of directors raises the question of whether it will be beneficial for the companies to do so. This study will examine if there is a connection between board nationality diversity and firm financial performance. The performance will be measured by using profitability ratios Return On Assets (ROA) and Return On Equity (ROE). These variables are to be compared to the proportion of non-Finnish board of directors members compared to the whole board composition. The relation between these variables will be examined using correlation analysis and hierarchical regression analysis (Erhardt, Werbel, Shrader, 2003; Radlach, Schlemmbach, 2008)

Plenty of previous research has been made to examine the relationship between the board of directors' diversity and firm financial performance. Diversity is a broad concept, and therefore results vary vastly, as different variables can be used to measure diversity. The most common diversity variables in previous research have been age diversity, gender diversity, and ethnic

diversity. There is harshly any studies concerning Finnish companies where nationality diversity is considered the only variable affecting a firm's financial performance. This study will add an important understanding of how nationality diversity in the board of directors can affect firms' profitability in the Finnish context.

In this paper, I will go through nationality diversity in Finland. Finnish corporate governance. Theories behind diversity and optimal board composition. Justification of selected performance measures. Data collection, relevance, and significance of the study in a more profound manner. Formation of the hypotheses, results, and conclusion for them. Lastly, a discussion will be done to leave insight into findings and propose what could be done in future studies.

1. LITERATURE REVIEW

The literature review gives an overview of the theory behind the research. It is important to go through background information, most important theories and prior research to understand the aims and outcomes of the study. The literature review acts as a base for hypotheses development and leads to hypotheses setting.

1.1 Nationality diversity in Finland

"The Finns have been taught to think of Finland as a culturally homogeneous nation. There are, however, several ethnic and cultural minorities within the boundaries of the Finnish state. These groups consist of numerically fewer members than the majority population, are not in a dominant position in society, have distinctive linguistic, ethnic, or religious characteristics, and wish to maintain this distinctiveness." (Raento, Husso, 2001). First, the mass movement to Finland started in the early 1900s due to raging world wars and Finland gaining its independence. After the second world war during the 1960s and 1970s, Finland was suffering from a net loss of moving population, mainly from people moving to Sweden in the hope of better life and job opportunities. Only after joining the European Union Finland has been receiving relatively large amounts of immigration and workforce movement due to free movement of labor in the Union area (Pedagogiikkaa Netissä)

In 2019, 7.3% of Finland's whole population were born outside of Finland, according to Tilastokeskus (Tilastokeskus, 2019). As this study focuses on other nationalities in the board of directors, a look into the proportion of other nationalities in Finland is more relevant. According to Tilastokeskus, 4.8% of the whole population is non-Finnish nationals (Tilastokeskus, 2019).

In recent years, Finland has been in a negative light as various studies show that Finland is one of the most racist countries in the European Union. European Union Agency for Fundamental Rights surveyed 12 EU countries and concluded that Finland is the most racist country towards Black people in the report "Being Black in EU" (Fundamental Rights Association, 2018). The survey is conducted to understand the fruition of the European Union directive (2000/43/EY), in which everyone shall receive equal treatment regardless of ethnic or racial background.

To overcome these issues, laws are made to improve the position of people affected by discrimination. Revisioned equality law (Yhdenvertaisuuslaki 1325/2014) came to force in late 2014 to raise equality, prevent all sorts of discrimination, and improve the due process of people affected by these (Yhdenvertaisuuslaki 1 §). The employer shall evaluate the fulfillment of equality in the workplace and continuously develop working conditions and keep equality in mind when making decisions related to existing and future employees (Yhdenvertaisuuslaki 7 §).

Although foreigners are working in relatively the same jobs as Finnish people, some differences were found in research conducted by Tilastokeskus in 2010 and 2014. Three main occupations for foreigners were cleaners and domestic servants (23%), assisting kitchen and food workers (18%), as well as service and sales workers (11%). Foreigners worked less frequently in expert positions, office work, and in addition less in customer service roles (Tilastokeskus, 2014). Customer service roles can be explained easily as the Finnish language is usually required to be working in customer service.

Immigrants are more likely to become entrepreneurs compared to Finnish nationals. It has been explained with cultural differences, but also because of given circumstances. E.g., education from the country of origin is not recognized in Finland, lacking linguistic skills or prejudice by employers. Entrepreneurship for many can be the only way of making a living. Fixed-term employment is also relatively high in the foreign workforce compared to Finnish nationals (Tilastokeskus, 2014). The longer an immigrant stays in the country, the better the possibility of getting a job (Larja, Sutela, 2015).

As the subject is very topical, it is interesting to investigate diversity and firm's financial performances in Finnish context. This study could enlighten the reasons behind "overrepresented" boards in terms of non-Finnish nationals and give justification for it. Also, plenty of previous literature suggests that it is beneficial for companies to apply good diversity politics in their decision-making. As previous literature suggests positive impacts, it is worth examining if similar findings can be interpreted from Finnish markets. Also, diversity principles are constantly changing and evolving in Finnish Corporate Governance code, which is a good motivation for the author to research the subject.

1.2 Board of directors

This chapter will discuss about electing board members, different committees formed by the board of directors, and the overall expectations set for corporate boards.

1.2.1 Corporate board

As all publicly listed companies, a company must have a corporate board. A Board of directors is an elected group of people who represent the shareholders. The corporate board is in charge of the company, with the existing shareholders. So it can be concluded that the duties between the board of directors and top-level management differ. This is because boards are there for advising the managers rather than developing the management (Lacker, Tayan, 2011). Boards are responsible for the company's dividend and option policies, top-management compensation model, and hiring top-level management. In addition, the board helps the management in their long-term operations, sets guidelines, and seeks to keep the optimal level of resources in use. Overall, the board of directors is not included in management, but they are the extension of shareholders' authority. Therefore it is expected that board of directors act according to shareholders' best interest.

1.2.2 Appointment of directors

Board of directors are appointed in the shareholders' meetings, where topical issues of the company are discussed and decisions made. When selecting a new board member, executives and the owners should consider what kind of member would fit the company's current tasks and aims. In 2013, van Veen, Sahib and Aangeenbrug, discussed that nationalities within the boardrooms have increased and led to better company performance, but negative effects were also found. They stated that it is important to balance the optimal amount of nationality diversity in a boardroom to have an incentive to recruit international directors. They also argued that it is advisable to keep the distances rather low to the new board member's country of origin to avoid too much cultural distance. This way, the new board member can be more familiar with the operations of the company.

Chhaochharia and Grinstein also made a relevant finding in 2009, as they examined US companies' CEO's and boards. They found out that many companies As' CEO's sit in company Bs' board, and vice versa. This leads to a broad conversation about what is behind this phenomenon as board independence is a relevant tool for loosening the agency problem and enhancing company performance. Creary, McDonnell, Ghai, and Scruggs (2019) researched the issue related to this

problem and found out that it can be the laziness of finding new board members, executives and top-level managers who share mutual connections in civil life. This matches the theory of psychological egoism, where humans are always putting self-interest before others.

There are several legal requirements and guidelines for Finnish publicly listed companies in NASDAQ OMX Helsinki. The legislation behind it comes from directions and procedures developed by the European Union commission. These legal aspects are derived from Finnish laws and guidances. The requirements for boards and companies are presented more in chapter 1.3.

1.2.3 Committees

The board of directors are responsible for various tasks with limited time and meetings. In the Finnish Corporate Governance Code for 2020, it is stated that the board of directors shall decide on establishing different committees. The board of directors will confirm the tasks and duties of a found committee, and the formed committee shall report carried work regularly to the board of directors. The most common committees appointed by the board of directors are the audit committee, remuneration committee, and nomination committee. According to Limited Liability Company Act (Osakeyhtiölaki 2006/624), the audit committee shall monitor and assess e.g. financial reporting, internal control, risk management and other related. The remuneration committee shall develop efficient incentives for CEO and top-level managers in order to line shareholders' and executives' interests for long-term goals. Also, it is essential to do the remuneration packages to avoid agency costs, which will be discussed in more depth in chapter 1.3.2. The nomination committee shall be responsible for remuneration and appointment of board of directors. It is very important that independent members shall be on the nomination board due to the agency theory. As the nature of the committee is easily correlated to the board of directors, neither the CEO nor the managing director can be appointed to the nomination committee (Finnish Corporate Governance Code, 2020).

1.3 Corporate Governance

According to Shleifer & Vishny (1997), corporate governance is a way for investors to understand how they are making the profits for their investments. According to them, corporate governance is controlled by legal and economic institutions developed in political processes. Legislation, code for corporate governance, and the markets impact how the company is controlled and directed.

This chapter goes through the Finnish corporate governance code and the legislation behind it, conflict of interest problems raising between shareholders and the top management of publicly listed companies, and international legislation which affect positively to liquidity and tradeability of shares in international markets.

1.3.1 Finnish corporate governance

Laws and regulations discussed in this chapter are taken directly from Finlex Data Bank, where laws are organized topically and accurately. The main laws to be discussed are Limited Liability Company Act (Osakeyhtiölaki 2006/624, later OYL) and Securities Market Act (Arvopaperimarkkinalaki 2012/746, later AML).

Publicly listed companies in Finland are under various laws and are constantly supervised. The main laws to be followed by corporations are Limited Liability Company Act (OYL) and Securities Market Act (AML). These laws act as a regulation for corporate boards to follow equal principles in Finland. The laws followed by corporate boards are mainly included in Limited Liability Company Act (OYL). Chapter 6 § 1(OYL) states that all corporations publicly listed shall have a corporate board of directors. Appointing directors happens in shareholders' meetings unless it is signed that the board of administration will make the decisions (OYL Chapter 6 § 9). The Nomination Committee shall elect a minimum of 1-5 board members. If a board consist of less than three persons, a minimum of one deputy member shall be elected (OYL Chapter 6 § 8)

OYL chapter 6 examines publicly-listed companies' administration and representation in a bigger picture. The chapter discusses the board's decision-making and administrative tasks, gatherings and eligibility, and other responsibilities appointed to directors. The board is responsible for appropriate corporate governance, financial management, and suitable accounting standards (IFRS). The corporate board acts as a decision-maker, and the decision will be valid if more than half of the board is present in shareholders' meetings and all board members have been given an equal chance to attend the meeting. If the vote is tied, the chairpersons' vote shall decide the outcome.

The corporate governance code is established by the Finnish Securities Market Association and it contains recommendations for Finnish publicly traded companies. Finnish Securities Market Association was founded in December 2006 by the Confederation of Finnish Industries (Elinkeinoelämän keskusliitto), Finland Chamber of Commerce (Keskuskauppakamari), and

Nasdaq OMX Helsinki. Good securities market practice is acknowledged by law, but what can be defined as good practice cannot be regulated in such detail. Securities Market Association's main duty is defining and promoting good securities market practice at any given point in time (Securities Market Association 2020).

The Finnish Corporate Governance Code updated in 2020 contains recommendations from these topics: general meetings, board of directors, committees, managing director, remuneration, and other related governance. Finnish publicly traded companies follow these recommendations, and they publish yearly their corporate governance statements (Selvitys hallinto- ja ohjausjärjestelmästä) as part of their annual report that discloses the fiscal year.

As stated in chapter II - recommendation 9, companies are given recommendations about the diversity of the board of directors. Companies shall define diversity in their own ways of seeing the subject while taking into account the nature of the business and requirements for it. Subchapter 9 lists age, gender, occupational, international, and ethnic background to be acknowledged as diversity in the company's way of following the recommendations. The company can solely decide to which extent it reports the diversity principles in its corporate governance statement. The subchapter promotes diversity as it states that differentiated know-how, experience, and opinions of directors promote the ability to have open-minded thinking leading to innovative ideas. Also, the subchapter states that adequate levels of diversity promotes open discussion and more independent decision-making. Diversity leads to good corporate governance, potent supervision of top executives and directors, as well as successful planning.

1.3.2 Agency Theory

Agency is a term where two parties are in a relationship where the other represents the other; in this case, the agent represents the principal. This gives the interpretation to the alternative term for agency theory, which is the principal-agent dilemma. In the principal-agent problem, the theory suggests that the two parties' interest is not always aligned. Or in other words, the principal and agent are willing to put self-interest before the counterparty's interest. In the corporate world, the problem is that the agent is in charge of the principal's resources, which usually is money in terms of shares. In this context, the principal is seen as the shareholders, and the top executives as an agent. In addition to the parties' different interests, Eisenhardt discussed the difficulties the principal faces while keeping track of agents' doings in the corporation. In addition to that,

Eisenhardt discussed about information flow and how it cannot be flawless between parties (Eisenhardt 1989).

The principal agency problem comes with a cost, as agency theory sees people being self-centered and self-serving agents who act for their own best interest. This cost is called agency cost, which was introduced by Jensen & Mecklin (1976). Jensen and Mecklin explicated this cost adding together monitoring and bonding costs and the residual loss. According to them, the residual loss is explained as the welfare reduction of shareholders, which is experienced because of managers' avoidance of duties. This raises a question on what could be done to avoid all agency theory costs, including the described agency cost.

According to various previous studies, the board of directors plays a vital part in relieving the principal-agent problem and the costs related to it. According to Fama & Jensen (1983), the board has the ability to control the doings of top-level managers, acting as a control mechanism for shareholders' interests. Agency theory and agency cost are problems to be solved by balancing the given incentives for top-level managers. Board of director members ensure the well-being of shareholders protecting their interests, as they shall report all kind of incapability or incompetency of a top-level manager to a shareholder in shareholders meetings. In other words, the board of directors shall provide the most competent managers to match shareholders' requirements (Lacker, Tayan, 2011). Shehata (2013) adds an important finding that diversity in corporate boards increases board independency, which helps avoid the principal-agent problem in the first place, as independent boards are less likely to seek their own benefit and are less subject to homogenous groupthink.

One of the most common senior executive remuneration models, is to compensate the managers not only by paycheck, but also with stock options and direct shares of the company. As stated in the Finnish Corporate Governance Code for 2020, remuneration is not only seen as compensation for contributed work, but it is also a key factor to motivate and guide the company's management. In that way, management shall be motivated to look for the best long-term success options. Mehran (1995) also reported that equity-based remuneration positively correlates with the company's financial performance. As a result, both, shareholders' and managers' wealth raise simultaneously. Mehran (1995) also found that it is not necessary the amount which is given by shares and by cash, that it is rather the fact, that something is compensated with shares in the beginning.

Even though the agency theory is mainly seen as a problem, something good usually follows from difficulties and obstacles. It could be said that without proper remuneration programs and valid incentives to managers, they could sit tight and do their jobs satisfactorily. But when their own rewards are on the table, the managers can and will look for long-term opportunities and success. This whole situation supports competitive markets and therefore leads to more innovation and well-being in the long term. Oligopolies and monopolies can distract this layout as the competition is really not a competition in the first place.

1.3.3 International legislation

Finland joined the European Union in 1995. As Finnish companies also operate in the international markets, international laws and regulations must be met when doing business and existing national laws and regulations. Many Finnish companies have subsidiaries in other countries including and excluding the European Union. Finnish laws must be in accordance with laws in force made by the commission of the European Union. In this way, a cross-border business can be done easily and with less hierarchy. This serves not only companies doing international business but also investors, moving managers and directors, creditors, and all other persons or institutions who have to be familiar with international guidelines (European Commission).

European Commission published a study by Ernst & Young in July 2020 that examines directors' tendencies to fall for short-term shareholder maximation, rather than a company's long-term interests. The study listed board remuneration and composition, directors' duties and enforcement, sustainability, and stakeholder involvement as key problems contributing to so-called "short-termism" (EY, 2020).

1.4 Prior research

Diversity is a subject that has been widely studied inside board rooms and in another contexts as well. Diversity is a broad concept, and it can be interpreted in various ways. In this context, diversity is seen as differences between people. The main differences leading to diversity are racial, ethnic, socioeconomic, and cultural backgrounds. Also, sexual orientation, age, gender, and religion are seen as diversity. In this chapter, the author will mainly discuss about cultural, racial, and ethnic diversity, as these can best be joined to nationality diversity. Even though nationality diversity is the main subject to be studied, other studies considering diversity will be considered

as diversity in various studies shows links between diversity factors. Previous studies' findings vary. Some previous authors find a positive relation between nationality diversity in the boardroom and the company's financial performance, and other studies did not find significant or any correlation at all between them.

According to psychological and social theories, increasement in board diversity can lead to more critical thinking, more diverse opinions, and less conflicts affecting negatively to company's performance (Carter, D'Souza, Simkins, Simpson, 2010). The paper also suggests that according to human capital theory, board diversity will be beneficial for the board's performance as a result of unique and diverse human capital. In 2003, Carter, Simkins, and Simpson discussed board independence and how it is crucial for directors to act in the shareholders' best interest. They argued that diversity in terms of gender, ethnicity, and culture increases board independence. As a result, they found out statistically significant positive relationship with the presence of minorities and company performance measured with Tobin's Q, while examining Fortune 1000 companies (Carter, Simkins, Simpson, 2003). Their study was controlled with size, industry, and corporate governance measures.

Rivas (2012) discussed that diversified boards and top-level management have access to a greater pool of task-relevant abilities, skills, and knowledge. Rivas found out that boards and top-level management diversity possibly affect the company's ability to operate in international markets. Alon and Higgins (2005) also noticed that increased globalization on business leads to the need for understanding different cultures better. As boards are more international, global business is easier to manage, leading to international success. They analyzed the international success with cultural intelligence stated as CQ, derived from IQ (Intelligence Quotient). In 2009, Reus and Lamont (2009) also examined if a company's managers' cultural distance affects the acquisition performance, as they stated that diverse groups have higher knowledge absorptive capabilities. They did not find that cultural differences would still lead to a higher acquisition performance. They rather explain the cultural distances and differences as a "double-edged sword," which means that cultural differences might have good and bad effects on the company.

Barney (1991), discussed about the resource-based view, which is used to determine a company's sustainable competitive advantages by recognizing firms own strategic resources and how to exploit them. In the resource-based view, managerial attention to these resources is to be recognized to gain a maximal level of competitive advantage. Following Barney (1991), Wellalage

and Locke (2013) proposed that the board of dircetors diversity is a valuable non-substitute asset. In other words, they partially based their research on comparing board of directors diversity to a strategic resource based on Barney's (1991) resource-based view. They examined Sri Lankan firms and set a hypothesis: "Board ethnic diversity is positively associated with Sri Lankan firms financial performance." Their study found out that board diversity has a significant positive impact on Sri Lankan firm's financial performance measured with racial and age diversity. Other diversity variables were stated to have a negative effect on a firm's financial performance.

McMillan-Capehart (2003) also examined the relationship between firm performance and cultural diversity with resource-based view theory. In the study, hierarchical regression analysis was carried out to examine the relationship between cultural diversity and firm financial performance measured with ROE and ROA. Cohen and Cohen (1983) stated that hierarchical regression is one of the best tools to extract information from data. McMillan-Capehart found limited support for her hypotheses, stating that there can be a negative or positive impact on firm performance, depending on how the company is managed.

Dalton, Daily, Ellstrand, and Johnson (1998) conducted a meta-analysis examining if board leadership structure has an effect on financial performance. They found no relationship in a meaningful level but did not reject the possibility due to their small relative representation. In their review, they still stated that "There is near consensus in the conceptual literature that effective boards will be comprised of greater proportions of outside directors." This was based on earlier findings from Lorsch & MacIver (1989), Mizruchi (1983), and Zahra & Pearce (1989).

Radlach and Schlemmbach (2008) conducted a study focusing on the fifty largest financial institutions worldwide using data from 2005 to 2008. Their research indicated that a higher amount of ethnic and gender diversity in the board positively affects the firm's financial performance. Also higher amount of outside independent directors and a higher average age of board affected positively to financial performance. Increased board size had a negative impact on the firm's financial performance. They used ROE and ROA also as performance measurements in their study.

Marimuthu (2008) examined Malaysian top 100 non-financial companies over six years, from 2000 to 2005. The research aim was to understand if there is a relation between ethnic diversity and a firm's financial performance measured with profitability ratio ROA. Marimuthu made a standpoint that in the Malaysian area, many foreign board members are non-Malaysians, but very

close to the same ethnic race, and therefore might add a limitation to the study. Also, Marimuthu added that using only ROA as the only performance measurement can limit the study result. Although the limitations, Marimuthu concluded that ethnic diversity enhances a firm's financial performance, and Malaysian firms should make the fullest to benefit from this opportunity.

Erhardt, Werbel, and Shrader (2003) examined the relationship between the board of directors' demographic diversity and firm financial performance. The research was done using the data of 127 large category US companies and using return on assets and return on investment as financial performance measurements. They found a significant positive correlation between demographic diversity of boards and ROI and ROA. They controlled the study with industry variables, the board size, and total assets.

1.5 Hypothesis

This study will examine the relationship between board nationality diversity and firm financial performance based on previous literature and studies. Profitability ratios ROA and ROE are used to measure firms' financial performance, as they are used in many previous studies (Radlach, Schlemmbach, 2008; McMillan-Capehart, 2003). Board of directors' diversity will be examined as the percentage of non-Finnish nationals on the whole board of directors. A similar study was made by Erhardt, Werbel, and Sharder (2003). Therefore it is appropriate to adjust the hypothesis to match the research problem. As the study examines the relationship between firm performance and board diversity, it is common to use null hypothesis and alternative hypothesis. Previous research has found plenty of positive relationships between board diversity and firm performance; therefore the hypotheses are set as:

H0: Board nationality diversity has no correlation with firm's financial performance

H1: Board nationality diversity has a positive correlation with firm's financial performance

2. DATA AND METHODOLOGY

The relationship between nationality diversity and firm financial performance is not so commonly studied, but a large amount of studies and data is found when examining the overall diversity of the board and firm financial performance. Also, many studies have conducted using demographic diversity of board as an independent variable, e.g., Erhardt, Werbel, and Shrader (2003). This study will examine the relationship between nationality diversity and firm financial performance and seek similarities to previous findings.

2.1 Data

The author examined a total of 32 companies listed in NASDAQ OMX Helsinki. The companies were selected to fit the study by market capitalization. By FINDIX study (Halttula, Saikkonen, 2020), the relative amount of other nationalities in boardrooms decreases significantly as we move from the large capitalization company category to medium capitalization category. The selected companies were at a minimum book value of one billion euros, which leaves only large capitalization companies to study. Nasdaq divides companies into small, medium, and large by capitalization. The benchmarks were as follows; book value of 150 million or less = small, book value of 150 million to one billion = medium, and book value over one billion = large.

A total number of 7 companies were ejected from the study as they did not meet the requirements for suitable data analysis due to one of the listed reasons; a company has merged with another company between 2015 and 2019, a company is not listed to Nasdaq OMX Helsinki in 2015 or 2019, a company is registered to another country than Finland, a company has an insufficient amount of data to be used in a regression model. After the ejection, this study was left with a total of 25 companies fitting the requirements.

This study uses cross-sectional data from the years 2015 and 2019. The selected years represent relatively stable fiscal years with no major macroeconomic incidents, as the financial crisis of 2008 is long in the past, and the ongoing COVID-19 pandemic has not affected the 2019 fiscal year. Typically a five-year interval is used as organizational performance requires several years to observe and this timeline usually accounts for diverse candidates' potential towards strategic decision-making (Erhardt, Werbel, Shrader, 2003). This study uses the data from Orbis database,

which gives the nationalities of current and former board members. In addition, ROE and ROA were easily accessible from the global ratio analysis, and the clarifications for ROE and ROA were in line with the used measurements in this study. Assets, board size, and board diversity are also collected from both observable years in respect to measured performance year.

2.2 Performance measures

Financial performance is a subjective measure of how well a firm can generate profit using its capital and intangible assets, or in other words, assets in general. It is essential to constantly evaluate firms' financial performance to understand better how the business is doing. Investors want to know how efficiently a firm is generating cash compared to invested equity. Board of directors and top-level managers want to measure performance on a big scale using performance or profitability ratios to understand how employees are doing without observing it at grassroots. Creditors want to observe companies' cash flows to analyze the probability of default and protect their interests at collecting short and long-term debts from companies if they are leveraged. Analysts want to have a wide range of data to conduct benchmark analyses to give relevant and timely information for all of the participants mentioned above.

This study will measure performance through profitability ratios. Profitability ratios can be divided into margin ratios and return ratios. Margin ratios tell the company's ability to generate profits from sales measured with different percentage ratios such as, EBIT and EBITDA margin, net profit margin, and, e.g., ratios considering cash flows. These ratios give viewers a better understanding of situational ratios when the user wants to pinpoint e.g., the effect of taxes on profit or the effect of short-term debts on cash flows. On the other hand, return ratios tell us better about a company's ability to generate returns to its shareholders. This study focuses purely to return ratios (ROE and ROA) to serve investors' points of view. ROE and ROA were selected for performance measurements as various previous studies have also used them (Radlach and Schlemmbach, 2008; McMillan-Capehart, 2003)

2.2.1 ROA

ROA is a measure of how much earnings were generated from all capital during the fiscal year, or put simply, from assets. The higher the ROA number, the more efficient is the usage of the company's assets in generating net profit. ROA is a good comparative measure, but it has some

limitations to it. ROA is best to be compared to the company's previous year ROA numbers or similar companies' same year ROA.

Return on assets in this study is represented as:

$$ROA = \frac{Net\ Income}{Total\ Assets} \tag{1}$$

2.2.2 ROE

ROE is very similar to ROA, with a difference that it compares net income to total net assets. In other words, ROE excludes debt on assets leaving just shareholders equity. ROE measures the profitability of an investment in relation to shareholders' equity. ROE and ROA are expected to correlate with each other, as they are both calculated from the same Net Income amount from the same year.

Return on equity in this study is represented as:

$$ROE = \frac{Net\ Income}{Shareholders\ Equity} \tag{2}$$

2.3 Correlation and regression

The study will use a combination of correlation analysis and hierarchical regression analysis. The combination is widely used to examine board diversity and firm performance. This study will use a similar approach as Erhardt, Werbel, and Shrader (2003) to approach the problem.

This study will use correlation analysis to determine specific correlations between all variables. A similar method was used by Erhardt, Werbel, and Shrader (2003), although this paper only focuses on nationality diversity. The correlation analysis will be executed in excel data analysis tool, which gives a correlation matrix with numbers from -1 to 1 in a correlation table. In Pearson correlation, the correlation is measured from the numbers that the table has given. 1 stands for perfect positive correlation, 0 stands for no correlation at all, and -1 stands for perfect negative correlation. If the correlation is between 0.5 and 1, then it is a strong positive correlation. If the correlation lies

between 0.3 and 0.49, then it is a medium positive correlation. When the value lies between 0 and 0.29, it is said to be a small positive correlation. It goes the same way when the values take a negative value towards -1. E.g. if the correlation between variables Y and X is 0.5 and variable Y raises by one unit. Then the variable X is expected to raise by a half unit.

This event's significance can be examined with the p-value to examine the likelihood of this event. In this study, the significance will be examined with a p-value, and the confidence of 0.05 is used to test the null hypothesis. The hypothesis shall be tested with board diversity relation to all other variables to see if the null hypothesis can be rejected.

Hierarchical regression analysis will be done to examine *Hypothesis 1: Board nationality diversity has a positive correlation with firm's financial performance.* The regression analysis is selected to give comparability to the findings of previous similar studies (Erhardt, Werbel, Shrader, 2003; Marimuthu, 2008; Radlach, Schlemmbach, 2008). The sample size 25, is relatively small for hierarchical regression analysis, but the amount of other nationalities in boards decreases significantly in less than one billion euro capitalization companies. To make the test more robust, the years 2019 and 2015 are both examined in the regression model to raise the number of observations to 50. The regression model will analyze the relationship with explained variable (Y) and explanatory variable (X), and controlling them with board size and the natural logarithm of assets.

In the regression model, variables can be divided into dependent variables and independent variables. The independent variable is also known as an explained variable in the function, whereas the dependent variable is known as an explanatory variable. The dependent variables (Y) in the regression model will be ROE and ROA, and the independent variable (X) will be the board diversity ratio. The diversity ratio in the equation is calculated by dividing non-Finnish board members by the total number of board of directors. In the regression model, we examine how the explained variable (Y) will be affected by the explanatory variable (X).

The control variables in the study will be the board size and natural logarithm of assets. Board size will be controlled as it was controlled by Erhardt, Werbel, and Sharder in 2003 and Marimuthu in 2008. Assets were also controlled in the study of Erhardt, Werbel and Shrader (2003). This study will use the natural logarithm of assets as previous studies have often preferred this method (Carter, Simkins, Simpson, 2003; Peni, Vähämaa, 2011). Using the natural logarithm of assets will exclude extreme values from the distribution (Ruuska, 2017). The control variables are presented as

independent variables (X) in the regression model, but they are not the main interests to be observed. The presence of control variables helps us to determine a more accurate correlation between firm performance and board diversity. Even though control variables enhance the regression results to be more trustworthy, the equation does not imply causality of variable relations.

The regression model will be conducted in two parts. First, the relationship between ROE and board diversity will be regressed while controlling for board size and natural logarithm of assets. And in the second part, ROA is regressed in the same way. For clarity, if regression models is examining ROE data and the first dependent variable is ROE from 2019, the related independent variable and control variables are also from 2019. If the dependent variable is from 2015, the respectful independent variable and control variables are also from 2015. The results will be presented in table 3 and in table 4. The regression results will tell us the coefficient of each independent variable in relation to the dependent variable. T-test and P-values are also presented in table 3 and table 4.

The regression model can be evaluated with R^2, or more commonly known as the coefficient of determination, and it represents the combined effects of all independent variables. The value of R^2 ranges between 0 and 1, implying the proportion of the variance of dependent variable that is explained by the independent variables in the regression equation. In other words, R^2 explains how much of the equations observed variations can be explained by the inputs in the regression model. The coefficient of determination tells the explanatory power of the function. Adjusted R^2 is fit to use when more independent variables are used. Interpretations of the regressions will be discussed in the results section.

3. RESULTS

In this chapter, the author will examine descriptive statistics for variables, analyze the findings of the correlation matrix and regression model, and also reject or accept hypotheses with the found p-values.

3.1 Descriptive statistics

Table 3.1. Descriptive statistics

	Mean	SD	Median	Min	Max
Finnish BM	5.80	2.07	6.5	0	9
Non-Finnish BM	2.64	2.57	2	0	10
Board Size	8.42	1.44	8	6	13
Diversity	0.29	0.26	0.27	0	1
Assets	8456005	11407308	4282964	1140304	56494328
ROE	15.13	9.77	13.09	-13.90	40.08
ROA	7.05	5.44	5.85	-5.17	19.88

Author's calculations

Notes: Number of observations (n=50). BM stands for board members. Years 2015 and 2019 are both represented in the table. Assets in thousands (€).

Table 1 represents descriptive statistics for both examinable years in the study. The diversity shall be looked at as a percentage of non-Finnish board members compared to the whole board composition. As seen from table 1, board size varied from 6 to 11, with an average of 8.42 directors sitting on the board. What is interesting to see from the data, nationality diversity is quite high in large capitalization companies, as the average percentage is 29%. The standard deviation for other nationalities is also quite high, as can be seen in minimum and maximum values for diversity. Some boards were entirely without a non-Finnish board member, and in Citycon, there was surprisingly no Finnish board member at all in 2019.

Table 1 also includes descriptive statistics for the performance measurements used in this study. The fiscal years for 2015 and 2019 have been relatively similar, so it is easy for them to be pooled together in this study. Total assets also had a relatively big standard deviation as the maximum values were much bigger than close to minimum values. Although this study only focuses on large capitalization companies, the selected method of using the natural logarithm of assets in the regression model is justified, as can be seen from the table. The maximum values for ROE results were quite high for large capital companies, and they were able to generate great profits for their shareholders. The reason why ROE results are always better than ROA results, is that ROE examines the net income compared to shareholders' equity, excluding the company's net debts. In ROA the net debt is included; thus, it increases the denominator in the equation. Overall, the maximum ROA values were surprisingly good, as the companies near 20% ROA can generate 20% profit compared to their whole book value. Mean values were also all bigger than median values. This indicates that the most profitable companies in terms of ROE and ROA generate profits relatively big comparing to lower ROA and ROE companies.

3.2 Correlation and regression models

Table 3.2. Correlation matrix

	Diversity	Board size	Assets	ROE	ROA
Diversity	1				
Board size	0.396	1			
Assets	0.201	0.374	1		
ROE	-0.138 (0.340)	-0.233	0.005	1	
ROA	-0.151 (0.294)	-0.174	-0.042	0.912	1

Author's calculations

Notes: P-values for 0.05 significance in parenthesis. Number of observations (n=50). Years 2015 and 2019 are both represented in the table.

The pearson correlation matrix is presented in table 2, which gives an overview of how well the variables are correlated to each other on a scale from -1 to 1. The most clear near-perfect

correlation to be seen is ROE to ROA due to their similarity in calculating them. It is interesting to find that the diversity is negatively correlated with the ROE and ROA values, although no significant relation is found with used 0.05 significance. It was also expectable that board size and assets were positively correlated as bigger firm's have the tendency for bigger boards. The findings that board size and assets are positively correlated to diversity is in line with previous studies, as large capitalization firms in Finland have more non-Finnish board members on average (Halttula, Saikkonen, 2020)

As the null hypothesis was set to be "*H0: Board nationality diversity has no correlation with firm's financial performance*", it is appropriate to examine if the null hypothesis can be rejected. The significance was examined with regression models between the diversity and profitability ratios. Both coefficients were tested in a separate regression to measure the p-values. The results came out to be non-significant as the appropriate bar is at 0.05 for results to be ruled as significant. The findings can be interpreted in a way that with over 70% chance there can be a negative correlation with board nationality diversity and ROA. The same interpretation is appropriate for ROE, but with just 65% chance. With these results, the study fails to reject the null hypothesis, but it does not mean that there can't be a negative relationship between firm performance and board nationality diversity.

Table 3.3. Regression summary for ROA

Variable	Coefficient (Beta)	T-stat	P-value
Constant (ROA)	8.542	0.617	0.540
Board Diversity	-3.056	-0.846	0.402
Board Size	-0.509	-0.775	0.442
ln Assets	0.213	0.225	0.823
Estimated Equation	R^2	$AdjR^2$	F-Stat
	0.045	-0.017	0.730

Author's calculations

Notes: Number of observations (n=50). Years 2015 and 2019 are both represented in the table.

Table 3 shows, that the regression coefficient for board diversity is -3.056. In terms of ROA, it can be interpreted that Board Diversity is negatively correlated with firm financial performance. As the coefficient describes the regression line's slope, one unit increase in the independent variable (X) leads to an increase in the dependent variable by the amount of beta. When board diversity increases by one unit, ROA decreases by 3.056 units. Assets were slightly positively correlated to ROA, but with no statistical significance. It was also interesting to see that board size is negatively correlated to firm performance, but no statistical significance was found. The estimated equation had R^2 of 4.6 percents and adjusted R^2 of nearly zero percents. Although the estimated equation shows relatively small explanatory power, previous studies examining diversity and firm performance also report small values for R^2 and adjusted R^2 (Erhardt, Werbel, Shrader, 2003; Ruuska, 2017).

Table 3.4. Regression summary for ROE

Variable	Coefficient (Beta)	T-stat	p-value
Constant (ROE)	3.745	0.147	0.884
Board Diversity	-4.893	-0.737	0.465
Board Size	-1.768	-1.464	0.150
ln Assets	1.736	0.996	0.325
Estimated Equation	R^2	$AdjR^2$	F-Stat
	0.081	0.021	1.350

Author's calculations

Notes: Number of observations (n=50). Years 2015 and 2019 are both represented in the table.

As examining the second regression model in table 4, similar outcomes were found. Board diversity had a negative correlation to ROE. If board diversity increases by one unit, ROE decreases by 4.893 units. ROE regression model also failed to find statistical significance for board diversity with an appropriate 0.05 significance value. Control variable findings were in line with previous findings as well. The natural logarithm of assets and dependent variable ROE had a positive correlation with no statistical significance. Board size was again negatively correlated

with firms' financial performance, but with no statistical significance. The estimated equation had R^2 of 8.1 percent's and adjusted R^2 of 2.1 percent's

As both regression models failed to match statistical significance for board diversity with used minimum value of 0.05 for p-value, it is mandatory for the study to also reject Hypothesis 1 (*H1: Board nationality diversity has a positive correlation with firm's financial performance*).

4. CONCLUSION

This study examined the relationship between nationality diversity in boardrooms and firms' financial performance in the Finnish context. Nasdaq OMX Helsinki was examined with firms exceeding one billion euros on the balance sheet. The financial performance of companies was measured by examining return on equity and return on assets. Data was obtained from the Orbis database, and cross-sectional data from 2015 and 2019 was used to approach the problem. The data set was examined with descriptive statistics, Pearson correlation matrix, and regression analysis.

Two hypotheses were set to analyze the problem. First, the null Hypothesis (*H0*: *Board nationality diversity has no correlation with firm's financial performance)* was analyzed, and the study failed to reject the null hypothesis due to insignificant p-values. Although the null hypothesis was not rejected, the study did find a relatively high negative correlation with relatively small p-values, meaning that there can be a correlation. After this, Hypothesis 1 (*H1: Board nationality diversity has a positive correlation with firm's financial performance*) was examined in a regression model with selected control variables. The regression model found more precise information on how board diversity can affect firm profitability negatively, but with insignificant p-values. Therefore the study also rejected the alternative hypothesis. It seems that there can be a negative relation between board diversity and firm financial performance, but the results are to be considered and examined in future studies.

This study only examined 25 companies which is a relatively small dataset, to conclude that nationality diversity has a negative effect on firms's financial performance. The regression model always has its limitations as all the affecting variables cannot be found and inserted into the equation. The data is only collected from two points of time, although companies have a long history of doing business. The initial and past increases of the firms' nationality diversity are also not examined in the study. Those findings could find more robust data on how nationality diversity has been initially affecting firms' financial performance. Erhardt, Werbel, and Shrader (2003) also speculated that adding more diversity in the equation could turn to more "curvilinear.". In other words, by adding diversity after a certain level, the maximum benefit could decrease. That is yet to be analyzed, if, after certain levels of diversity, the performance turns negative.

Further research for nationality diversity and firm financial performance is certainly needed to have a more precise understanding of the relationship between the two. This relationship could be examined more in other countries where nationality diversity is high and more companies could be analyzed. Further studies could also control the regression more with the share of exports or subsidiaries in other countries if board members are from the country of subsidiary or exports. This method could also indicate if cultural distances play a role in firm profitability or acquisition performance (Reus, Lamont, 2009). The optimal level of nationality diversity could also be examined better to understand the "curvilinearity" of the equation.

This study can act as a good foundation for more studies focusing directly to board nationality diversity and its potential relation to firms' financial performance. Governments, organizations, and companies need useful and topical information about the optimal board composition, and this study gives insight and literature to interested participants. This study is made to be repeatable to encourage other academics to investigate the problem further.

LIST OF REFERENCES

BrainyQuote, *Barack Obama Quotes.* Retrieved From
https://www.brainyquote.com/quotes/barack_obama_416718 . 10 March 2021.

Halttula, S. Saikkonen, S. (2020), *Diversity of Senior Leadership in Finnish Listed Companies.*
FINDIX. Retrieved From https://findix.fi/index.html. 10 March 2021.

Tilastokeskus (2015), *Ulkomaalaistaustaiset työelämässä.* Retrieved From
https://www.stat.fi/tup/maahanmuutto/art_2015-12-17_003.html. 15 March 2021.

Carter, D, A. Simkins, B, J. Simpson, W, G. (2003) *Corporate Governance, Board Diversity, and
Firm Value.* The Financial Review, 38:1, 33-53

Raento, P. Husso, K (2001), *Cultural Diversity in Finland.* Fennia, 180:1-2, 151-164

Pedagogiikkaa Netissä (2018), *Maahanmuuton Historiaa Suomessa.* Retrieved From
https://peda.net/kol/foorumi/m/mkk/t3mst/mhs2. 21 March 2021.

Tilastokeskus (2019), *Maahanmuuttajat Väestössä.* Retrieved From
https://www.stat.fi/tup/maahanmuutto/maahanmuuttajat-vaestossa.html. 22 March 2021.

Fundamental Rights Association (2018), *Being Black in The EU/Second European Union
Minorities and Discrimination Survey.* Publications Office of the European Union.

European Union Directive 2000/43

Yhdenvertaisuuslaki 30.12.2014/1325

Osakeyhtiölaki 21.7.2006/624

Arvopaperimarkkinalaki 14.12.2012/746

List of IFRS Standards and IFRIC Interpretations. IFRS. Retrieved from
https://www.ifrs.org/issued-standards/list-of-standards/ 17 April 2021.

Larja, L. Sutela, H. (2015), *Ulkomaalaistaustaisten miesten työllisyysaste lähes samalla tasolla
kuin suomalaistaustaisilla – naisilla enemmän vaikeuksia työllistyä.* Tilastokeskus. Retrieved
From https://www.stat.fi/tup/maahanmuutto/art_2015-12-17_001.html. 22 March 2021.

Lacker, D. Tayan, B. (2011), *Corporate Governance Matters.* (2nd ed.) New Jersey, USA: Pearson
Education Inc.

van Veen, K. Sahib, P.R. Aangeenbrug, E. (2013), *Where Do International Board Member Come From? Country-level Antecedents of International Board Member Selection in European Boards.* International Business Review, 23, 407-417.

Chhaochharia, V. Grinstein, Y. (2009), *CEO Compensation and Board Structure.* The Journal of Finance, 64, 231-261.

Creary, S.J. McDonnell, M. Ghai, S. Scruggs, J. (2019), *When and Why Diversity Improves Your Board's Performance.* Harvard Business Review.

Securities Market Association (2020), *Finnish Corporate Governance Code.* Retrieved from https://cgfinland.fi/en/corporate-governance-code/ 17 April 2021.

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

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

Jensen, M.C. Mecklin, W.H. (1976), *Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure.* Journal of Financial Economics, 3:4, 305-360.

Fama, E.F. Jensen, M.C. (1983), *Separation of Ownership and Control.* Journal of Law and Economics, 26.

Shehata, N.F. (2013), *How Could Board Diversity Influence Corporate Disclosure.* Corporate Board: Role, Duties and Composition, 9, 42-49.

Mehran, H. (1995), *Executive Compensation Structure, Ownership, and Firm Perfromance.* Journal of Financial Economics, 38:2, 163-184.

Ernst & Young (2020), *Study on Directors' Duties and Sustainable Corporate Governance.* Publications Office of the EU

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

Carter, D.A. Simkins, B.J. Simpson, W.G. (2003), *Corporate Governance, Board Diversity, and Firm Value.* The Financial Review, 38, 33-53.

Rivas, J.L. (2012), *Diversity & Internationalization: The Case of Boards and TMT's.* International Business Review, 21, 1-12.

Alon, I. Higgins, J.M. (2005), *Global Leadership Success Through Emotional and Cultural Intelligences.* Business Horizons, 48, 501-512.

Reus, T.H. Lamont, B. (2009), *The Double-Edged Sword of Cultural Distance in International Acquisitions.* Journal of International Business Studies, 40, 1298-1316.

Barney, J. (1991), *Firm Resources and Sustained Competitive Advantage.* Journal of Management, 17:1, 99-120.

Wellalage, N.H. Locke, S. (2013), *Corporate Governance, Board Diversity, and Firm Financial Performance: New Evidence From Sri Lanka.* International Journal of Business Governance and Ethics, 8:2.

McMillan-Capehart, A. (2003). Doctoral Dissertation. *Cultural Diversity's Impact on Firm Performance: The Moderating Influence of Diversity Initiatives and Socialization Tactics.* Louisiana Tech University.

Cohen, J. Cohen, P. (1983), *Applied Multiple Regression/Correlation Analysis for The Behavioral Sciences.* (2nd ed.). New Jersey, USA: Lawrence Erlbaum Associates.

Dalton, D.R. Daily, C.M. Ellstrand, A.E. Johnson, J.L. (1998), *Number of Directors and Financial Performance: A Meta-Analysis.* The Academy of Management Journal, 42:6, 674-686.

Lorsch, J. MacIver, E (1989), *Pawns or Potentates: The Reality of America's Corporate Boards.* Boston, Ma, USA: Harvard Business School Press.

Mizruchi, M.S. (1983), *Who Controls Whom? An Examination of the Relation Between Management and Boards of Directors in Large American Corporations.* Academy of Management Review, 8.

Zahra, S. Pearce, J. (1989), *Boards of Directors and Corporate Financial Performance: A Review and Integrative Model.* Journal of Management, 15.

Radlach, P. Schlemmbach, K. (2008) Master Dissertation, *The Board of Directors and Its Influence on Risk Propensity and Firm Performance – An Empirical Study of Their Relations in the Banking Sector.* Kristianstad University College.

Marimuthu, M. (2008), *Ethnic Diversity on Boards of Directors and Its Implications on Firm Financial Performance.* The Journal of International Social Research.

Erhardt, N, L. Werbel, J, D. Shrader, C, B. (2003), *Board of Director Diversity and Firm Financial Performance.* Corporate Governance: An International Review, 11:2, 102-111

Nasdaq. *Shares – Share Prices for All Companies Listed on Nasdaq Nordic.* Retrieved From http://www.nasdaqomxnordic.com/shares . 17 April 2021.

Peni, E. Vähämaa, S. (2012), *Did Good Corporate Governance Improve Bank Performance During the Financial Crisis?* Journal of Financial Services Research, 41, 19-35.

Ruuska, M. (2017) Master Dissertation, *Women in the Boardroom and Firm Financial Performance: Evidence From the Nasdaq OMX Helsinki Firms.* Vaasa University.

APPENDICES

Appendix 1. Companies data 2019

Company 2019	Board Size	Finnish Board Members	Non-Finnish Board Members	ROA	ROE	Board Diversity	Assets in thousands
Cargotec	7	7	0	2.12	6.26	0.00	4770962
Citycon	9	0	9	0.19	0.38	1.00	5147755
Elisa	7	7	0	10.77	26.34	0.00	3732100
Fiskars	8	6	2	3.83	6.83	0.25	1532654
Fortum	10	5	5	6.34	11.20	0.50	26247114
Huhtamäki	8	4	4	5.27	13.23	0.50	4056148
Kemira	6	4	2	3.81	8.95	0.33	3247749
Kesko	7	7	0	4.92	15.85	0.00	7750673
Kojamo	7	7	0	12.52	26.70	0.00	7403654
Kone	8	7	1	10.81	29.17	0.13	9676180
Konekranes	8	4	4	3.08	9.51	0.50	4329808
Metsäboard	9	9	0	6.37	10.81	0.00	2270400
Neles	9	5	4	7.69	19.59	0.44	4366655
Neste	9	4	5	18.26	30.19	0.56	11001455
Nokia	10	3	7	0.02	0.05	0.70	43956389
Nokian Renkaat	8	7	1	17.14	22.60	0.13	2620442
Orion	7	7	0	19.35	25.71	0.00	1163505
Outokumpu	7	5	2	-1.24	-2.93	0.29	6783088
Sampo	10	7	3	2.97	12.94	0.30	56494328
Sanoma	10	9	1	0.58	2.09	0.10	2244441
Tietoevry	13	3	10	2.05	4.68	0.77	4335425
UPM	10	7	3	7.21	10.43	0.30	16538693
Valmet	9	6	3	5.85	19.31	0.33	3877976
Wärtsilä	8	5	3	3.39	9.00	0.38	7647283
YIT	9	7	2	0.40	1.39	0.22	4158489

Appendix 2. Companies data 2015

Company 2015	Board Size	Finnish Board Members	Non-Finnish Board Members	ROA	ROE	Board Diversity	Assets in thousands
Cargotec	9	9	0	4.01	10.66	0.00	3887421
Citycon	10	1	9	2.33	4.85	0.90	5078132
Elisa	6	6	0	10.82	26.26	0.00	2445873
Fiskars	10	8	2	4.65	7.14	0.20	1995914
Fortum	10	7	3	18.18	29.85	0.30	24786431
Huhtamäki	7	3	4	5.84	14.18	0.57	2738407
Kemira	6	4	2	2.74	5.95	0.33	2825394
Kesko	7	7	0	2.46	8.39	0.00	4506456
Kojamo	8	8	0	8.42	20.50	0.00	4236120
Kone	9	7	2	13.75	40.08	0.22	8171346
Konecranes	8	6	2	2.07	6.75	0.25	1616611
Metsäboard	9	9	0	6.18	13.34	0.00	2220100
Neles	7	3	4	13.77	30.61	0.57	3493638
Neste	7	4	3	8.23	18.01	0.43	7395539
Nokia	10	3	7	11.78	23.43	0.70	22782135
Nokian Renkaat	8	8	0	13.72	19.39	0.00	1910451
Orion	7	7	0	19.88	35.00	0.00	1140304
Outokumpu	9	7	2	1.63	4.12	0.22	6395023
Sampo	9	7	2	5.3	16.55	0.22	38800177
Sanoma	10	8	2	-5.17	13.90	0.20	3010364
Tietoevry	10	4	6	8.33	18.74	0.60	1182655
UPM	10	7	3	6.45	11.53	0.30	15451918
Valmet	8	4	4	2.7	9.06	0.50	3150698
Wärtsilä	8	5	3	7.94	19.80	0.38	6084744
Yit	6	6	0	2.4	9.02	0.00	2141037

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