Big fish in a small pond?

- A quantitative study about independence and the social networks among corporate boards in Denmark, Finland and Sweden

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Abstract

While the European Union is striving towards harmonization among the member countries, interlocks (connections) are a social phenomenon that has an implication on the Corporate Code but it is more implicitly pointed out with words like “other relevant information” or “other significant board positions” that might affect the individual board member’s independence and ability to fully commit to the company. Although the board often is referred to as one single entity, it consists of many board members that individually can have an agenda that might deviate from all stakeholders’ goal. Every single director has a business network of social contacts, especially if they are elected to more than one company’s board. These individual directors create interlocks (links) between the firms they work for, and form a social network on company level, while the Code only recommends the companies to provide independence information and other significant assignments one by one as if they operate in solitude.

This exploratory study captures the corporate governance perspective about independence and the social networks of directors on supervisory corporate boards in Denmark, Finland and Sweden by investigating the interconnectedness of the directors and companies, and combines this data with the independence disclosure by companies.

We employed deductive approach and a quantitative archival research strategy based on secondary data from annual reports and corporate governance documents in a total of 150 companies to gather a sufficient database about the independence disclosure and the corporate networks.

We identified the most central companies and individuals in corporate framework, and found concentration of power to be evident. Identifying the director networks enabled us to focus on the structural aspects of the networks and what implications this has on the independence of the boards. Furthermore, this research analysed the disclosure independence by the companies and assessed, whether the current requirements on disclosure are adequate for their purpose.

We also found, contrary to our expectations, that the independence disclosure is not harmonized between the studied countries and therefore we assessed the disclosure by using insider-outsider theory. This showed that the current corporate codes do not capture the independence very accurately, and that harmonization of the codes in addition to insider-outsider theory would help the relevant stakeholders to get a “truer and fairer view” of the directors’ independence.

This study has been written especially the legislators in mind and suggests the use of insider-outsider -theory approach to the legislators for providing a more comprehensive and accurate view of the independence.

Keywords: Corporate Governance, Board of Directors, Board independence, Interlocking directorate networks, Corporate Elite
Definitions:

**Interlocking directorates network (IDN):** Network of corporate board members who serve on the boards of multiple corporations

**Corporate elite:** Directors with most interlocks to other companies

**Most central firms:** Companies with most interlocks to other companies

**Board of directors:** A company’s board of non-executive directors

**Aggregated corporate framework:** Aggregated data of individual independencies and interlock networks
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1. Introduction

This chapter will introduce our problem background to show the relevance of our chosen topic. We will describe the legal framework and environment businesses operate in internationally but also more specifically in the area we are examining. We will also provide the readers with findings from previous studies, followed by a discussion leading to the research gap, purpose and research question. Here are also the limitations and delimitations of this study described.

The Enron case in late 2001 caused major corporate governance changes, not only in the US but also worldwide. Not because it was a scandal itself (all countries have experienced scandals of some sort), but because the fall happened so fast, affected so many and the magnitude of the corruption both within and outside a firm never had been seen before. This was the first time in business history the senior management also was proven to be involved in unethical behaviour says Cohan (2002, p. 276).

1.1 The Enron case

Enron was once considered to be the role model for how to run a successful business, where young and ambitious, well-educated people could make a great career. Today, Enron is used as an example of corporate malfeasance, greed, fraud, creative accounting and is the ultimate symbol for corporate governance and ethical failure. The whole truth about Enron will probably never be revealed says Brickley (2004, p. 273) since many of the accused in the Enron scandal pleaded the fifth amendment privilege to give out documents and memos that could self-incriminate them. Enron as a company cannot invoke this right in the US Constitution but individual Americans can, which made it both difficult and time-consuming and expensive to prosecute the people responsible for the company. But what we do know and have learned in the aftermath of the scandal is still a lot. Healy & Palepu (2003) among other researchers has tried to assess how such a successful company like Enron could end up in bankruptcy scandal of this magnitude. They found not only an economic scandal per se; they found all ingredients worthy of any soap opera on TV: money, greed, power, lies, intrigues and even political conspiracies. Sadly, this is a true story from real life, affecting and ruining real people and law-abiding firms.

Kenneth Lay, the first CEO and chairman of Enron board of directors, founded the company by merging two other natural gas companies in 1985. During the next two decades Enron could, thanks to a deregulation in the natural gas market, grow from being a large gas supplier in the US to owning and managing water and electricity plants, get involved in pulp and paper plants and engage themselves in internet broadband and fiber optics in other countries in the world. From a business perspective we recognize this type of diversification as a common way to minimize risk, and that is usually considered to be a good thing. Healy and Palepu (2003, p. 9) concludes this was not the case. Enron operated not only in a very competitive business environment that just had been deregulated. They also focused solely on financial results, a more short-term goal to gain profit and used very complex and exotic derivative vehicles and practiced creative accounting to hide their true debt from the eyes of the public, especially after Jeff Skilling was hired as CEO of the company.
Getting away with unethical and illegal behavior in a company for a longer time is not possible unless you surround yourself with people in key fiduciary positions that have as questionable moral standards as yourself. This is what Kenneth Lay and Jeff Skilling among others did to hype the stock value. The CFO of the company, Andrew Fastow, and other employees at the financial department of the firm were all gaining individual profits from these special purpose vehicles arrangements for their participation in the accounting errors. The board of directors also made arrangement with their legal advisors and employees in the auditing firm Arthur Andersen to pull the scheme off (Healy & Palepu, 2003). Cohan (2002, p. 276) points out that the whistle-blower system did not function properly in the firm either. Sherron Watkins, an executive at the company blew the whistle to the House Energy and Commerce Committee when she discovered errors in her accounting books and felt she gained no response whatsoever from the chairman of the board, Kenneth Lay. And when the accused board members and executives were questioned by authorities, many tried to keep up appearances towards employees and investors in hope to get away with the fraudulent affairs. The former CEO Jeff Skilling even testified in front of the Commerce Committee saying “This was a very large corporation. It would be impossible to know everything going on” (Cohan, 2002, p. 276) but there was too much compromising evidence showing he and the others did know much more than they admitted from the beginning. The prosecutors also were a bit lucky in getting over a dozen key individuals, among them all five former CFO’s to cooperate in the process. All in all, over twenty people were found guilty of conspiracy, fraud, money laundering and insider trading on different levels. Vinten (2002, p. 5) concluded that most were board members or top executives in Enron, their outside law firm and the auditors at Arthur Andersen.

1.1.1 Governance failures in Enron

In hindsight, Healy & Palepu (2003, p. 17) says that the deregulation was the starting point of the Enron scandal, although they do question how professional investors and other actors on the market could (or chose to) ignore the warning flags time and time again, providing the firm with more money until the very day the company announced bankruptcy. One possible reason could be herd behavior, i.e. that no investor wants to be the first to rock the boat, especially not if the stock value is high - in case they might be wrong in their expectations.

Cohan (2002, p. 277) discusses that board members are often elected for their business skills and knowledge, and are by corporate law ultimately responsible for the company. Yet none of the innocent board members questioned what was going on. They were unaware of the problem or too overconfident in their own perception of the firm’s performance until Watkins blew the whistle. Cohan continues by arguing that monitoring is one of the more important fiduciary tasks assigned to the board members to protect the shareholders from agency problems, although the impact of the Enron scandal also affected many stakeholders worldwide. Employees lost their jobs, and many more lost their pensions when the stock plummeted to junk status. Many large and prestigious pension funds like Goldman Sachs Asset Management, Barclay’s Global Investors and California Public Employees Retirement Fund had invested for years in the firm (Healy & Palepu, 2003, p. 16-17). Audit
firms in general also suffered from lack of credibility for their work after it became evident that Arthur Andersen, one of the largest audit firms in the US failed to acknowledge all the problems in Enron (Healy & Palepu, 2003, p. 12).

1.1.2 Governance reforms in the aftermath of Enron

Cohan (2002, p. 276) says: “The Enron scandal brought to light a recurring communication dysfunction within the organizational structure of the corporation itself”, and he also suggested some changes in the regulatory framework to prevent future scandals, or at least detect and correct problems before it is too late. Heath & Norman (2004, p. 247-248) takes the corporate governance failure debate even further by implementing agency and stakeholder theory into the problematization. They use the Enron case as an example of the assumption that shareholders are authorized with enough power to make sure their interest in the firm is safe in the hands of the board of directors to be undeveloped, perhaps even flawed. Shareholders are legally protected with rights by corporate law and codes of best practices to a much higher extent than any stakeholder, but we all know today the shareholders could do little or nothing to prevent or limit the damage at the time Enron went bankrupt. On the other hand, after almost every scandal or crisis we can see reformations that are striving towards increased accountability towards the owners.

We recognize that many of the following suggestions of corporate governance improvements from 2002 by Cohan in the next paragraph already have been put in action in many countries, either by law or by a voluntary corporate code but we still want to mention them here since we believe it is important to know them as reforms in the wake of Enron and other governance failures. These changes are not something taken out of the blue. They derive from real events, affecting real people. Heath & Norman (2004, p. 248) states that every single stakeholder to Enron was harmed (not just the shareholders) when the small group of senior managers and auditors conspired, stole and lied to their employees, investors and to the general public with their not at all “true and fair view” of the company’s performance.

First, an improved whistle-blower system exists today in many countries, not only in the US. Second, many reforms has strengthened the accountability of the board of directors and managers to increase shareholder protection. Third, board of directors are to make sure they have the time and skills to deal with business matters, but also to explicitly provide this information to the owners that elect them. Fourth, implementing and enforcing ethical and sustainable guidelines for the company are today considered to be more important than ever. Historically businesses have been seen as a tool for profit-maximizing only, but that is no longer true since Enron. Cohan (2002, p. 288-290) admits this will of course not prevent bad apples, but proper monitoring would discover them and reduce the risk of bad behavior to spread. Fifth, he suggests more diversification on the boards, mainly outside, independent board members to increase the monitoring of the company. He also sees these independent directors useful to balance the amount of inside directors to reduce agency problems and too much group-thinking. He even elaborates on a broader diversification on the boards with representatives from various stakeholder groups to balance the shareholder goals but acknowledge this might be problematic to implement in practice. Sixth, as one if the major problems in Enron was that many of the bosses did not approve with being
questioned and the working climate was very constrained with the only focus on profit-maximizing Cohan (2002) also believes hiring CEO’s and other leaders with people-skills is essential to improve company performance and make sure the information within the company is not blocked on any level. Humans are not rational like neoclassic theory claims, and we are not machines. People are emotional and base many of our decisions on feelings. Hence, Cohen (2002) means that a business-skilled manager with lack of people skills can be contra-productive for the company. Seventh and last lesson we have to learn from Enron according to Cohan (2002, p. 293) is the importance for companies to keep good relations to its stakeholders. People do not like scandals, unethical behavior or irresponsible social behavior and trust is easily lost, but much harder to regain.

Vinten (2002, p. 7-8) came up with similar suggestions as Cohan in his study. He emphasises a more stakeholder-friendly model instead of the narrow shareholder perspective within the business sector, and more focus on “true and fair view” along with harmonization of the regulations on global level. He also stresses the importance of proper training and education of the board members. Regarding business ethics and setting a business tone with good communication he agrees with Cohen (2002), although as a British citizen he of course finds the UK Corporate Governance system to be a little more balanced with a “healthy mix” of both non-independent and independent board members than the US system which he claims to be more outsider-oriented. Vinten also points out that he wants to see more supervisory board members elected outside the “old boys’ network”, with true independence towards the company and major shareholders.

1.1.3 A code of best practices

Within a year after the Enron collapse, the US presented the Sarbanes-Oxley Act (2002) with many of the aforementioned governance changes. In UK, the Combined Code (today called the UK Corporate governance Code by the Financial Reporting Council) was updated for publicly listed companies on London Stock Exchange and in Australia the Australian Securities Exchange (ASX) also signed a revised code that put emphasis on what is called the “best international practice”, which stresses the importance of independent (outside) directors on the boards to monitor the management, but what defines an independent director vary from country to country and stock market to stock market (Wang & Oliver, 2009, p. 196-197). Today, over 90 countries have their own domestic Corporate Governance Code listed on the webpage of European Corporate Governance Institute (ECGI).

John & Senbet (1998, p. 372-373) explain corporate governance to be a code of conduct that aims to enhance trust between the various actors on the market, not specifically just shareholders but also stakeholders. They argue that the implementation of corporate governance increases the owners’ power, but it also clearly states the limitations and responsibilities of the inside managers and board members. They also specify that the monitoring role in corporate governance is one of the key functions for non-executive board members (NED’s), and depends on three components: size and composition of the board but also on the individual board members level of independence.
Fama & Jensen (1983) was one of the first studies trying to examine the importance of good corporate governance in the business world. They explained the problem with help of the agency theory. After that others have tested corporate governance in combination with other parameters, such as board composition (de Andres & Valledado, 2008; Brenes et al. 2011), performance measurements (Baysinger & Butler, 1985; Dalton & Dalton, 2011), ownership structure (Berrone et al., 2010; McGuire et al., 2012), diversification (Lien & Li, 2013) etcetera. The list can be expanded by combinations of the aforementioned terms or applied on other areas in society such as universities for example (Henze, 2010).

1.2 Corporate governance in general

Corporate governance as a field of study is very complex since it goes into everything from a country’s political decisions, legal framework, competitive strategies on management and supervisory level within a company to individual agendas, risk preferences and trust. And to make it even more complex, the conclusions in the different studies also vary, which indicates to us the scientific field is not fully explored yet.

The definition of corporate governance varies from a very narrow shareholder-only perspective, such as “Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment.”(Shleifer & Vishny, 1997, p. 737) to very broad ones like the one used by both OECD (Organization for Economic Co-operation and Development, 2004) and EU, “Corporate governance: procedures and processes according to which an organisation is directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among the different participants in the organisation – such as the board, managers, shareholders and other stakeholders – and lays down the rules and procedures for decision-making.” (European Central Bank, 2004, p. 219).

1.2.1 Corporate governance in EU and in the Nordic countries

Back in 2003, the European Commission started a plan to improve, harmonize and modernize the corporate governance in the European Union. Over the years they have given recommendations of remuneration, the role of independent directors on the board, issues regarding the board of directors and shareholders and adapted a “comply or explain” approach to the EU Corporate Governance Framework in the latest version (NASDAQ OMX, 2011). In 2012, The Nordic Corporate Governance Group together with NASDAQ OMX in Denmark, Finland and Sweden examined how well the listed companies follow the Code and the “comply or explain” principle. Their overall impression was that companies seem to obey most of the requirements, and all presented a Corporate Governance document, but they saw a tendency of more deviation from the Code the smaller the company was. These companies were also reprimanded, which shows that the monitoring works on the stock markets. The same result was found on EU-level in a study by RiskMetrics Group (2009, p. 101), where they also pointed out that even the Codes are generally followed, there were many companies that had explanations instead of providing the recommended number of independent directors on the board, regardless of the company sizes.
1.3 Independence as a measurement of good Corporate Governance

One of the lessons from the Enron scandal, where there was too much friendship between the top managers of the corporation, their legal advisors and their auditing firm. Good friends might not monitor or question each other’s decisions as effectively as a pure independent director can do. Nor is it certain that non-independent directors share the company’s and other shareholders’ interest. As a direct result, the individual board members’ level of independence is today used as a measurement in the Corporate Code of good corporate governance practices. This information is provided by the company on an annual basis, mainly to the owners so they can assess which director they believe to be the best choice on the board. But as we recall, stakeholders were also severely affected by the fall of Enron making this information useful to anyone interested in a firm. Especially the need for providing information of non-independent (inside) directors and independent (outside) directors are emphasised (John & Senbet, 1998, p. 372-373). Tonello (2010, p. 198) and Zorn et al. (2012, p. 346) conclude that the number of independent directors on public boards have increased over time due to scandals like Enron. This can to some extent be explained by the fact that both New York Stock Exchange and NASDAQ OMX have incorporated a requirement independent directors’ presence on the listed companies’ boards (Wang & Oliver 2009, p. 167) but also on the suggestions for improvements in the governance by researchers like Cohan (2002) and Vinten (2002). Bathala & Rao (1995, p. 62) discuss this risk of reduced effectiveness of having too many outsiders on the board and as a counterbalance to “insider-outsider studies”. Zorn et al. (2012) recently presented a research about what they call “lone-insider boards”, in which they theoretically discuss the implications and that it might be counterproductive having too many independent board members to watch over one single insider from a corporate governance perspective.

Johnson et al. (2013) present not only a corporate governance study on independence. Their article is also an extensive literature review of many other studies within the management field and has covered many of the recent studies about board size, outside directors and monitoring function, compensation plans and other board characteristics that can improve firm performance and at the same time reduce risks and minimize monitoring costs. They, just like John & Senbet (1998) concluded in their study about corporate governance and board effectiveness, that there is no such thing as “one size fits all” optimal value of these characteristics.

1.4 Corporate boards of directors as social networks

The board of directors is often seen as one unit (e.g. one governing body) within the company from an outside and legal perspective since they are ultimately responsible for the firm, but they are also a mix of individuals with different knowledge, goals and their own individual social network. In other words, individuals are socially connected through their appointments on corporate boards create links between each other called interlocks. These interlocks combined establish a network, both on individual level but also between companies. Borgatti et al. (2013, p. 3) describe a social network as a way of structuring and positioning the relationship between the individuals that makes up the system, e.g. it can be used to figure out “who knows whom” or to describe something, “who is more likely to become friends thanks to mutual interests”.
Social network analysis is a technique within social sciences, which can be used as a tool to help analyzing and visualizing the interlocking directorate networks (IDNs) in order to identify the corporate elite (the biggest linkers) and the most central companies connected by these individuals (also called the “organizing pillars” in social network studies). When an individual has more than one board membership in different firms at the same time, the link that occurs is called an interlock (Mizruchi, 1996; van Veen & Kratzer, 2011). For example, a person elected to the board of directors in company A, B and C respectively has three board positions but also two interlocks. If there are two individuals with the same two board positions, this creates two interlocks between the companies in question. Some firms share more board members than others in a network system; there is a concentration of interlocked directors in these companies. Bohman (2010, p. 12-13) argues that the interlocks are “according to most theories a vital part of the board of directors”. Furthermore, he says: “To understand the behavior of the firms, one must consider the persons that make the long-term strategic decisions, by most theories of corporate governance deemed to be the board of directors.”(Bohman, 2010, p. 11)

The actors studied are usually people and organizations and groups of them both like in the sociology studies by Edling et al. (2012), Van Veen & Kratzer (2011) and Heemskerk (2013) but this type of analysis can also be applied in various other areas of research, such as biology, physics, management and other fields where graph theory, especially matrix algebra is extremely useful according to Borgatti et al. (2013). Within business environment there are many different networks. A relation between the individual and their other board positions in other companies is one type of network, and a relation between companies is another.

While studying the corporate boards through analyzing their networks has been in the focus of many researchers, the approach and different theoretical perspectives used in these studies have varied (Van Veen & Kratzer, 2011, p. 2). Kogut & Walker (2001) and Sinani et al. (2008) examined the ties between ownership and the networks, while the “varieties of capitalism” perspective was the focus of Hall & Soskice (2001) and Hall & Gingerich (2004). Van Veen & Kratzer (2011) took this line of research further by having the cross-border EU-dimension as their focus. Van Veen & Kratzer (2011) and Heemskerk (2011, 2013) had an approach to examine the corporate elite through the corporate network interlocks. Heemskerk’s research often has had the elite perspective with variations in geographical scope: The Netherlands (Heemskerk & Fennema, 2009), Europe (Heemskerk, 2011; 2013).

However, apart from Bohman (2010) and Sinani et al. (2008), there are few IDN-studies in the Nordic countries, and we found none that actually combined the network with the corporate governance independence perspective even though they recognized in the already mentioned network studies that the existence of an interlocking social network has implications on parameters in corporate governance due to for example the information channels interlocks serve as and the fact that owner structure is affected when major shareholders to a company are elected to the board of directors. Heemskerk used mainly longitudinal research design as he examined the change of the networks over time within EU, and Van Veen & Kratzer (2011) had a cross-sectional research, also on EU-level.
1.5 The Nordic co-operation

The Nordic cooperation is one of the oldest still existing intergovernmental collaborations in the world and includes not only trading but also education, welfare, health, environmental issues among much more. Any Nordic citizen can move, study or start a business within the Nordic countries without problems thanks to this old agreement (Nordic Council, 2013). This applies to any citizen in Denmark, Finland, Iceland, Norway and Sweden (plus the three autonomous regions of the Faroe Islands, the Åland islands and Greenland). The geographical proximity and long history of trading in the Nordic countries can be a possible reason for the convergence in business culture and also why these countries have similar political framework, social values and culture (Nordic Council, 2013).

1.6 Three Nordic countries are also members of the European Union

The “four freedoms” are fundamental rights for any EU-member country. That means free movement of people, products, services and capital within all the member countries (European Policy Centre, 2013). As three of the Nordic countries are part of the Nordic cooperation and the EU (Denmark, Finland and Sweden), they all have equal rights but also need to follow the same rules and regulations. A very current legislation from EU that will be implemented in all member countries during this year (2014) is the CRD IV-directive (OJ No: L176/338, 27.06.2013). CRD IV is the former Basel III-requirements for the financial sector with corporate governance rules included. Since it is an EU-directive it overrules any voluntary “comply or explain” principle used in the domestic corporate Codes. In short, this regulation limits number of board positions for board members involved in the financial sector to a maximum of 4, but it also stipulates the importance of having enough time, proper experience and independence to be on a board in such a systemic important sector. This is an example of legislative development from EU, trying to promote a high level of independence, personal responsibility and time management for each director elected to these boards, but also that a limitation of the board memberships will set boundaries to the interlocking directorates network in this systemic important sector.

Edling et al. (2012, p. 185-188) describe the Nordic countries to be small, bank-based economies with a high degree of family-, foundation- or sphere-owned businesses. The social welfare system and the public sector are extensive, but the taxes are therefore also a bit higher in comparison to the rest of the world. Sweden and Finland rely on the industrial sector, mainly mining, machine building and engineering while Denmark has been an agricultural and manufacturing country for centuries. All in all the Nordic countries are similar in many ways, even if there also are differences. The legal system and business laws are with a few exceptions harmonized. Denmark is the only of the three countries that still requires management and board members to be mostly Danish and resident in the country according to their Companies Act. Along with the internationalization and the EU-membership Edling et al. (2012, p. 188) believe this will soon change to a more foreigner-friendly environment, just like other countries already have done.

1.7 Boards of directors in the Nordic countries

The Nordic Corporate Governance Working Group (2009) describes the Corporate Governance structure in the Nordic area to be in between the one-tier system often found in
the UK and the two-tier model commonly used in the rest of Europe, however this is more closely examined in section 4.7. The Codes in the different countries are harmonized to international standards and recommends that “at least half, or a majority” (The Nordic Corporate Governance Working Group, 2009, p.8) of the board members needs to be independent of the company. It is also stated that there has to be a power separation between the supervisory Board of Directors and managers, which means that an executive manager (a CEO) cannot be chairman of the Board and vice versa. This has led to a predominance of non-executive Boards in the Nordic area, and this is particularly true for Sweden according to the RiskMetrics Group which performed a corporate governance study within the EU-countries (2009, p. 33).

Shareholders in the Nordic countries are given strong authority through the Annual General Meeting (AGM), which is the highest decision-making body of a publicly listed company. At the AGM the shareholders have the power to accept the company’s financial statement, the suggested dividends, remunerations, dismiss or elect individual board members among other things. And, since the firm itself is a legal entity with rights and liabilities, executed by the managers, these individuals are held responsible to the shareholders for how they run the business. To even further ensure to protect the shareholders, external auditors go through the listed company's bookkeeping every year. All of this is in favor of the harmonization idea, to present a true and fair view of the business to shareholders and stakeholders according to the Nordic Corporate Governance Group (2009, p.6).

Many Nordic publicly listed companies also have a clear separation between owners and managers, but some also have large shareholders (blockholders) that take more interest in the firm’s affairs than the average investor. To protect smaller shareholders and to make sure that the supervisory Board are doing their tasks it is also required for all Nordic countries to have at least two Board members that are completely independent from major shareholders. In Denmark the requirement is increased to at least half of the supervisory Board being independent (Corporate Governance Group, 2009, p. 10).

1.8 Problem discussion and research gap
In our search for an interesting but also theoretically and practically contributing research topic in the field of both corporate governance but also social network studies we realized we found no single study that has examined the aspect of the board members social business network from a corporate governance independence perspective. One could of course say that since no researcher has done that combination earlier, it might not be worth examining, but we would like to say it could be as simple as an institutional reason for this. Social network researchers explore the business network and conclude the interlocks exist between individuals and corporations, and try to explain this by giving possible reasons to this phenomenon. The vast number of corporate governance studies shows that researchers within the business field are more into finding solutions to the optimal board size, board composition and other factors that can be measured in economic values than looking at the complex network of individuals within the system.

The corporations are required to present information about each and every board member, as stated in the domestic Corporate Codes. Interlocks are a social phenomenon that has an implication on the Corporate Code but it is more implicitly pointed out with words like
“other relevant information” with comments towards other board positions or assignments that might affect the individual board member’s ability to fully commit to the company both in time but also regarding independence (Committee on Corporate Governance, 2011, p. 16; Securities Market Association, 2010, p. 10; Swedish Corporate Governance Board, 2010, p. 24-25). Interlocks have been recognized as important information to give the owners when deciding who is to be on the board of the company, if they have enough time, skills and experience. Managers (CEOs in particular) are often headhunted from one company to another for their skills, experience and social network, showing that the individual social network is important (Kronberg, 2013). And, even if the business network only is a small part of an individual’s whole network it does visualise the importance of knowing the “right people” to get a board or management position, although, according to Bohman (2010, p. 18) it is not crystal clear yet how much these interlocks actually affect firm e.g. performance and economic decisions.

Independence information about each and every board member is also a requirement in the Corporate Code, both towards the company itself but also towards major shareholders (blockholders). Independent directors have been considered important ever since the huge Enron-scandal because of their possibility to monitor the company more efficiently than an inside director ever could. We found two recurrent problem discussions in the previous independence-studies. As already mentioned, Wang & Oliver (2009) points out the definition problem regarding what an independent director actually means in different countries, since it varies from country to country. In the Corporate Codes it is usually instead stated what is not considered to be independent. The second problem was that the result regarding the optimal proportion of independent directors on the boards is not unanimously supported. Most researchers agree that it is good in general to have more outsiders than insiders (John & Senbet, 1998; Wang & Oliver, 2009), but we also found studies with the opposite conclusion in studies by Bathala & Rao (1985) and Zorn et al. (2012). They argue that too many independent directors can be contra-productive for a firm.

None of these abovementioned studies take the individual network into account from a broader perspective (the aggregated business environment), e.g. the network of connected firms that arises from the individual board members assignments on different boards within the market. A company can for obvious reasons only provide independence information about the board members towards the company itself and their known major shareholders. And even if they also need to give out other significant board positions their board members have (interlocks, network links to other companies), there is a gap between the provided information from the companies one by one and the situation on the aggregated level.

Regarding network studies we found only two peer-reviewed articles with a Scandinavian perspective (Edling et al., 2012; Sinani et al., 2008). We found no studies on a Nordic level. As one of us is from Finland and the other from Sweden this choice felt appealing to us since we both are living in Nordic countries. Heemskerk (2013) and Van Veen & Kratzer (2011) went for the European perspective, in which three of the Nordic countries are included in: Denmark, Finland and Sweden. As described earlier, EU-member countries are part of the same regulatory body, which means that would be a parameter less to consider
in our research and any decree from EU will affect the whole sample of ours since the idea of EU is harmonization between the member countries. And since Finland is not a Scandinavian country, there are no studies covering the business network there apart from the already mentioned EU-studies. That gives us a Nordic perspective, surrounded by the same EU-regulation and we get to examine and compare the independence of the most central firms and individuals within the business network by choosing Denmark, Finland and Sweden as our sample. All in all, this is a research gap we believe is worth examining from a business perspective.

1.9 Purpose and research objectives

So, to narrow down our research to a topic we can assess: the board of directors are chosen by the shareholders to run the firm in the interest of the shareholders. They are also ultimately responsible for and have the power to influence the firm’s strategic goals and decisions by law. To further aligning board members’ and managers’ interest with the owners and other stakeholders, companies are surrounded by laws and principles. Independent directors on the board are considered to be of importance in the corporate governance recommendations. So are other significant board positions (individual connections to other companies). These are to be voluntarily disclosed or explained by the companies every year.

Although the board often is referred to as one single entity, it consists of many board members that individually can have an agenda that might deviate from all stakeholders’ goal. Every single director has a business network of social contacts, especially if they are elected to more than one company’s board. These individual directors create links (interlocks) between the firms they work for, and form a social network on company level. And, since the Code only recommends the companies to provide independence information and other significant assignments one by one we ask ourselves:

*Regarding independence, what implications can individual board member’s interlocking network create on an aggregated corporate level in Denmark, Finland and Sweden?*

Hence, the scope of this thesis is to study the level of independence of the most interlocked firms and board members and relevant CEOs of publicly listed companies in Denmark, Finland and Sweden and when possible, compare with results from previous studies within the two fields of corporate governance and social network studies. By combining these two areas we will be able to find out if the independence is provided in a fashion that benefits everyone who is interested in the business market in the Nordic area, i.e. from a best corporate governance and harmonization perspectives.

In order to be able to answer our research question, we are forming three objectives that will help us:

1. We will start by **analysing the interlocking directorates** network in Denmark, Finland and Sweden by trying to answer:

   a) How does the interlocking directorates network look like (visually)?
b) Which country has the most dense corporate interlocking directorates network within our sample, and how do our results relate to previous network studies?

c) How involved are the most central directors with the most central companies, and does this have implications?

2. We will then analyse the level of independence on corporate boards in Denmark, Finland and Sweden by trying to answer questions such as:

a) Do the firms provide the independence information according to the rules in the domestic Code, and if not: is it explained?

b) Is the corporate disclosure of independence harmonized between the three countries?

c) Does the companies’ disclosure provide a “true and fair view” of their board member’s independence in comparison to the intentions in rules and codes?

3. Last but not least, we will combine the knowledge we have from the analysis of independence and interlocking networks in order to answer the research question.

Because of the aforementioned knowledge gap, especially regarding Finland, we are aiming for a theoretical contribution that provides more detailed information about how independence and interlocking directorates network are linked to each other in the three Nordic EU-countries Denmark, Finland and Sweden. On a practical level, we believe this can be of use to legislators and investors in the three countries, but also serve as a starting point for researchers that would like to continue studying corporate governance within the context of social networks.

1.9.1 Perspective

We have chosen to take an outside perspective in this study, especially that of the government regulators since corporate governance is considered to be a “soft law” and the Code is designed to give reliable and trustworthy information about the company, while we recognize that companies do not work in solitude. We can also see use for our study as information to stakeholders as the Code is supposed to be a guideline for the company to voluntarily give out trustworthy and accurate information to shareholders and other stakeholders. Our research might also be of interest for analysts, researchers and others interested in the field of corporate governance and/or social network studies since there is a gap between these two fields of research we are aiming to highlight with this paper. However, even from this chosen outside perspective of ours, the paper might also be of interest to inside directors and managers that are within this environment.

1.10 Delimitations

- This study is only about the three Nordic EU-member countries; Denmark, Finland and Sweden. Although Norway and Iceland are members of the Nordic Cooperation, they are not members of the European Union and therefore not required
to obey any judicial legislation from the EU so we decided to exclude them from this paper.

- Private limited companies are excluded from our study even if they have to obey the same rules as public limited companies. Public companies with headquarters outside the selected geographical areas of Denmark, Finland and Sweden are also excluded since they have different legal framework to settle litigations under, different accounting standards and corporate code.

- We are only studying and collecting information on the individuals of the supervisory board of directors and CEO that have interlocks within our sample. Hence, other executive directors and employee representatives (that neither are unlikely to have interlocks to other companies due to full-time jobs at the corporation nor can be considered to be independent) are for this reason excluded.

- While the social and business networks of board members and general managers (CEOs) obviously include many other types of connections and affiliations apart from their board connections, we decided to delimit the scope of this study to only include the networks related to their board and CEO connections due to availability of objective data within the time frame.
2. Theoretical methodology

In this chapter we will present our theoretical and practical preconception and argue for our chosen problematization. We will also explain why we have chosen to do a quantitative study with the eyes of a critical realist, choose a deductive approach and our decision to conduct this study from an outside perspective. Last but not least, a critical review of our literature search and source criticism along with ethical considerations will be highlighted.

2.1 Choice of subject and preconceptions

According to Bryman & Bell (2011, p. 29-31; p. 718), reflexivity is a concept referring to factors such as researchers’ methods, values, biases and previous experience which are likely to have an impact on the knowledge they generate. The impact is on both: how and what the individual sees while conducting research. Therefore we want to shed some light on our backgrounds in order allow the reader to evaluate the possible impact we as researchers can have on the study.

Writing a degree project gives the author free hands to dig into something interesting in a scientific way, plan and do the research within a time frame and then present your findings. It can be something you have already learned that you want to find out more about, or something completely different that you may have little knowledge of before you start. We ended up with a little bit of both worlds. One of us is from Finland while the other is from Sweden, and the language we both are fluent in is English. We also both understand Danish, at least enough to assess legal documents and reports in Danish. The two of us have the same basic business background, although the master courses are in different areas. One is going for a degree in finance and the other one has an emphasis on marketing and management. After a lot of brainstorming we found something that interested us both and realized we could combine and learn from each other while we did this project, since one has taken courses in international universities in corporate governance and social network analysis within business context, and the other has taken courses in corporate governance at the university in Umeå. We believe that our several years of studies within business administration provide us with enough experience and critical awareness in order to try to maintain a scientific mindset while conducting this study. Feedback from our supervisor, fellow students, friends and relatives familiar with academic research also has for its part has also been of assistance to us to avoid subjectivity during the process. Having said all this, we acknowledge that totally value free research is somewhat impossible within a field such as business and management with a social science orientation, but that we recognize the problem and try to act in a scientific manner to stay neutral.

We also want to highlight that we will consistently use “we” instead of “the authors” throughout this paper to make a clear distinction of what are our thoughts and interpretations and those of others.

2.2 Research Philosophy

Saunders et al. (2012, p. 680) say that research philosophy concerns the way the researchers look upon the world and what they consider to be knowledge. Research philosophy is important in guiding us to the choice of the research method as it helps the researcher to frame their world view and explains how the social reality should be studied.
The discussion of research philosophy is often (Saunders et al., 2012; Bryman & Bell, 2011) divided into two major ways of thinking: ontology and epistemology, each highlighting differences influencing the researcher’s view about the research process (Saunders et al., 2012, p. 129).

2.2.1 Ontology

It may be easiest to grasp the concept of ontology by asking questions like Blaikie does in his Approaches to Social Enquiry (1993): “What is, what it looks like, what units make it up and how these units interact with each other?” Are the patterns and structures we perceive as real only part of our own imagination, or are they part of a bigger, objective reality? For practical and time-saving reasons, it has been beneficial that both of us authors share a similar view on the world as we see it as an objective reality itself, and not as a reality that is only true behind a filter, the perception. The drawback is that we might have missed out on a synergy effect that could have improved the quality of the thesis if we had different views.

According to Bryman & Bell (2011, p. 20), ontological considerations are concerned with questions about the nature of social entities; if they really have an objective reality regardless of the social actors, or if the reality is constructed by the perceptions and actions of the social actors. These contradicting stances are objectivism and constructionism. Saunders et al. (2012, p. 131-132) define the objectivist view as the reality occurring independently of the units who live in it and argue that a constructivist view as the reality only exists because we experience it, although they refer to it as subjectivism. Furthermore, Nightingale & Cromby (1999, p. 209) use the term realism when they talk about objectivism, which becomes clear as they define the perspective of realism as “the doctrine that the external world exists independently of our representations of it”.

One can of course argue that interlocking directorate networks are a social phenomenon and depend on the individual board members, which would point us in the direction of a constructivist view in the network part of the study. However, we consider the companies in our sample as objective entities where the board of directors in each company have similar job descriptions prescribing their duties and responsibilities according to domestic rules and regulations. Saunders et al. (2009, p. 110) say that “this [objective] view emphasises the structural aspects of management and assumes that management is similar in all organisations”, which is in line with our thinking for this study.

We want to look at the level of independence in an aggregated business network context, and we consider the board functions being very similar in different companies and can be objectively measured, without it depending much on the individuals themselves. Therefore, we argue that adopting an objectivist standpoint over constructivist is suitable for our purpose. However, as follows in our epistemological considerations next, we cannot act in full from the objectivistic viewpoint.

2.2.2 Epistemology

When we ask ourselves what reality really is, we need to decide upon what knowledge is within the field of study and how that reality should be measured (Saunders et al. 2012, p.
A central epistemological consideration deals with whether social world can and should be studied in the same fashion and by using the same approach as in the natural sciences.

Bryman & Bell consider positivism and interpretivism as the two contrasting categories for describing epistemological approaches to a research (2011, p. 15-16), while Saunders et al. go even further by dividing the epistemology into four different categories: positivism, interpretivism, realism and pragmatism (2012, p. 134-137).

Positivism entails the natural science approach to knowledge, described by Bryman & Bell as “the application of methods of the natural sciences to the study of social reality and beyond” (2011, p. 15). A scientist with a positivistic philosophy will only accept what we can experience with our senses as phenomena worth studying, and the research is preferably based on facts with as few personal opinions as possible. You find many natural scientists within this area of research testing hypotheses or running statistical analyses of data in search for generalizations, patterns and structures (Saunders et al., 2012, p. 134-135). A researcher assumes an objective position in order to avoid affecting or being affected by the subject of the study (Saunders et al., 2009, p. 114), or in other words by Bryman & Bell, 2011, p. 15), the researcher takes a stance of conducting study in a value-free, objective way. MacKenzie narrows positivism down as: “there is a single reality independent of human beings” (2011, p. 534) and induce that in social questions the methods of the natural sciences should be adopted. On the other hand, it should be mentioned that these interpretations or views of positivism have also been questioned. Bhaskar (2008, p. 13), for instance, argues that “real structures exist independently of and are often out of phase with the actual patterns of events”.

The opposite is the interpretivist philosophy, in which trying to understand social actors is the focus. Interpretivism derives from the subjective ontology, where we all are a part of a socially constructed reality that is in constant change according to Saunders et al. (2012, p. 137-138). Bryman & Bell (2011, p. 16-17) also raises a critical standpoint towards applying natural scientific model within social context because of the fundamental difference between the subject matters of natural and social sciences.

The realistic philosophy could be seen somewhat in between positivism and interpretivism. It has the features of positivism and natural science in the sense that it is objective and tries to find generalizations but interprets the findings in a social context, which is a feature from interpretivism. Saunders et al. (2012, p. 136-137) divides realism into two contrasting practices. Direct realism draws conclusions from their senses, no more and no less. Errors and anomalies are taken for inaccuracies in sensations or data. To them, that is true knowledge. The other category of realism is called critical realism. Critical realists focus on putting the conclusions within a social context, that instead of experiencing things directly, we experience sensations, and recognize anomalies as misinterpretations from our senses.

There would be also a philosophical ‘middle way’, called pragmatism. According to Saunders et al. (2012, p. 130), pragmatic scientist accepts both objective and subjective phenomena to be acceptable knowledge). This type of research also uses different types of research methods and different perspectives, depending on the research question. The goal
is to gain more knowledge, and the used approach and philosophy are of lesser importance compared to the importance of the research question. However, this does not mean that pragmatic scientists conduct haphazard studies. They believe that one single study cannot cover the whole picture and show the whole reality, since there might be multiple truths and as many ways of conducting research in the hunt for knowledge. Although our epistemological approach could be pragmatist since we cannot all the time act in full from our ontological standpoint of objectivism, we still consider the philosophy and approach to be the most important determinants in a thesis like this. As objectivity is our major ontological standpoint, we rule out the pragmatic position from our options.

Based on our view on the world, we are in the opinion that objective data is more accurate knowledge. Such studies can also be replicated with the same data and any researcher will get the same result over and over without being dependant on time, situation or personal opinions, and therefore our research question require quantitative methods, i.e. calculating the independencies and number of interlocks on different levels while also capturing some other parameters. That speaks for a positivistic stance over an interpretivist one.

However, we recognize that board members are appointed through i.a. business relations, which are social networks occurring between social actors, and therefore also are in constant change over time. We also acknowledge that the business dimension is only part of an individual’s larger network, and the individual board members will be influenced by their other networks, which would in this case be difficult to capture without qualitative methods and goes beyond our scope. On the other hand, the interlocking directorates network is very transparent and easy accessed thanks to the current corporate governance principles, and the disclosed information is controlled by investors, media and others interested in the company performance that makes it more reliable and trustworthy to us. We see our approach being is in line with the realist school, which May (2001, p. 81) expresses to be “characterized as taking official statistics to be objective indicators of the phenomena to which they refer”.

Considering the abovementioned epistemological discussion and adding the critical realist’s position of our reality being a result of social conditioning and being impossible to understand separately from the social actors involved to it, as we interpret Robson (2002, p. 35), we expect that by adopting more of a realist philosophy we will be able to find structures in a social context we most likely would miss out on with a totally objectivist stance where hypotheses are only rejected or accepted. Therefore, we choose a critical realist philosophy as our epistemological standpoint, as according to Saunders et al. (2012, p. 136-137) we still will be able to find knowledge that is objective and can be replicated but we are aware of the fact that business networks do not occur in solitude and is more complex than any objective research can fully capture.

2.3 Scientific approach

Now that we have determined our philosophical standpoint, we can continue by designating our research approach. The concept of research approach covers the relationship between research and theory and will help us to determine which methods should be used to gain knowledge in the study, i.e. what research design to use.
Saunders et al. (2012, p. 144-148) divide the research approach into three common sections. When going from theory to solve the question in a structured way with questions or hypothesis testing, a deductive approach is used. With this kind of approach you are trying contribute to strengthen existing theories with your study, and the possibility to generalize the findings is higher. The opposite approach is the inductive, where you observe a phenomenon and try to gain more understanding and possibly develop new theories. Hence, it is not certain you can develop theories with just one study. Often more research is needed to strengthen your findings, but generalization is possible to some extent. A third approach is called abductive, and it is the case when you are moving back and forth between inductive and deductive methods and procedures to gain more knowledge, i.e. interesting findings during the study. Which approach is considered to be the best depends on what kind of study is undertaken, and how much time you have at hand, and of course if you find “surprises” you did not even know of beforehand. Generally, inductive studies can be more time-consuming than deductive ones since they are often conducted with interviews, and to use a combination of the both approaches is even more extensive. Although, the benefits can be rewarding.

Instead of attempting to generate new theories through inductive approach, in this study we believe that we can develop a better understanding of our subject through studying related literature, and therefore we can formulate a research question which, after being answered, could lead to findings for strengthening and testing the existing theories, We will therefore conduct this study in a deductive manner. Bryman & Bell (2011, p. 27) associate deductive approach mostly to quantitative research strategy, to positivism as the epistemological orientation and to objectivism as the ontological orientation, while the inductive approach they associate to qualitative strategy, to interpretivist epistemological orientation and to constructionist ontological orientation. This further strengthens our decision on deductive approach, as our abovementioned philosophical orientation being mainly objectivist and our epistemological approach being critical realist, which according to Bryman & Bell (2011, p. 16) is closer to objectivism than constructionism.

2.4 Research strategy

In scientific research, research strategy establishes how the research is conducted, and is generally divided into two main categories: quantitative and qualitative strategies, augmented by a combination of these: mixed methods (Bryman & Bell, 2011, p. 26; Creswell, 2003; Edmonds & Kennedy, 2013).

It is considered that quantitative research employs measurement, usually emphasizes deductive approach, views the reality as external and objective and follows the natural scientific practices (Bryman & Bell, 2011, p. 27), cause and effect thinking, employs experiments and surveys with preference on quantifiable, statistically applicable data (Creswell, 2003, p. 18), or simply put: quantitative deals with numerical data (Babbie, 2004, p. 26). On the other hand, qualitative research is much of the opposite: it predominantly entails inductive approach, views the reality as constantly shifting and being interpreted by individuals themselves (Bryman & Bell, 2011, p. 27), employing “open-ended, emerging data with the primary intent of developing themes from the data” (Creswell, 2003, p. 18) or: qualitative research deals with nonnumerical data (Babbie, 2004, p. 26).
Because of our epistemological belief in the applicability of natural science in this study, and the above reasoning for our deductive approach, we can say that we believe in statistically applicable data, and that it will be an appropriate way for identifying large networks and for producing meaningful results about independencies. Therefore, we decide to use a quantitative strategy. This strategy entails that we will collect mainly numerical data, which is then processed in statistical software in order to provide us with the data needed to answer our research question and to meet our research purpose.

Saunders et al. (2009, p. 141-151) list seven different strategies for conducting a business research: experiment, survey, case study, action research, grounded theory, ethnography and archival research.

Because of our choice of using quantitative and statistically applicable data, and taking our research question, philosophical standpoints and the scope of the study into consideration, we immediately were able to rule out others except survey and archival research. While survey strategy would enable us to collect “a large amount of data from a sizeable population in a highly economical way” (Saunders et al., 2009, p. 144), one of the first problems we would encounter with that strategy in a study encompassing a social network of directors on large publicly listed firms, is gaining access and consent from the individuals and corporations we wanted to focus on in the three countries. This would be both rewarding as it would be primary data we collect, but it would also be very time-consuming and require a lot of double-checking. Moreover, while surveys often are good for making general assumptions of the whole population we will not be able to do for instance regressions outside of the network sample in question, no matter what strategy we choose (see chapter 3 for further explanation regarding limitations in social network studies).

When we considered more specifically our strategy for obtaining the reliable and especially objective data, we were convinced that the most appropriate strategy for our study is archival research (Saunders et al. 2009, p. 150), in which the principal source of data are administrative records and documents, originally collected for another purpose. We knew that corporate annual reports would provide us with the quantitative data for our purposes, and decision to use it was easy when we considered the following advantages of using secondary data described by Saunders et al. (2012, p. 317-318). First, saving in resources means that we are able to collect a rather large database to ensure reliability and conclusiveness of data. Second, it is an unobtrusive way of collecting data of individuals. Third, the collection of data is rather time-efficient as the data is readily available on the companies’ websites, thus enabling us to allocate more time for other parts of the thesis. Fourth, the data provided by the companies is directly comparable within itself because of the reporting standards in the legislation. Fifth, generating a database of our own is useful for including only the parameters we considered relevant for this study and for avoiding collecting irrelevant data. Sixth, the data is easily checked by others because of its public nature and permanence.

Saunders et al. (2009, p. 270-272) also provide disadvantages secondary data may bring, such as: data may be collected for a purpose not matching one’s needs, difficulty or cost of
access and lack of control over data quality. However, as we from our previous experience know, we would expect annual reports (that we are planning to use) to provide us with secondary data that will match our requirements reasonably well, and also to be cost-effective to collect. We also believe that the quality of the secondary data will be consistent and comparable because of the requirements imposed on its disclosure (see chapter 3), so we have a good reason to think that we will generally be able to avoid these disadvantages.

2.5 Research design

Saunders et al. (2009, p. 139-141) categorize the nature of different research designs into three categories: descriptive, explanatory and exploratory.

Simple questions of what, where, when, and how are answered by descriptive studies, and they are “typically more accurate and precise than the casual ones” (Babbie, 2004, p.89). Descriptive study is very important in providing a clear picture of a phenomenon, a situation or an event but the drawback of its accuracy is that it may not really lead the research to any conclusions in the end. However, it may be very useful as a piece of or an extension to exploratory and explanatory studies (Saunders et al. (2009, p. 140).

Explanatory studies have an emphasis on investigating situations or problems in order to establish causal relationships and explain patterns in the research in question. This design answers the question “why” as the emphasis is on explanation between variables (Saunders et al. (2009, p. 140). According to Robson (2004, p. 59-60), explanatory studies seek explanations of problems and situations and often, but not necessarily, as a causal relationship.

Exploratory studies generally discover “what is happening and gain insights about a topic of interest” (Saunders et al., 2009, p. 139). Literature appears to somewhat agree that this design is useful when a researcher wants to familiarize with a new topic, and also when the subject of the study itself can be considered as relatively new (Babbie, 2004; Robson, 2002; Saunders et al., 2009). Most typically exploratory study is done “to satisfy the researcher’s curiosity for better understanding, to test the feasibility of undertaking a more extensive study, and to develop the methods to be employed in any subsequent study” (Babbie, 2004, p. 87-88). Babbie continues that in social scientific research, this design is quite valuable, and it is essential for breaking new ground, as they “almost always yield new insights into a topic for research” A major shortcoming, however, is that instead of providing definitive answers to research questions, often this design rather hints at the answer or suggests methods for achieving answer (Babbie, 2004, p. 89).

As mentioned before, in this paper we are studying subjects in the chosen geographical area that are relatively new, and we are also trying to lay basic groundwork for studies in this field. Considering the formulation of our research purpose and questions, and on the other hand these options for research designs, it seems very clear that the most suitable design for this study is the exploratory one. However, even though the focus is on the exploratory aspect, there is an important descriptive dimension to it as first we need to establish an accurate picture of the subject under investigation.
2.6 Time horizon
As the time dimension of the study, we considered the options of longitudinality and cross-sectionality (Saunders et al., 2009, p. 155). Although Bryman & Bell (2011, p. 53) call cross-sectionality as a research design itself, we lean more towards the Saunders et al. and Babbie (2004, p. 101-102), who consider it more as the time horizon of a study. According to these authors, longitudinality involves the collection of same set of data at different points in time, in order to capture change and development. Cross-sectional studies, on the other hand, are based on observations at a single point in time.

Considering the longitudinal time horizon, we thought it could make sense in this study for the network part in order to make comparisons over the years and e.g. identify trends in the networks. However, the corporate boards and Corporate Codes are in constant flux, and capturing the changes on the corporate governance side could turn out to be difficult to assess because of this. Adding an independence analysis on top of a social network study, which is extensive to its nature as it is, from more than one point in time without having a previous set of data was not doable within the scope of this study. Combined this with the exploratory design of our study due to the existing research gap, we decided that a cross-sectional time horizon would be the most suitable for us to capture the current situation.

2.7 Literature and data sources
Saunders et al. (2009, p. 75) describe literature search to be a time-consuming but also very important part of any research. Going through previous research within the field gives the researcher a chance to identify research gaps and avoid repetition but can also help when choosing between scientific methods or revising the initial research question.

Initially we started with a more general, improvised search online with broader search terms to get basic information on what has been presented within network studies and corporate governance, but also to find relevant newspaper articles. We realized quite soon that the field of corporate governance was well covered from a business perspective, while we had difficulties finding reports covering social networks so we had to re-examine study notes and handouts from the course one of us had taken at a German university to come up with possible search words. This experience is not uncommon for students according to Saunders et al. (2009, p. 75-76) since proper search words are essential when looking for information in scientific databases. This second time we were luckier, although it is worth mentioning that the narrow nature of the field of studies within social networks, and especially interlocking directorates network studies, gave us relatively few sources and key researchers that focused on either power concentration (an elite) or on ownership structure of companies. We also read a few books about corporate elite and the main reasons behind forming laws or principles on corporate governance that gave us a good overview. This background is mainly covered in the first chapter of our thesis. We also got many good ideas, questions and helpful advice from our supervisor and other students participating during work-in-progress seminars too.

When we both felt we had the necessary background knowledge of both scientific fields to form a research purpose from the found research gap between the voluntary disclosure of individual level of independence recommended by the Codes and the existence of an interlocking network connecting firms, we refined our search with suitable key words and
conducted a thorough literature search by using the following keywords and combinations of them:

corporate governance
independence
board of directors
independent director
inside/outside director
interlocking directorates network
corporate interlocks
interorganizational relations
corporate elite
board independence

We used mainly scientific article databases we could access via the Umeå University library search engine “Primo”, such as Business Source Premier (EBSCO), Emerald Journals and Google Scholar but also DiVA, an institutional repository for research publication and student theses. The scientific articles employed for establishing the theoretical framework have been published in academic journals and are therefore peer-reviewed. We have also found some additional articles through the references in important key authors’ articles. Other sources including legal framework in the different countries has also been implemented.

Regarding the comparison of independence between the countries, it became evident that disclosure of this data was not harmonized. Therefore, we needed to find another scientific method to deal with the problem. We returned a third time to literature search and conducted further searches by combining the previous key terms with the following keywords:

theory
inside outside
grey directorship

All the articles we have used in this paper are peer-reviewed, primary sources except for one. Mizruchi (1992) is a book referred in the doctoral thesis by Bohman (2010, p. 11). The book was not available to us, but as we regard Mizruchi to be one of the key authors within social network studies and we use other papers by this author, we decided to use this one secondary reference.

We employed secondary sources of data in this study. According to Saunders et al. (2012, p. 304) using secondary data means employing data collected for other than research purposes, and in this case it had been collected by the companies for administrative (in addition to their own) purposes and to meet legal requirements. The data was collected from the digital annual reports of the sample companies (from companies’ own websites) and double-checked this information with AMADEUS (2013) database, which is a “database of comparable financial information for public and private companies across Europe”, compiled by Bureau van Dijk. This specific database is even recommended by
Saunders et al. (2012, p. 306), and it is also available from the Umeå University library subscription so we consider it to be trustworthy enough for our purposes. The data was then compiled and converted into a suitable database by us for analysis. We consider the annual reports as a reliable source of data as the information provided in them is scrutinized by the companies themselves, surveilled by NASDAQ OMX and, due to regulation on publicly listed companies, also monitored by independent auditors. In addition to legal requirements, the publicly listed companies have a reason to be precise and honest in the published information to their stakeholders. The auditors are independent companies share the same reason for their reliability and trustworthiness.

NASDAQ OMX stock exchange website was used as the source for information such as stock prices, company sectors and size segmentation. For all the same abovementioned reasons we consider also data provided by them reliable. Laws, rules and principles were taken from government homepage and other primary sources to maintain quality, validity and reliability throughout the process.

2.8 Source criticism

Even if we try to ensure the quality of this paper by using only sources we consider to be accurate and reliable, there is reason to critically examine them. Ejvegård (2009, p. 72-73) states four requirements that has to be taken into consideration: authentication (swe: äkthet), independency (swe: oberoende), freshness (swe: tendensfrihet) and timed relationship (swe: tidssamband).

The authentication requirement is according to Ejvegård (2009, p. 71) to make sure the sources used are indeed from the original author. We have chosen to use many sources but also course literature and handouts to minimize errors, misinterpretations and plagiarism. Ejvegård (2009) also says that scientific reports are mainly peer-reviewed, which means they have been reviewed and approved by others with extensive knowledge in the field which increases the credibility of them. Bohman’s paper is a doctoral dissertation we found in DiVa, and they are scrutinized by other opponents with knowledge in the field before they are accepted in the DiVA archive. We have also taken citations from these articles into account when deciding upon the importance of them, although that can be somewhat misleading since there are other factors that might be of higher importance to decide if a source should be used or not.

Literature search is often extensive so there is often no problem finding enough material, but it concerns more to evaluate their origin and level of importance. This is what the independence requirement is about (Ejvegård, 2009, p. 71). We have tried to go back to the original articles whenever possible to minimize errors and possible misinterpretations from secondary sources, although we recognize we are using the information from the companies’ annual reports and corporate governance documents for our main source for data collection even if they are secondary sources to us. We believe them to be accurate enough for our purposes, i.e. creating a database of our own, since the companies are required to give out this information and it is monitored by the stock markets and independent auditors aside from the general public that also has access to the information. The news articles are included as examples of corporate governance trust issues from real life and should be regarded as examples, not as of specific importance to the thesis. And
last but not least, we have used several research based research methodology books, theory books and course material from our previous courses.

Freshness is about an evaluation of the age of the sources. Newer sources, such as recent scientific articles are often regarded to be of greater importance and provide more recent information within the field making older sources out of date according to Ejvegård (2009, p. 71-73). On the other hand, Johansson-Lindfors (1993, p. 89) criticise the tendency to rule out and replace older sources with newer for only the reason they are older, without assessing the quality of the newer source actually being more accurate. We are using some older theories and sources in this thesis. For example, agency theory is from 1932 but it is still used as the foundation in the corporate governance codes in both Finland and Sweden which makes it as important to us as it was when it was first published. We also use some older network articles from the 1990s and 2000s, for two reasons: First, there don’t exist that many social network studies to choose from since it is a narrow field of study and the second reason is that these few researchers still are working in this field today making them more relevant than ever since their work is based on years of experience. We have tried to use as much new relevant sources as possible, since within corporate governance the Codes are under constant revision and for the network comparisons we chose to focus mostly on two studies by van Veen & Kratzer (2011) and Heemskerk (2013) where the three countries of our study also are included in.

Timed relationship means that the literature should be interpreted in the context of the time period they were written compared to when the event it describes happened. The better correlation in time between the event and the publication of the source, the more the source can be considered to capture the correct circumstances and vice versa. A source that is written years, or even decades after an event might be distorted and important factors can be neglected, making the source less reliable.

Last but not least, we are using many different sources that originates from different countries. Even if one of us is a native Finn and the other a native Swede and we both understand Danish pretty well we are writing this thesis in English, which is a language we both are fluent in but we have to consider there might be minor translation errors between the languages.

2.9 Axiology

Axiology is the philosophical study of value, and in a scientific study it covers the researchers own aesthetic and ethical values. The choice of topic is a sign of your values since it was the choice that won over other interesting topics. And the way you choose to collect data and undertake your research to make it reliable or trustworthy is another. A third one is that any conclusions and findings always are what the researcher believes to be of significant matter (Saunders et al., 2012, p. 137-139).

Studying companies and the board of directors is not an uncommon topic for business students or researchers in the field, but more and more ordinary people also invest their money in stocks and bonds aside from regular savings at the bank today. You cannot open a newspaper without headline of present business information and many of them also provide a specific business section including what they present to be good investment advices.
Anything interesting to the general public also becomes important to the government and the legislative body of countries, and with the harmonization idea in not just accounting and auditing but also corporate governance and other rules surrounding the companies that is changing over time.

The combination of measuring independence of individuals that was on many of the publicly listed boards was a decision that grew over time, especially since there is to our knowledge no one that has presented this aggregated information already. And, since we both like to learn and deal with difficulties, we thought doing a scientific study in an unexplored area would benefit both us and others (both theoretically and practically) more than repeating something old and already tested. Of course, testing theories are of course also important, but to us a chance to explore something new was a far more intriguing topic than any other idea we came up with while brainstorming.

Regarding our study focus we cannot go for a deeper understanding without a broader knowledge first. And to our knowledge there is no such study combining the individual director’s independence and network with the aggregated market of corporations. That made our choice to go for an exploratory, quantitative study fairly easy. The third part of the axiology that matters according to Saunders et al. (2012, p. 137-139) our own conclusions and findings we will point out to be important, will therefore be tinged by our chosen topic and our naturalistic way of looking at the world.

2.9.1 Ethical considerations
The ethical considerations covers how the researcher has carried out their philosophical values (the axiology) in practice. A scientific study should contribute to knowledge in a scholarly manner, with logical methods that lead to reasonable conclusions. The methods vary depending on the type of questions asked, but they always have the reasoning and techniques of good science in common. For example, it is not ethical to tamper with the data or ignore parts of scientific methods in ways to get the results you wished for. Many studies involve interaction with people. If we had interviewed people about their links to other companies and private social networks, and asked for personal information such as religious beliefs and moral standpoints we would have had many ethical considerations, i.e. to make sure we do not harm or misinterpret what the person meant or misuse their information for other purposes and conclusions (Research Council, 2013).

The same would be with a qualitative method such as a survey. A person filling out a form has the same right as an interviewee to decide if they want to willingly participate after they have been informed about the use of the study and if they want to remain anonymous that is to be respected. In surveys the anonymity and confidentiality is easy to accomplish, but with interviews the researcher has to make sure that no one outside the study can gain access to the information or recognize the individual. On the other hand you have the possibility to re-interview a subject and gain deeper information or make sure you understood what they meant (Saunders et al., 2012, p. 210-213). Although, qualitative studies with no interaction at all with people require that the researchers have the very same ethical mindset as in other studies. The Swedish Higher Education Act (SFS 1992:1434, § 5) also states that research problems and scientific studies on higher levels “shall support a
sustainable development that creates a good, healthy environment for this and future
generations, economic and social welfare and justice”.

A totally external research like we are conducting has the benefits of the legal framework
that emphasises the listed companies to render the information in public which makes it
easy for us to get access to publicly listed corporate information and thanks to the
University’s subscription to Amadeus database we can easily double-check the accuracy of
most of the information. The flipside is that the rules and regulations also set boundaries
regarding how much information we actually can collect and use from these sources
(Saunders et al., 2012, p. 213-214). Yet we are convinced that we will be able to find the
information needed to answer our research questions in full with this outsider-method.

We want to of provide objective and trustworthy information of the current situation of the
boards in the three countries, especially to legislators but also to other outside stakeholders.
In order to achieve objectiveness, we try to employ scientific methods used by other
researchers in this field, which will be discussed in detail further in the practical
methodology chapter. Meeting our research objectives involves collecting personal, albeit
public data, required being available by regulations. It should be emphasized that all the
data we collect of the individuals is publicly available because of their professional
positions in companies, i.e. on this professional side of their lives they do not enjoy quite
the same level of privacy as private persons, and at recruitment they implicitly have
accepted this. Our quantitative approach for obtaining the info through the annual reports
and AMADEUS allows the collection of these personal parameters of individuals in a
sensitive and accurate manner. Because of the nature of this study, and specifically because
of the use of social network research, retaining the anonymity of the individuals is not
possible (Borgatti et al., 2013, p. 40), nor do we find it necessary. Even if they as
individuals could be very interesting to study, our focus is to compare the level of
independence on the business network (between the firms) in this study. Furthermore, the
data will only be used for this research purpose by us. Moreover, the decision on collecting
the data mainly from secondary sources provides us with an unobtrusive (Saunders et al.,
2012, p. 318) method for acquiring it, as already mentioned earlier.
3. The practical method

This chapter provides the practical steps conducted in the sample selection and the data collection phases, in order to demonstrate how we arrived with the empirical evidence that will be presented later. Due to the relatively simple nature of collecting and analyzing the data about the independencies, a major part of this chapter deals with the questions on the network-part of this study.

3.1 Population and sample choice

In this study we decided to examine the corporate boards, their independence and the social network through analysis of IDNs in Denmark, Finland and Sweden. Therefore, the population of this study is all companies in these countries. There were several reasons for choosing these three countries. First and foremostly, this is area where the authors have spent the majority of their lives and therefore have a special interest of. Second, the Nordic history and cooperation make this geographical area cohesive and us to expect relatively similar corporate structures and corporate governance codes among companies enabling relatively accurate comparisons. Third, these three countries are the only EU-countries in the Nordic area and therefore in many corporate governance aspects we could expect if not similar, at least convergent corporate governance Codes. Fourth, these countries were included both in Veen & Kratzer (2011) and Heemskerk (2013) social network studies, enabling comparisons to those. Fifth, although there is a vast number of corporate governance studies with focus on the optimal amount of independent directors (Bathala & Rao, 1985; John & Senbet, 1998; Johnson et al., 2013; Tonello, 2010; Wang & Oliver, 2009; Zorn, 2012) the researchers have not reached consensus in this matter.

Through a network analysis of our data we can capture the interpersonal and intercorporate network properties and characteristics and then combine that with measurements from a corporate governance perspective. Further analysis of the real-world causes and consequences of the interlocking directorate networks, such as their role as information carriers etc. go beyond the scope of this thesis.

The population choice was followed by a decision about the choice of suitable samples and their sizes. Due to reasons of data accessibility and availability, we decided to conduct the study on publicly listed companies, as for example private companies often follow different company code on information disclosure and provide less information publicly. The availability of data has also been one of the reasons for example for Van Veen & Kratzer (2011, p. 9) and Heemskerk (2013, p. 79) to conduct their studies on publicly listed companies. For measuring the independence, it seemed quite clear that the largest and therefore the most important companies are the choice. On the network side, some consideration was needed. Heemskerk (2013, p. 78-79) says that it is still a matter of debate in the field, if a stratified sample of firms or the largest stock listed firms should be in focus of the researchers. Bohman (2010, p. 18) takes a slightly different perspective, and omitting the idea of using a stratified sample, discusses this question by calling it as the boundary problem. He introduces two well-established boundary definitions within this field: either selecting an “arbitrary number of largest firms according to the Fortune 500 or some equivalent list” or including “all publicly traded firms in a country or all firms traded on a particular stock exchange”.

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In small markets like the Nordic countries, using a stratified sample might cause biases towards smaller firms in different strata. Selecting all listed firms would be too time-consuming for this study. Furthermore, in order to be able to meet our research objectives and to find the most central and influential individuals and companies, we think it is reasonable to concentrate to examine the largest companies in the market. Therefore, we decided to choose an arbitrary number of the largest companies from each market that we could be able to deal within the given predetermined time frame for this thesis, and ended up with 50 companies from each market.

The next question to solve was to determine the most suitable parameter to use when ranking companies in order by size for establishing the population. Typical ways are the number of employees, revenue or market capitalization. Using the number of employees is somewhat biased towards labour-intensive industries, and did not really seem suitable for the purpose of this paper. Using revenue turned out to be problematic: banks and insurance companies generally publish their financial information in different metrics than other companies. AMADEUS also lacks the data of banks, probably for the same reasons and therefore the ranking of companies by revenue could have omitted such financial sector firms. However, as banks are often central actors in economies and due to historical reasons, we expected especially banks to be very central firms, especially regarding the interlocking directorates (Mizruchi, 1996) and wanted them to be included in the study. While revenue would have captured the magnitude of each company’s current operations, market capitalization acts as a proxy of the success of operations of each company; it represents a company’s popularity and expectations of going concern among investors and therefore is a reasonable way of ranking the companies for establishing the population in this study. Hence, we decided to rank the companies by their market capitalization in order to the population for this study.

The decision of using market capitalization is further strengthened by the fact that it has also been used in previous studies in the field of network studies, and therefore ensures better comparability. Following the exact methodology by Van Veen & Kratzer (2011) and Heemskerk (2013) on sample selection would have resulted in using the FTSE-Nordic indices (FTSE, 2013). However, as those indices only include 20 to 30 companies from each market, they did not meet our requirement of the chosen 50 companies. In addition, the FTSE data is only available by a fee.

As even NASDAQ OMX Nordic did not provide a suitable established index of companies free of charge, we needed to compile a list of our own. In order to do this, we calculated the market capitalization of the largest companies from Denmark, Finland and Sweden by the market prices from NASDAQ OMX on 4th November 2013. We then ranked the companies from largest to smallest and selected 50 largest from each country.

In the case a company had several classes of shares, the market capitalization was calculated as the combined value of all class of shares (e.g. Carlsberg A and B shares). Some of the companies were listed in more than one country, and in such a case of multiple listings, the location of a company’s headquarters was used as the determining factor of its country of origin. Therefore, some companies that could have been expected to be in the
sample, were omitted if the headquarters was located outside of Denmark, Finland or Sweden (see appendix 1 for a list of companies in the sample).

As the individuals of the sample, only the members on the boards of directors (non-executives) and general managers (usually called CEOs) of each company were selected. We did this as we consider that being a member on a corporate board of directors is generally a part-time job, and therefore board members sometimes serve on several boards, thus creating interlocks. On the other hand, executive director positions of corporations generally require full-time contribution and therefore analysing the executives would result in contributing very few present interlocks to our study, while still taking time. Taking also into account the dual role of many (but not all) general managers serving on both the executive and non-executive boards, we decided to include the CEO positions to get a more comprehensive view of the companies. However, as the non-executive boards are in the main focus of this study, CEO positions without any contribution to study of interlocks were excluded from the study to save time. Members of advisory boards and employee representatives were not included in the database if they were not actual elected members of board of directors.

3.2 Segmentation of the sample companies by size:

When the studied companies are segmented by their NASDAQ OMX (2013b) categorization and presented country by country, differences between the stock markets of the studied countries become evident. As all three stock exchanges are owned by the same company, NASDAQ OMX, this ensured the comparability of the data between countries.

![Figure 1: Segmentation of sample companies by size](image)
The selection of 50 largest companies by market cap in each country delivered companies from each three size segments in Denmark, from two largest segments in Finland and companies from only the largest segment in Sweden. As the number of companies in the sample was an arbitrary number, the size of the sample is not in proportion to the size of the economies in question. In practice, a Large Cap company have a share value of over EUR 1 billion, a Mid Cap between EUR 150 million and EUR 1 billion and Small Cap under EUR 150 million. These classifications are in line with international standards (NASDAQ OMX, 2014). This difference of company sizes between the countries may have an impact on our results, for example if large companies are expected to have more interlocks, then we can expect the Swedish companies to have the densest network as there are proportionally much more large companies in Sweden than there are in Denmark or Finland. This will be taken explicitly into consideration in the analysis. However, even if these differences may have an impact on the results, the results are nevertheless correct for our sample -we decided to include the 50 largest companies from each country and then compare them and that we will do. We just want to stress that this sample selection may have an impact, and that it needs to be taken into account if someone wants to make comparison to our findings.

3.3 Segmentation of the sample companies by sector:
For segmenting the companies, NASDAQ OMX uses Industry Classification Benchmark, (ICB Benchmark, 2013), which is a widely used classification standard that consists of 10 industries.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
<th>All countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financials</td>
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<td>38,00%</td>
<td>Financials</td>
<td>32,00%</td>
</tr>
<tr>
<td>Health care</td>
<td>26,00%</td>
<td>Basic Materials</td>
<td>14,00%</td>
<td>Industrials</td>
</tr>
<tr>
<td>Industrials</td>
<td>24,00%</td>
<td>Consumer Goods</td>
<td>12,00%</td>
<td>Basic Materials</td>
</tr>
<tr>
<td>Consumer Goods</td>
<td>10,00%</td>
<td>Financials</td>
<td>12,00%</td>
<td>Consumer Goods</td>
</tr>
<tr>
<td>Consumer Services</td>
<td>4,00%</td>
<td>Technology</td>
<td>8,00%</td>
<td>Consumer Services</td>
</tr>
<tr>
<td>Materials</td>
<td>2,00%</td>
<td>Consumer Services</td>
<td>6,00%</td>
<td>Health care</td>
</tr>
<tr>
<td>Oil&amp;Gas</td>
<td>2,00%</td>
<td>Health care</td>
<td>4,00%</td>
<td>Technology</td>
</tr>
<tr>
<td>Technology</td>
<td>2,00%</td>
<td>Oil&amp;Gas</td>
<td>2,00%</td>
<td>Telecom</td>
</tr>
<tr>
<td>Telecom</td>
<td>2,00%</td>
<td>Telecom</td>
<td>2,00%</td>
<td>Oil&amp;Gas</td>
</tr>
<tr>
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<td>Utilities</td>
<td>2,00%</td>
<td>Utilities</td>
</tr>
<tr>
<td>Basic Materials</td>
<td>0,00%</td>
<td>Materials</td>
<td>0,00%</td>
<td>Materials</td>
</tr>
</tbody>
</table>

Table 1: Segmentation of the sample companies by sector

3.4 Data collection
To ensure comparability of the data between the companies, the latest available annual report (for fiscal year 2012, capturing the CEOs and composition of boards at the end of December 2012) was used. In a handful of cases when a company had a differing fiscal year from others preventing the collection of data at the same date, most equivalent available data was used instead (these few exceptions are mentioned in detail in the database). In the case of an annual report provided insufficient data for our purposes, AMADEUS was used.

The data was manually searched online, and then entered into Microsoft Excel 2010 in order to establish a relational database.
For each company, we collected the following parameters:

- NASDAQ OMX -segmentation by sector
- Market capitalization of the company
- NASDAQ OMX -segmentation by size
- Size of the board of directors
- Gender distribution of the board of directors

For each individual entry, we collected the following parameters:

- Birth year of the individual
- Nationality of the individual
- Tenure on board (only regarding board positions, not including CEO positions)
- Gender of the individual
- Education
- Independence towards owners (yes/no)
- Independence towards company (yes/no)
- Positions as CEO or member of board of directors in other companies within the sample

Due to the relative ease of collecting more than the strictly required parameters once an annual report was under research, we collected quite many parameters, in order to see if they could provide some unforeseen discoveries or patterns within our exploratory study.

3.5 Pilot study

Before beginning with the actual data collection phase, in order to improve our confidence towards the chosen method, we conducted a pilot study in order to assess the planned method of data entry in Excel, the required and other possibly collectable parameters, and to test in which format the data is most purposeful to enter into UCINet software for analysis. Data of 6 companies in Finland and 2 companies in Denmark were collected and entered into Excel and then analysis was conducted. We practiced with Excel and UCINet and, at that point, became confident that the method in general seemed to be applicable for our purpose.

3.6 Implications regarding our choice of sample and method

Regarding the aforementioned boundary problem, Bohman (2010, p. 18) reminds that most studies employing interlocking directorates cut out parts of the network, which is the case in this study as well. It is possible that the connectedness would be more accurate with a larger or a smaller sample, but on the other hand, Bohman continues “we do not know how actors and relations outside the studied network would affect results, and that the results presented are only valid for the part of the network studied.” This is also the case in our study. It is also important to understand that in studies of networks, regression analysis is not applicable, as it would assume “independence between observations, and network links are not independent of each other” (Bohman, 2010, p. 19). According to Borgatti et al. (2013, p. 41), in social network analysis, the resulting network can be quite different if some central actors are missing. However, we believe that we can overcome this issue
because we try to explicitly state in this chapter the boundaries of this study, and it should be relatively easy to understand what and who we are measuring.

Because of our sample selection, many potentially important interlocks and individuals were not included in the sample. Most importantly, it must be emphasized that our method on limiting the boundary of the samples in this study excludes all individuals’ affiliations to companies that were not within the samples. However, the study of interlocks through this method has been recently employed by several researchers (Bohman, 2010, Van Veen & Kratzer, 2011, Heemskerk, 2013) as a way to analyse networks in their social context, which after all supports this choice as a proper way for assessing the networks.

As the focus on publicly listed companies was mainly a decision based on the availability of data, it leads to a selection bias towards publicly listed, largest and very likely the most internationally operating companies. Several companies that could have contributed interesting findings may have been excluded from the sample, e.g. many privately and state-owned ones. However, we believe the stock exchange contains the majority of large companies in this geographical area, so this selection provides a good opportunity to grasp the independence and interlocking directorates of the corporate boards in the Nordics. Due to the method of having a relational database that only can include interlocks to other companies within the samples, many potentially significant and interesting affiliations of individuals to companies, interest groups and other organizations outside the sample are obviously not present in the network findings.

It is also important to recognize that observation of the board interlocks fathoms only a part of the social network of individuals and does not measure all their relations, for example the social networks established on free time, or non-corporate positions of trust (organizations, interest groups, political affiliations etc.) that can have impact on an individual or a company. Of similar importance it is to understand that this study only took into account individuals’ current corporate affiliations. For instance, the accumulated tenure on boards or possible connections to other individuals arising from previous board and executive positions during the individuals’ careers were not captured by this methodology.

Because the basis for ranking the companies for the sample was their market capitalization and as the market capitalization represents the profitability and future expectations, this sample may be biased towards companies that comply with such expectations. Therefore, some prominent and large companies which are currently having financial struggles may have been excluded from the sample due to their current low market capitalization, even if the revenue and size of operations would suggest they should be included in the sample. As discussed in 3.2, selecting an arbitrary number of companies from each country led the sample to consist of different-sized companies in the countries. This implies that the comparability between the network properties (such as density) is possibly different than it would have been with for example with samples consisting of large cap companies only. However, we found it more important to have as large samples as we have, and because of this and the geographical scope, it meant that from Denmark and Finland we also had to include smaller companies. Furthermore, as the boundary of the study was limited within the three Nordic countries, some large, very international companies contribute relatively few interlocks due to their boards being international beyond the scope of this study.
Finally, it needs to be reminded that for instance owners, executive directors other than CEOs and many other kinds of stakeholders of corporations also have a lot of corporate power, sometimes even more than the boards of directors and general managers but that they are also beyond the scope of this study.

3.7 Data treatment

As mentioned above, the data we collected from the annual reports and corporate governance documents of our sample of 150 companies from the three countries were entered in Excel to create a database of our own. This database gave us not only descriptive data, but also network data and independence information.

We used the social network analysis program UCINET and produced the aggregated results as visual representations with its NetDraw function, that are helpful in calculating network measurements and visualizing the network. The drawbacks of using this tool are that the datasets often need to be in binary form or with transposed information. To analyze every single link for every individual would contribute very little unless there are more individuals having the same connection. All “loose ends” turn up as isolates (and isolates do not add anything to the network). Hence, network studies are often performed in the way we describe.

Regarding each company, we treated the collected data in the following way:

We assigned each company a sector by ICB standards provided by NASDAQ OMX. We entered in the database the market capitalization as the market value of a company’s all shares on NASDAQ OMX stock exchange on November 4th 2013. The company was assigned into a given category according to their listing by the latest size segmentation by NASDAQ OMX (The list is updated once a year, so this data was from 11/2012). We also entered the size and the gender distribution of the board of directors in the database.

Regarding each individual, we treated the collected data in the following way:

We calculated an individual’s age at an accuracy of 1 year by deducting the birth year from 2013 (example: 2013-1948=65 years) and added their nationality and gender. We calculated a board member’s current tenure on each board at an accuracy of 1 year by deducting the board assignment year from 2013 (example: 2013-2005=8). We collected an individual’s field and level of education, independence towards company and towards ownership. In order to establish the relational database to discover the interlocks, we entered the positions as a CEO or a member of board of directors in other companies within the samples. We did this by employing a binary system; an interlock to another company was marked by “1” and no interlock by “0”.

Once a database of the individuals was established, multiple entries of individuals with several board positions were removed by merging the data together, in order to have another version of the database with only one entry for each individual. In order to establish yet another version of the database consisting of companies only, the data of all the individuals representing one company were merged into one entry for each company.
In the case of entries with two or more board positions, double-checking of the positions was conducted: the info about the individual was entered from each annual report and in the end while removing the multiple entries we checked if the info was similar from different sources. In the case there were inconsistencies with the data regarding the entry, a double check through the respective annual reports and AMADEUS was conducted in order to conclude the correct info. In addition to the double-checking, we allocated a reasonable time for coding the data in order to minimize the amount of human errors.

In order to calculate the results presented in the tables and figures, the relevant parameters were used and processed in Excel. However, because of lack of parameter data for some entries on e.g. tenure, age, nationality and independence some data was excluded from the calculations; these cases and the used sample sizes are explicitly noted in every such table.

The collected data was analysed in UCINet-social network analysis software (Borgatti et al., 2002), which is specialised to measure densities and other kinds of network measures. Its Netdraw-function was used for visualization of selected data from the database to help us and the reader to understand the tables.

Density expresses the cohesion or connectedness of a network by measuring the proportion of actual interlocks out of all possible ones. “Density is simply the number of ties in the network, expressed as a proportion of the number possible” (Borgatti et al., 2013, p. 150-151).

\[ D_M = \sum_{i=1}^{Z} \sum_{j=i-1}^{Z} \frac{Z_{ij}}{n(n-1)} \]

Dm=density, Zij=sum of all links, n=node (an individual or a company in this study, depending on the figure)
Source: Van Veen & Kratzer (2011, p. 11)

According to Borgatti et al. (2013, p. 150-151), density is a measure which can be hard to assess as an absolute number, but is useful to use in a comparative way. It is particularly useful in this study as it adjusts the number of individuals and companies to the size of the network making networks of differing size comparable with each other and to previous studies.
4. Theoretical frame of reference

_in this chapter we will go more in-depth about the constitution and responsibilities of the board, since they are ultimately responsible for the company towards the shareholders (and stakeholders in one of the countries)._ 

4.1 Separation of ownership and control

Few know that one of the first public listed companies similar to what we have today was a bank actually was founded in 1407 by four rich merchant families in Genua, Italy, to help re-build the state after a couple of expensive wars. Banco di San Giorgio lasted for 400 years. The records in Latin are preserved until today, and it is an interesting historical reading of how the banking system started says Boland (2009) in his article in Financial Times Magazine. In contrast to this pioneer bank, most companies were still small or family-owned before the 20th century. The industrial revolution changed that in many ways. Companies grew and expanded; some even started to export to other countries and import goods from abroad. When corporations become larger, they also need money to grow. To lend money from banks was one way to finance investments, but it also became more common start limited companies to attract private investors.

The transformation on the market from mostly private-owned firms to publicly listed firms also created a problem, since it clearly separated the owners from the firm and reduced their power to control it. This principal-agent problem in the first limited companies were unregulated and uncontrolled so many investors were lured into different Ponzi schemes since there were nothing limiting the personal risk in these affairs. The legislation formed back then to protect the owners’ risk and rights became the embryo to the regulatory environment around publicly listed firms we have today, and is developed over time but the main idea to make sure the company is managed in the way all the owners want and not to benefit the managers only.

4.2 Relevant theories

We put a lot of effort trying to narrow down our study using the most proper theories to use and came up with a handful of possible ones. These were: agency theory (Fama & Jensen, 1983), stakeholder theory (Freeman, 1984), the resource dependency theory (Pfeffer & Salancik, 1978), transaction cost theory (Rao, 2003), stewardship theory (Davis et al., 1997) and Smith’s “invisible hands” theory as interpreted by Minowitz (2004). The “invisible hand” and stewardship theories were excluded since there would have been no or very little need for corporate governance if they had worked in practice. The resource dependency theory and transaction cost theory could have been used, but considering our research questions we are not trying to figure out how interlocks and independence affect each other, nor do we look for any information cost or ownership structure where these theories could have been very useful. All three of our chosen sample countries also have a "comply or explain" approach to corporate governance.

The Swedish Corporate Governance Board clearly states that the recommendations in the Code are for shareholders only with the argument that the stakeholder perspective would be beyond the scope of their pure “owner-oriented” focus (2010, p. 5), and in the Finnish Code
only responsibility for the company towards shareholders are mentioned (Securities Market Association, 2010, p. 10). On the other hand, the Danish Committee on Corporate Governance (2011) implements all types of stakeholders into their Code, which is also in line with the international OECD-principles and the EU-recommendations on Corporate Governance. Hence, both agency and stakeholder theory are important for our study.

For improving the understandability of this paper, we want to stress that when we discuss and analyze the agency theory in this paper and refer to ‘shareholders’, we mean the owners of the company’s shares. When we discuss the stakeholder theory and refer to ‘stakeholders’, we mean all the constituents in a company’s sphere.

4.2.1 Agency theory

Even though agency theory originally was written in 1932 by Berle & Means, we will use Fama & Jensen (1983) who has tested the agency problem in combination with independent directors in mind in many studies. Their research is, just like Berle & Means, explaining how different associates to a company are driven by different motivations and behave differently when working together, and therefore also end up with different results. Agency theory can be applied on almost any group sharing a common goal or task such as school classes, extracurricular circles or rights activists but it is mostly used and tested within the business sector. As this is a business thesis, we will explain it in corporate terms. In private companies there is rarely any agency problem since the owners more often than not the very same as the management. For publicly listed firms there is a clear division between ownership and control since there is the principal (the shareholders) that delegates the task to agents (the board of directors and managers) towards a mutual goal. To ensure that the agents’ interests are converged with the principal, incentive programs are often used along with assigning the supervisory board to monitor and control the managers to avoid too much agency costs.

From a legal perspective, the board of directors are considered to be the highest authority and ultimately responsible for the firm’s strategic affairs. They supervise and monitor the managers, but is also supposed to contribute with competence and knowledge. In countries with a corporate governance code based on agency perspective (such as Sweden and Finland in our research), this is done solely for the shareowners of the firm. Hence, stakeholders are not included in the regulatory framework.

We also realize, that as a theory the agency theory has been criticised over the years for being difficult to validate and generalize and too general as it ignores important social factors (Nilakant & Rao, 1994), but also that there are no certain way of reducing agency costs and moral hazard with incentive programs (Kunz & Pfaff, 2002). Few theories are rock solid and valid in every single situation, and since the shortcomings and boundaries of this simplification of reality (as any theory is) and the fact it still is applied as a concept in the Finnish and Swedish corporate Codes we believe it to be important enough for our study.

4.2.2 Stakeholder theory

Stakeholder theory was introduced as a concept by Edward Freeman. He expresses his idea of this theory as: “The principle of who or what really counts” (1994, p. 413) where he
identifies different types of associates to the firm by asking who “can affect or is affected by the organization’s achievements” (Freeman, 1984, p. 46) and gives the managers advices how to take the interest of these stakeholders into account before making business decisions. According to Post et al. (2002, p. 17), a corporation is engaged in creating wealth for its several constituents through mobilizing resources. They emphasize the stakeholder view by saying “the conventional notion that the corporation should create wealth only for its shareowners is incorrect” (Post et al., 2002, p. 32), and they argue throughout their book that in the long run, stakeholder approach is a functional model in creating organizational wealth in corporations. Moreover, they argue that this is important for the whole corporate system’s survival (Post et al., 2002, p. 255).

Over the years the stakeholder theory as a management theory with moral and ethics included (Gibson, 2000, p. 255) has evolved but Phillips (2003, p. 66) argues that the core is still that you cannot profit from a firm in the long run without taking the stakeholders’ interest into consideration. This is further supported by Donaldson & Preston (1995), especially when it comes to the normative function of stakeholder theory.

Since there is no single accepted definition of what is meant by stakeholders, we will here use the broader concept of anyone who “can affect or is affected by the organization’s achievements” by Freeman (1984, p. 46). That includes everything from internal stakeholders such as employees and union to external ones, such as government and loan institutes. (In its broadest interpretation it even includes competitors to some extent.)

![Contrasting Models of the Corporation: The Stakeholder Model](image)

*Figure 2: The stakeholder model*

This example shows how important stakeholders are in the Danish Code, and therefore we also find it essential in our theoretical frame of reference.
“In order for a company to be able to adjust readily to changing demands and thus stay competitive and deliver value-adding performance, it is essential for the company to have, in addition to the dialogue with its shareholders, a good relationship with its stakeholders.” (Committee on Corporate Governance, 2011, p. 8)

4.3 Corporate boards
Generally, corporate board structures can be categorized into two models: a unitary board and a two-tier board (Solomon, 2010, p. 78). The Danish model is a two-tier system with a separation between the management and the supervisory board, and when a unitary board is used most board members must be independent according to Selskabsloven (LOV 322 af 11/04/2011, p. 35). The most common board system in Sweden is to have a unitary board with both executive, employee representatives and supervisory members all together (European commission, 2013c) and in Finland the companies are free to choose the type of board that suits them best (European Commission, 2013b), although the Securities Market Association (responsible for the Finnish corporate code) recognizes it to be more common for publicly listed firms to have a unitary board (2010, p. 7).

4.3.1 Board independence
In order to discuss independence, we need to define what an independent and non-independent director is. We searched for a definition in the Corporate Codes but simply could not find a clear definition anywhere. Yet, the importance of having independent board members is stated in various places in the documents. What is explained in the Codes is what is not considered to be independent.

In scientific studies independent directors are often stated to be “an outside director who has no affiliation with the firm other than the affiliation of being on the board of directors” (Beasley, 1996, p. 448), and hence non-independent directors are regarded as “insiders” of the company.

Independence is one of the most used words in the Corporate Code, and the importance of giving out information if a board member is independent or non-independent is stressed. But what is not clearly expressed in the three corporate governance codes we examined, is what they mean by being an “independent board member”? That is not clearly defined in any of the corporate codes. On the other hand, it is explained with a number of examples what is not an independent director (which indirectly explains what an independent board member is).

The Combined Code in U.K. states that an independent board member is “independent in character and judgement and whether there are relationships or circumstances which are likely to affect, or could appear to affect, the director’s judgement” (Financial Reporting Council, 2010, p. 12). In practice, this means that the companies are to disclose the board members as one out of two options to the public: either they are totally independent of the company, management and shareholders making them a 100% outside director, or they are not independent (an inside director) towards company, management or shareholders (or a combination of them).
In comparison to Denmark, Sweden and Finland display the disclosure differently, with independence towards company and towards major shareholders separately. This gives information on the reason why the person is 100% independent or not towards the company or shareholders. The downside of having a different set of tools to measure independence is that the disclosure is not harmonized with all the other countries (SOU 2004:46, p. 53-54). Hence, it becomes difficult as a shareholder or stakeholder to make comparisons between companies in different countries.

4.3.2 Insider-outsider theory

In order to assess if the companies disclose a “true and fair view” of the independencies we had to deal with some practical issues. First, independence is defined differently depending on if it is founded on agency theory or if it derives from the broader stakeholder concept. Second, because of the theory differences, the parameters in the Codes are not the same in our sample countries. Third, because we used secondary data to build our database, we do not have that many options to choose from when trying to test the data we have (on the other hand we gained a lot of reliable data in a very short period of time, making the analysis more reliable due to the large amount of inputs). Fourth, there do not exist many scientific practical methods to solve this type of insider-outsider problem since the amount of data we have access to is limited to what is stated in rules and regulations.

Therefore, we ended up with two choices. One method, common when analyzing the independence on boards is by grouping the board members into insiders and outsiders (Brickley et al., 1994; Yermack, 2004). This did not solve our problem, since the information disclosed by the companies already is presented in this form. The other is to divide the board of directors into three groups; insiders, outsiders and “grey directors” (Beasley, 1996; Coles et al., 2008; Rosa et al., 2004). Outsiders are the board members that are totally independent both towards the company but also towards major shareholders, while insiders are the non-independent directors. Rosa et al. (2004, p. 26) define “grey directors” as: “Directors who are either a former employee of the firm or affiliated with managers through current or potential future business or family ties are classified as “grey“ directors.” The abovementioned factors can compromise the director’s level of independence, and Rosa et al. (2004, p. 29-30) discuss the low proportion of independent directors in their study being a result of cost and benefit. The risk of having “grey directors” with close connections and knowledge to the firm outweighed the benefits in trust from independent directors, even in a voluntary Code. That should be put in context of Beasley’s study (1996), where he concluded companies with larger proportion of independent directors reduced the risks of fraud and other trust issues significantly compared to corporations that appointed inside directors.

We cannot go as far and apply the full “grey director” definition used by Rosa et al. (2004, p. 26) since we do not have all that information, but we can determine if these individuals have ties to each company’s major shareholders since that information is to be presented by the companies. In this paper, “grey directors” are the directors with major shareholder interest. Hence, we chose to measure and compare the companies own disclosure in our sample by applying this theory.
4.4 Interlocking directorates network
Bohman (2010, p. 16) defines an IDN as follows: “An interlocking directorate network is a 2-mode network consisting of firms and their directors, and where a link (only present between firms and directors) indicates that the director serves on the board of the linked firm”. Van Veen & Kratzer (2011, p. 2) describe them as: “Interlocking directorates are links between corporations that occur when a director who is affiliated with one corporation sits simultaneously on the board of directors of another corporation”. The reason for us to examine the IDNs is that the corporate governance Code states that the companies are to provide important affiliations to other firms for the stakeholders’ sake (Committee on Corporate Governance, 2011, p. 16; Securities Market Association, 2010, p. 10; Swedish Corporate Governance Board, 2010, p. 24-25).

A director having more than one board (or a managing director) position interlocks the two companies. Links are then established for all the individual connections in the samples to indicate everyone’s board positions in corporations. Of course, the inclusion of managing directors in this study means that also their links to boards of directors outside their own company are counted as interlocks. As previously explained, when an individual creates an interlock, this also forms an interlock between the companies this individual is connecting. Aggregating all the individual (director-to-director) interlocks creates the network of the companies (company-to-company). These linkages collected in the database enable us to examine the aggregated networks of interlocks in the chosen Nordic countries, and find the most connected firms and individuals, which are not explicitly disclosed by the companies.

4.5 The most central firms in the Nordic network
Bohman (2010, p. 26-27) describes the importance of this field of research by pointing out that the interlock networks carry information and are channels through which practices and performances of firms and also information of the directors are spread. He further strengthens this point by referring to several studies which, having taken this perspective into account, have shown that” firms are inclined to the same decisions, actions and even organizational structures as linked firms”. He concludes by referring to several previous studies (2010, p. 26-27) which indicate that board interlocks also have real-world impact on e.g. company performance and recruitment of new CEOs and directors of board.

Heemskerk (2013, p. 89) noted that as IDNs are not equally distributed within the network, the most central firms are of special importance, and he referred to these firms as “organizing pillars”. The list of companies with the most interlocks (created by aggregating the individual interlocks of board members) will be called as the most central ones in this study.

4.6 Corporate elite
The existence and formation of a social group that can be called the economic elite has been a subject of debate in many societies; Mills (1956) originally coined the term “power elite”, which according to him included the elite from politics, business and the military. However, as that concerned the elite on a very general level, we now deductively move to the scope of this thesis, and narrow down what we mean by the power elite -the corporate elite in this paper.
Drawing conclusions from Mizruchi (1992, referred in Bohman, 2010, p. 11), Bohman argues big companies to be “maybe the most important societal actors in western society, and understanding the behavior of these key actors is key to understanding society as a whole”. As the groups of directors in these large companies are not particularly large, Bohman considers the directors of large corporations to be the economic elite. Therefore, the economic elite are also what we call the corporate elite. Furthermore, Bohman points out that the company and director networks have been in the focus of the elite perspectives for functioning as connectors of the corporate elite (2010, p. 22). He concludes that several scholars in the field have defined the corporate elite as “the directors who hold several board positions”, which is a definition we also follow in this study. Heemskerk (2011, p. 456) discovered, that the corporate elite consisted of a very small group of interlocked directors, and he called this hard core of interlocked directors the “old boys”. He also concluded that it was a small group of these “old boys”, who created the most connections across borders within the scope of his study.

Bohman (2010, p. 23) also holds that “the network of interlocking directors is a map of the relations that uphold and distribute the power of the corporate elite”. We follow this idea and argue that the group of individuals identified with most interlocks in this study, the hard core of directors, is the present corporate elite in these three Nordic countries.
5. Regulatory frame of reference

In this chapter we will look at the rules and legislation surrounding the firms, with special focus on the recommendations in the Codes regarding independence and interlocks.

5.1 Companies Act

One of the laws surrounding the limited companies is the domestic Companies Act. It covers the fundamental requirements for private and publicly listed companies in the country. As any law, it must be followed or there will be penalties for the firm. The Swedish “Aktiebolagslagen” (SFS 2005:551), the Finnish “Osakeyhtiöläaki” (OYL 624/2006) and the Danish “Selskabsloven” (LOV 322 af 11/04/2011) are very much harmonized since the middle of the 20th century. They may vary in smaller details, but overall they share many characteristics (Nordic Corporate Governance Working Group, 2009, p. 4). One of the few exceptions is the already mentioned Danish Company law that stipulates that the management and at least half of the supervisory board should be residents in Denmark, and that there is only allowed a minority of nonnatives (Edling et al., 2012, p. 188). This used to be the case in Sweden not too long ago, but is no longer in the Companies Act since it goes against the EU-legislation of free flow of people over the member borders. Nor has Finland this type of requirement in the “Osakeyhtiöläaki” and Edling et al. (2012) believe this paragraph is about to be erased from the Danish “Selskabsloven” in a few years’ time.

5.2 Rules on the stock exchange

Since all three countries in our study have a voluntary comply or explain-approach on corporate governance, someone has to make sure that they in fact do comply with the rules or explain why they deviate. Any type of monitoring is costly, so to make it as efficient and cheap as possible this task is delegated to the domestic stock exchanges, since they are already in charge of ensuring the stakeholders the information they provide on the stock exchange is showing a true and fair view of the listed companies (NASDAQ OMX, 2013c).

5.3 Corporate governance

All of our selected countries are as we already stated: members of EU, the Nordic Cooperation and OECD and use the comply- or explain approach of the Code and we have chosen to look at this issue from an outside view; therefore it makes sense to us to apply the latter, broader definition when discussing the corporate Code in this paper:

“Corporate governance: procedures and processes according to which an organisation is directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among the different participants in the organisation – such as the board, managers, shareholders and other stakeholders – and lays down the rules and procedures for decision-making.” (European Central Bank, 2004, p. 219).

It should be said that the corporate code is not a new invention. There has always been need for “best practices” rules, but they have been written in different laws surrounding the firm earlier. Today, they are to be found in the same place (in one document) and is to be disclosed by the companies in a similar manner so shareholders and stakeholders can evaluate them more easily than before when they were scattered paragraphs in different
laws. We recognize this idea from the global harmonization in accounting and auditing standards, but also from the increased number of EU-policies that also works for harmonization in all these areas (Dewing & Russell, 2004). The choice of the three countries in our study is no coincidence, since they all apply a self-regulating, voluntary corporate governance code, which in many aspects is harmonized both to each other, EU-regulation and towards the corporate governance principles by OECD but also the Combined Code in the European Union and the UK. Of course they also share features with Sarbanes-Oxley Act from the US.

5.3.1 The Code begins where the hard laws end
Dewing & Russell (2004) says the main reasons for having a Code of best practices are to increase the transparency and credibility of the firms, either as mandatory legislation or by a “comply or explain-policy”. With the latter approach, the Code is meant to begin where the hard laws end, which means that the companies voluntarily can give out more information than the legal system stipulate to gain trust from the market, or explain deviations from it without further punishment. Hence, it is a complement to the regulations on the market that has the benefits of being self-evaluating and cheap compared to a law (RiskMetrics Group, 2009). It also gives the companies time to adapt to changes in the Code, a possibility not available in a law. This flexibility is the reason the Code is called a “soft law”, although the underlying idea is that the rules in the code are so important the companies should make efforts to implement them over time. If the rules in the Code are neglected, postponed or even ignored, there is always a possibility of making legislation on European level. The ongoing gender quota discussion is one such example (European Commission, 2012).

A self-regulating corporate code also requires the shareholders to be active. Any type of monitoring causes cost (agency cost) according to Fama & Jensen (1983). Bathala & Rao (1995, p. 60-62, 67) say that independent directors are desired on the board because of their experience, expertise and their independence towards the management and company. Bathala & Rao (1995) also found evidence in their study for major shareholders to have an interest in the company but there is also a risk that these blockholding shareholders can influence the board to decisions that might not benefit all shareholders (or the company per se) but only the major shareholder. This raises the question regarding the composition of the board, especially regarding the monitoring task of independent board members are to do as John & Senbet concluded in their study (1998, p. 372-373).

5.3.2 The Corporate Code - a bond of credibility and trust
Today, more than 90 different countries (and market areas) have their own corporate Codes listed on the webpage of European Corporate Governance Institute (ECGI) and more are added over time since the Codes are under constant change and revision.

The Swedish governmental report SOU 2004:46 (p. 161) concluded that the global Corporate Governance harmonization was met with lukewarm interest by businesses in Sweden. The arguments given were that the “Swedish business model” has proven time and time again to be effective and reliable, and therefore has no need of changes. This conclusion also might be true for the other Nordic countries in our study since we share a common business tradition and major scandals and frauds here has been few so far in this
part of the world - but they do exist here too and we are evolving towards a more global economy that even the Nordic countries with EU-membership need to adapt to. Therefore, our goal is to examine the level of independence for the directors with board positions on more than one publicly listed firm at the same time.

The infamous Enron and other scandals are known world-wide because of their magnitude, but many countries have experienced larger and smaller scandals showing that there is need of a complementary set of rules along with the other legal framework surrounding firms, a Corporate Governance Code (Dewing & Russel, 2004). In Sweden many remember the headlines in newspaper about the Trusor affair back in 1997 (Aronsson, 2013) and The Scandia scandal (Olsson, 2003). In Finland the generous stay-bonuses in Finnair caused headlines (Hufvudstadsbladet, 2012) and later on also new rules regarding the bonus system in state-owned corporations were implemented to prevent this from happening again (Västra Nyland, 2012). “Luxury Lars” refers to the leader of the opposition party Venstre in Denmark, Lars Lokke Rasmussen, who used a lot of taxpayers’ money travelling by 1st class when he was on an information campaign for the Global Green Growth Institute (GGGI). Danish ministers usually travel in business class, and this upset both the taxpayers but also other politicians (Wenande, 2013).

Scandals, large or small, affect the trust between a firm and its interested parties. In the report by Socialstyrelsen in Sweden (SOU 2004:46) they try to explain why trust is a crucial element in corporate governance. Since companies do not work on a perfect market where everyone knows everything they face uncertainties that cause risk. We want to take calculated risks to gain possible rewards but we want to avoid bigger losses. Therefore, contracts, rules and regulations are one way of increasing trust and reduce risk and lower agency costs. But that is not enough, since trust does not work in solitude. Trust arises in a social context, between individuals or companies and here is where corporate governance becomes important. Or as Francis Fukyama, a well-known Stanford professor in political science and economics puts it in his book Trust: the social virtues and the creation of prosperity:

“Trust is the expectation that arises within a community of regular, honest, and cooperative behavior, based on commonly shared norms, on the part of other members of that community.” (1996, p. 26)

This paper is not supposed to be about trust, but while we read studies about corporate governance (especially the European type with comply- or explain approach) we realized it has many features of ethical and moral behavior where trust is easily lost and hard to regain, and we always came back to the reasons for having a Code of best practices to avoid scandals and increase trust. When a company lays off workers and at the same time suggests raising bonuses and increasing dividends, they send contradicting signals and risk facing bad PR and mistrust from actors on the market and to regain that trust can be very costly for the company. And as we already mentioned a couple of times already, the people ultimately responsible for the firm’s performance and reputation are the board of directors and managers. One way to keep trust is to be transparent and present a true and fair view of the company, not only in numbers and auditing, but also in the amount of voluntary disclosure of information in line with the Code.
5.3.3 Corporate code in the three countries

We have already stated that Denmark, Finland and Sweden have lots of similarities in the Codes, but there are also some differences. As the Codes are rather extensive we will only bring up relevant parts for our study in this section.

The Swedish Corporate Governance Board (2010, p. 16-17) stipulates the board of directors to be ultimately responsible for all decisions the company undertakes, both on long-term and daily basis. They are also required to monitor and control the company’s affairs and management board so all decisions are in favour of the firm and shareholders. The characteristics of the all individual board members are also important to provide to the shareholders so they can vote for the people they believe is best suited to be on the board regarding knowledge, experience, integrity and other factors. Only one member of board is also allowed to be part of the executive board or a subsidiary to the company. E.g. if the CEO is part of the board of directors, the CFO or other executive managers cannot be accepted as board members. Further on, the company should “exhibit diversity” and “strive for equal gender distribution” on the board.

The Finnish Corporate Governance Code is very similar to the Swedish. It states the board to be responsible for the operations and organization, to monitor and control and set strategies for the firm. The individual board member’s possibilities and will to engage in the company’s affairs is essential in this Code, especially the work for directors and the chairman of the board. As the shareholders’ elect the board members at the Annual General Meeting, the Code also emphasises the company to provide skills and relevant experience on all the board members. Regarding diversity, the Finnish Code gives an example of this: “One element of a diverse composition is to have both genders represented on the board” (Securities Market Association, 2010, p. 10-11).

The Danish Code is the one with most deviations in comparison to the other two. Or, one could say that the Finnish and Swedish Codes to be the ones deviating from the Danish, which is more harmonized to the EU recommendations and OECD principles. Chapter 2 in Recommendations on Corporate Governance (Committee on Corporate Governance, 2011) is all about stakeholders and corporate social responsibility. The directors are to disclose knowledge and skills compared to the education provided according to the other countries in our sample. Regarding diversity, women are specifically mentioned and objectives are to be set for the proportion of women at specific management levels. We also experienced that women often are represented as employee representatives or as managers, while the supervisory board often consists of men only. More discussions regarding our sample choice is provided in chapter 7.5.4.

5.4 Independence

After the Enron scandal it became evident that too many close friends (insiders) on the board of directors do not monitor as effectively as independent (outside) directors with no connections to the firm or major shareholders, which is why focus on the independence of the individual board members is considered to be important to measure (Vinten, 2002).

From an EU-perspective the director independence is dealt within the domestic corporate Codes although the revelation of compliance or deviation from any part of Code is
legislated in EU directive no: 2006/46/EC (RiskMetrics Group, 2009, p. 101). This means all countries have some freedom to decide on how the independence should be presented, for whom it may concern (shareholders or stakeholders) and in which form it should be publicly available.

The following references from the codes are direct excerpts in order to facilitate us to provide accurate information and basis for interpretations to the reader. They were essential when we collected, measured and compared the information from the 50 Danish, 50 Finnish and 50 Swedish companies. Even if they look similar at first sight, they differ very much from each other since the Danish Code is taking all stakeholders into account while Finland and Sweden rule out everyone except the owners. That totally changes the interpretations of what is to be considered as an independent director. The other difference we found was that the Swedish is very extensive to its nature while there is more room for interpretations in the other Codes.

5.4.1 Sweden
The Swedish Code has, like many other countries, no clear definition of what constitutes an independent director but it can be determined by screening out the extensive checklist of “what is not considered to be independent criteria” in paragraph 4.4 and 4.5 in the Code (The Swedish Corporate Governance Board, 2010, p. 17-18). The Swedish Code recommends the independence to be provided in two parts, both towards the company but also in relation to the company's major shareholders. Hence, all the following information is to be assessed from an agency perspective in order to be considered to be independent:

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<thead>
<tr>
<th>4.4. The majority of the directors elected by the shareholders’ meeting are to be independent of the company and its executive management</th>
</tr>
</thead>
<tbody>
<tr>
<td>A director’s independence is to be determined by a general assessment of all factors that may give cause to question the individual’s independence of the company or its executive management. Factors that should be considered include:</td>
</tr>
<tr>
<td>· whether the individual is the chief executive officer or has been the CEO of the company or a closely related company within the last 5 years,</td>
</tr>
<tr>
<td>· whether the individual is employed or has been employed by the company or a closely related company within the last 3 years,</td>
</tr>
<tr>
<td>· whether the individual receives a not insignificant remuneration for advice or other services beyond the remit of the board position from the company, a closely related company or a person in the executive management of the company,</td>
</tr>
<tr>
<td>· whether the individual has or has within the last year had a significant business relationship or other significant dealings with the company or a closely related company as a client, supplier or partner, either individually or as a member of the executive management, a member of the board or a major shareholder in a company with such a business relationship with the company,</td>
</tr>
<tr>
<td>· whether the individual is or has within the last 3 years been a partner at, or</td>
</tr>
</tbody>
</table>
has an employee participated in an audit of the company conducted by, the
company’s or a closely related company’s current or then auditor,
· whether the individual is a member of the executive management of another
company if a member of the board of that company is a member of the
executive management of the company, or
· whether the individual has a close family relationship with a person in the
executive management or with another person named in the points above if
that person’s direct or indirect business with the company is of such
magnitude of significance as to justify the opinion that the board member is
not to be regarded as independent.

A closely related company is defined in this context as another company in
which the company holds, directly or indirectly, at least 10% of the shares,
ownership interest or votes, or a financial share that confers an entitlement of at
least 10% of the yield. If the company owns more than 50% of the shares,
ownership interest or votes in another company, it is to be regarded as indirectly
holding the latter company’s ownership in other companies.

4.5 At least 2 of the members of the board who are independent of the
company and its executive management are also to be independent in relation to
the company’s major shareholders.

In order to determine a board member’s independence, the extent of the
member’s direct and indirect relationships with major shareholders is to be taken
into consideration. A member of the board who is employed by or is a board
member of a company which is a major shareholder is not to be regarded as
independent.

In this context, a major shareholder is defined as controlling, directly or
indirectly, at least 10% of the shares or votes in the company. If a company
owns more than 50% of the shares, ownership interest or votes in another
company, the former is regarded as having indirect control of the latter
company’s ownership in other companies.

(Source: Swedish Corporate Governance Group, 2010, p. 17-18).

A majority of the board needs to be independent of the company, but two of these company
independent board members need to fulfil the requirement of also being independent of
major shareholders in order to comply with the Swedish Code. If they do not comply, they
need to give a reasonable explanation to why this principle is not applicable to their firm.

5.4.2 Finland
The Securities Market Association (2010, p. 11) also recommends the companies to provide
independence separately towards company and major shareholders, and also from an
agency theory concept, just like in Sweden. The principle is also similar to the Swedish
Code, which says that a majority of the board members shall be independent of the
company and at least two of those independent directors also shall be independent of the
company’s major shareholders in order to be able to monitor, control and supervise.
Notably, there is no clear independence definition in the Finnish Code either, so
recommendation 15 is the checklist to consider when evaluating the independence of each and every board member:

**Recommendation 15 – Evaluation of independence**

The boards shall evaluate the independence of the directors and report which of them are independent of the company and which are independent of significant shareholders.

A director is not independent of the company, if:
- the director has an employment relationship or service contract with the company;
- the director has had an employment relationship of service contract with the company in the last 3 years prior to the commencement of the board membership;
- the director receives from the company or from members of its operative management not significant remuneration for services or other advice not connected with the duties of the board, e.g. consulting assignments with the company;
- the director belongs to the operative management of another company, and the two companies have, or have had in the past year, a customer, supplier or cooperation relationship significant to the other company;
- the director belongs to the operative management of a company whose director is a member of the operative management of the first-mentioned company (interlocking control relationship); or
- the director is, or has been in the past 3 years, the auditor of the company, a partner or an employee of the present auditor, or the director is a partner of an employee in an audit firm that has been the company’s auditor in the past 3 years.

A director is not independent of a significant shareholder, if:
- the director exercises control in the company or the director is a board member or has a relationship such as referred to in sub-sections a) to b) above to party who exercises control in the company; or
- The director is a significant shareholder or a board member of a significant shareholder of, or has a relationship such as referred to in sub-sections a) to b) above to significant shareholder of the company. In this recommendation, a significant shareholder is defined as a shareholder who holds at least 10% of all company shares or of the votes carried by all the shares or who has the right or obligation to purchase all corresponding number of all issued shares.

In addition, the board may, based on its overall evaluation, determine that a director is not independent of the company or a significant shareholder. E.g., the following circumstances shall be taken into account when making the overall evaluation of independence:
- the director participates in the same performance-related or share-based remuneration scheme as the operative management of the company, which may be of substantial financial significance to the director;
- the director has been a non-executive director for more than 12 consecutive years;
- private or legal persons who are related parties of the director have such circumstances
as described in this recommendation; or
the company is aware of other factors that may compromise the independence of the
director’s ability to represent all shareholders.

The above-mentioned criteria are divided into three categories. The existence of
even one of the circumstances cited in subsections a) to f) above means that the
director cannot be regarded as being independent of the company. Sub-sections g) to
h) present the criteria based on which a director is determined not to be independent
of a significant shareholder of the company. Sub-sections i) to l) deals with issues
based on which the board may, after an overall evaluation, determine that the
director is not independent of the company or a significant shareholder.

Companies belonging to the same group as the company are considered equal to
with the company. A company and another person are deemed related parties, if the
person is able to exercise significant influence in the company’s decision-making
regarding its finances and business operations.

(Source: Securities market Association, 2010, p. 11-12)

5.4.3 Denmark
The Danish code is similar to the already mentioned Swedish and Finnish Codes in that the
only way of deciding if a director is independent is by screening out the list below, but the
interpretation of independence should be seen from a broader perspective. The board
members needs to take all possible stakeholders into account in Denmark which is a huge
fundamental difference compared to the other two countries in the study. Another
difference is that Danish boards are often two-tiered, so these independence principles only
apply to the supervisory board of the company.

### 5.4 The independence of the supreme governing body

5.4.1 In order for the members of the supreme governing body to act
independently of special interests, the Committee recommends that at
least half of the members elected by the general meeting to be
independent persons.

The independent supreme governing body members may not:

- be, or have been within the last five years, a member of the
  executive board/managerial staff of the company or an
  associated company,

- Have received significant additional remuneration from the
  company/group or an associated company apart from a fee for
  its services in the capacity as a member of the supreme
  governing body,

- Represent the interest of a controlling shareholder,

- Within the last year, have had material business relationship
  (e.g. personally or indirectly as a partner or an employee,
  shareholder, customer, supplier or member of a governing
  body of companies with similar relations) with the company
or an associated company,
· be, or have been within the last 3 years, an employee or partner of the external audit firm,
· hold cross-memberships of governing bodies,
· have been a member of the supreme governing body for more than 12 years, or
· have close family ties with persons that are not regarded as independent persons.

Comment: Independence means that the person in question does not have close ties to or represents the executive board, the chairman of the supreme governing body, controlling shareholders or the company.

[...] Cross-memberships of governing bodies are seen where a member of the supreme governing body of company A is a member of the executive board of company B, at the same time as a member of the supreme governing body of company B is a member of the executive board of company A. A similar situation may arise where a member of the supreme governing body has significant links with members of the executive board of the company through involvement in other companies or entities.

(Source: Committee on Corporate Governance, 2011, p. 13)

5.5 The CRD IV-directive

We already mentioned some important parts about the CRD IV-package (OJ No: L176/338, 27.06.2013) in the introduction, but here we will go deeper into the governance part of this EU-legislation. Within the systemic important financial sector, many changes have been made in the banking sector since the credit crunch in 2008, to make it more “resilient, transparent and efficient” (European Banking Authority, 2014). The banking sector today also uses what is called “The Single Rulebook” to conform the application and harmonization of Basel III in all EU-countries, and the new CRD IV-directive will be no exception from this. With that said, we will only look at the rules that concern our study here, i.e. the corporate governance requirements of this directive.

This directive overrules any voluntary recommendation within the banking sector, and is mandatory for every EU-member country to obey. This also means that every individual director having a board position in this sector has to make sure they fulfil these legislative requirements, or leave their chair in this sector to someone else. We have financial institutions within our sample, which also means that some individuals will have to make a decision regarding the following governing rules:

Every board member needs to make sure they have sufficient time and is independent to effectively monitor the management (article 91:2 and 92:8 in CRD IV package). They also need to make sure they have enough experience, skills and knowledge to do their job (article 91:1). The maximum number of board positions one board member can hold at the same time on publicly listed companies are limited to four if the directorships are all
supervisory (article 91:3b), and if one board position is an executive position the total number of board positions are limited to three (article 91:3a). European Banking Authority (EBA) is to monitor that these rules are applied and obeyed (article 91:12).

We interpret this as the EU is trying to harmonize the regulatory framework in all member countries to increase the transparency but also making crucial information within this systemic important banking sector provided in the same way so there is no question of what they mean. When they are limiting the number of board positions we realize they also acknowledge the interlocks board members create between companies, tying the banking sector to the private sector, to be a risk they want to limit. A limitation of board position also makes certain the board members have sufficient time to contribute, but also that they do not have other board positions that might affect their judgment and independence.
6. Empirical evidence and analysis

For the sake of readability and better understanding of the issue at hand, the empirical evidence is presented here jointly with the analysis. Furthermore, this chapter is divided in three parts. First we present the descriptive statistics by paying attention to the individual, quantifiable characteristics for discovering the compositions of boards in order to provide a deeper understanding of the samples. Second, we will present network statistics and analysis in order and discuss the connections between individuals and between companies. Third, we present board independence statistics and analysis. The chapter will end with a concluding discussion.

6.1. Descriptive statistics

In this study we examined the individuals in 150 companies, in 3 countries. All members of boards of directors were included as well as all the CEOs who provided at least one interlock. This resulted in 1083 entries, and because of many individuals having several board (or CEO) positions, the number of unique individuals after merging the double entries was 844. Out of the 1083 entries, 1026 were non-executive board memberships, 42 entries were dual roles (at least one board and one CEO position), and 15 entries were a position only as a CEO.

As mentioned earlier, the monitoring task of independent directors depends not only on the independence, but also on the size and composition of the board (John & Senbet, 1998, p. 372-373). Therefore, we start by presenting descriptive statistics and discussing the corporate boards on country level in order to describe the characteristics and see differences between the countries and previous studies:

6.1.1 Board size, gender, tenure and age

<table>
<thead>
<tr>
<th></th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board size mean</td>
<td>6,06</td>
<td>7,22</td>
<td>8,12</td>
</tr>
<tr>
<td>Board size median</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Women mean (%)</td>
<td>11,66 %</td>
<td>26,02 %</td>
<td>26,74 %</td>
</tr>
<tr>
<td>Women median (%)</td>
<td>14,29 %</td>
<td>23,61 %</td>
<td>25,00 %</td>
</tr>
<tr>
<td>Spread %</td>
<td>0-40%</td>
<td>12.5-50%</td>
<td>10-57%</td>
</tr>
<tr>
<td>Male boards only</td>
<td>44,00 %</td>
<td>0,00 %</td>
<td>0,00 %</td>
</tr>
<tr>
<td>Tenure mean (yrs)</td>
<td>6,7</td>
<td>5,6</td>
<td>7,5</td>
</tr>
<tr>
<td>Tenure median (yrs)</td>
<td>4,3</td>
<td>4,8</td>
<td>6,3</td>
</tr>
<tr>
<td>Age Mean</td>
<td>58,3</td>
<td>56,8</td>
<td>58,5</td>
</tr>
<tr>
<td>Age Median</td>
<td>58</td>
<td>57</td>
<td>59</td>
</tr>
</tbody>
</table>

Table 2: Descriptive statistics of corporate board composition

Source: own database
1. Individuals with no birth year provided were excluded, as well as CEO’s without board positions since we are examining the board of directors here.
2. Sample size regarding age and gender is 844-20=824.
Corporate boards of directors in this study had on average 7.13 members, while the gender distribution was 78.22% male, 21.78% female; the boards of Danish companies are the smallest and also have the lowest proportion of women. Denmark was the only country having several boards without any gender diversification; however, this can be explained by the Danish corporate code that requires employee representatives on boards in every company, and our method of omitting such board members from this study. Employee representatives exist also in Finland and Sweden, but in Denmark this type of position had a significant impact on the results, as in Denmark the only female board members tend to be employee representatives. Therefore, the findings about board size and gender in Danish companies are not comparable to the two other countries or other studies in full extent. Among all countries the average tenure of a director was 6.6 years, Finland having result under the average, Denmark just above the average and Sweden above the average. However, a look at the medians indicates higher standard deviations among the Danish firms. The average age of board members among the Nordic corporate board members in our sample turned out to be around 57.9 years, with Sweden having the oldest board members by both measures, the mean and the median, while Finnish boards had the youngest members.

The average percentage of women on boards in this study were 11.66%; 26.02% and 26.74% in Denmark, Finland and Sweden, respectively, while in the European Commission study (2013, a; b; c), the figures were 20.8%; 28.6% and 25.5% respectively. While the notable difference in Danish figures is likely to be caused by the abovementioned reason of our methodological choice (of not including the employee representatives in this study), the Finnish and Swedish figures roughly corroborate with the European Commission study if the sample size is taken into account (2013, a; b; c) sample was smaller: 20, 25 and 30 companies, respectively). Moreover, compared to the average of EU-countries 16.8% of women on boards, the Nordics are way above the EU average (excluding the non-comparable Danish figures) in regards to gender diversification. Our findings are relatively aligned with the European Commission for the comparable Finnish and Swedish figures (2013, b;c).

Comparison to the proportion of women on boards in Edling et al. (2012, p. 192-193), indicates increase on Denmark (they found 7%) and Sweden (they found 16%), while Finland was not within their sample. Proportion of companies with at least one woman on board was 44% in Denmark and 72% in Sweden in Edling et al. (2012), while it was in this study 56% and 100%, respectively. This either could be a sign of a trend in Denmark and Sweden to converge towards e.g. the Norwegian level of gender diversification of boards or can be explained by the differing sample sizes (Denmark 149 companies, Sweden 290), suggesting that larger companies, as in this study, have generally more women on the boards.
6.1.2 Nationality

<table>
<thead>
<tr>
<th></th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of companies</td>
<td>41</td>
<td>49</td>
<td>49</td>
<td>139</td>
</tr>
<tr>
<td>Total individuals</td>
<td>250</td>
<td>353</td>
<td>396</td>
<td>999</td>
</tr>
<tr>
<td>Total nonnatives</td>
<td>69</td>
<td>74</td>
<td>96</td>
<td>239</td>
</tr>
<tr>
<td>Average nonnatives on the board</td>
<td>1,68</td>
<td>1,51</td>
<td>1,96</td>
<td>1,63</td>
</tr>
<tr>
<td>Median nonnatives on the board</td>
<td>1,00</td>
<td>1,00</td>
<td>1,00</td>
<td>1,00</td>
</tr>
<tr>
<td>Nonnatives (%)</td>
<td>27,17%</td>
<td>20,96%</td>
<td>24,24%</td>
<td>24,12%</td>
</tr>
<tr>
<td>Natives (%)</td>
<td>72,83%</td>
<td>79,04%</td>
<td>75,76%</td>
<td>75,88%</td>
</tr>
<tr>
<td>Boards with only natives:</td>
<td>13</td>
<td>20</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Boards with only natives (%)</td>
<td>31,71%</td>
<td>40,82%</td>
<td>32,65%</td>
<td>35,06%</td>
</tr>
<tr>
<td>Variety (%)</td>
<td>(17-80)%</td>
<td>(11-71)%</td>
<td>(11-88)%</td>
<td>(11-88)%</td>
</tr>
</tbody>
</table>

Table 3: Descriptive statistics of board positions by nationality

Source: own database

1. Total sample size reduced with the 15 CEOs that are not on the boards since we want to examine board member nationality.
2. Companies not providing information on all board members have been removed.
3. Sample size is therefore: (150-10)=140 companies with (1083-15-69)= 999 board members.
4. The excluded companies are Alm.Brand, BankNordik, D/S Norden, Groenlandsbanken, Jyske Bank, Spar Nord Bank, Sydbank, Topdanmark, Vestjysk Bank (from Denmark), Aktia Bank (Finland) and SKF (Sweden).

In regards to nationalities, we discovered that nonnatives constitute almost a quarter of the board members in the studied sample in Nordic countries. The differences between countries are not large, but still noticeable, Denmark having the most international boards and Finland the least. Sweden ranks in the middle, and has the boards with the largest spread of nationalities (11-88%). More accurately, Denmark had the most international boards (27,17% nonnatives) in this study, followed by Sweden (24,24%) and Finland (20,96%). Edling et al. (2012, p. 193) found 30% of companies in Denmark to have at least one nonnative director, while in Sweden the proportion was 32%. In this study the proportions were respectively 68,29% and 64,94%, either suggesting a significant increase in these measures or, that large companies have significantly more nonnatives on their boards than small ones, which seems a likely result. Moreover, Denmark that allows non-residents to be only a minority on boards, was surprisingly the country with the largest proportion of nonnatives on the boards.
6.1.3 Education

A majority on the corporate boards have their educational background in the field of economic studies. The significant number of background in engineering sciences is no surprise considering the sector segmentation of the largest companies within this study, which shows a large number of companies operating in e.g. industrial sectors (table 1). Notably, 30% of the individuals have double degrees.

The level of education turned out to be tricky to measure in all three countries. For example, the Swedish “Civilekonomexamen” was sometimes provided as M.Sc and sometimes B.Sc, and older education was shorter in many countries making an objective comparison and conclusions impossible for us out of the data available. And once again, the Danish Corporate Code stipulates the board members to provide skills that make them suitable for their task, compared to the Swedish and Finnish way of companies providing education and relevant job experience.

6.2 Network statistics

So, according to the corporate Codes, companies are to provide the corporate affiliations to their stakeholders in order to facilitate monitoring. We collected the data from the annual reports and ran it in UCINet for analysis on the aggregated levels. The results will now be presented first on country, then on company level and finally on individual level with answers to the objectives 1a and 1b. The network statistics will be concluded by combining the results from company and individual levels in order to meet our research objective 1c.
6.2.1 National interlocking directorates between companies

<table>
<thead>
<tr>
<th></th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of companies</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>Number of connected companies</td>
<td>35</td>
<td>45</td>
<td>44</td>
<td>124</td>
</tr>
<tr>
<td>Number of executive positions</td>
<td>7</td>
<td>17</td>
<td>33</td>
<td>57</td>
</tr>
<tr>
<td>Number of non-executive positions</td>
<td>299</td>
<td>354</td>
<td>373</td>
<td>1026</td>
</tr>
<tr>
<td>Number of interlocks</td>
<td>107</td>
<td>148</td>
<td>387</td>
<td>642</td>
</tr>
<tr>
<td>Number of strong Interlocks</td>
<td>4</td>
<td>11</td>
<td>31</td>
<td>46</td>
</tr>
<tr>
<td>Mean</td>
<td>2,14</td>
<td>2,96</td>
<td>7,74</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0,22</td>
<td>0,26</td>
<td>0,50</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>0,044</td>
<td>0,060</td>
<td>0,158</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Network statistics of national interlocking directorates between companies

Source: own database

1. Strong ID’s: companies connected with two or more individuals.
2. Mean: No of ID’s divided by no of companies.
3. Total sample size: 1026 non.executive. +57 exec board positions=1083.

To clarify the data in the table 4 and to present the companies involved, we also present the results of our NetDraw-analysis by the following visualization of the national interlocking directorates:

Figure 3: Visualization of national interlocking directorates networks between companies

Denmark:

Source: own database

1. Each node in the Figure is a corporation
2. A link between two nodes represents the existence of at least one interlock between two corporations.
3. Strong ties visible as thicker lines.

Of the 50 companies, 35 have one or more corporate interlocks and 31 companies of these are at least indirectly linked to each other.

**Finland:**

Source: own database

Of the 50 companies, 45 have one or more corporate interlocks and 41 companies of these are at least indirectly linked to each other.

**Sweden:**
Of the 50 companies, 44 have one or more corporate interlocks and all of these companies are at least indirectly linked to each other. A higher connectedness and number of strong ties is visible in Sweden.

Denmark has 56%, Finland 57.5% and Sweden 50.7% individuals with only one board position, thus not creating any interlocks. The slightly lower proportion of individuals with only one board membership in Sweden could be interpreted as an indication of the IDNs in Sweden being more interlocked and have more “big linkers” connecting more companies than the board members in the other two countries. This will be discussed further below.

In comparison to Van Veen & Kratzer (2011, p. 9), the network densities in our study (in table 4) for the three countries were lower. Their study had densities of 0.12; 0.21; and 0.22 compared to our findings of 0.044; 0.060 and 0.158 for Denmark, Finland and Sweden respectively. Although the absolute difference could be considered quite large, the sample selection is likely to be a significant contributor. As we selected more companies from each country, our sample includes more small companies (especially from Denmark), and this has resulted in quite a few companies being totally isolated, without contributing any interlocks and therefore lowering the densities.

Our findings are aligned with those of Van Veen & Kratzer (2011, p. 12), in the sense that the largest standard deviations correspond to highest means, which they suggested to indicate an existence of a central cluster of core firms (in these countries with highest means and standard deviations), that serve as strong connectors to the rest of firms. The Swedish firms definitely appear to have such a structure of interlocking directorates, which finding is further strengthened when taking a look at the strong interlocks per country and the table 5, which exemplifies the most central Swedish companies having about double the connections compared to the others. The visualization of the densest interlocking directorates network in Sweden in figure 4 confirms these findings of the dominance of Swedish firms in this study. The Swedish firms have by far the most extensive national intercorporate network among the sample (387 interlocks, table 4) compared to Finland (148) and Denmark (127), suggesting a lot more interconnected network in Sweden. This is confirmed by the density, and the Swedish companies have clearly the densest national network compared to Finland and Denmark, indicating higher connectedness among companies.

The mean number of interlocks per company within countries is around the same for Denmark and Finland as it was in the Van Veen & Kratzer (2011) study (2.14 and 2.96 compared to 1.5 and 2.0, respectively), while for Sweden it is over three and a half times as high, being 7.74 compared to 2.2. There can be two explanations for this. First could be the sample choice: as we studied 50 companies instead of the 26 in Van Veen & Kratzer, this suggests that much a denser network is discovered if a larger sample of companies is scrutinized. However, if the sample size is not the explaining factor, this leaves us with only one other plausible explanation: the interconnectedness of the Swedish corporate network has increased significantly since 2011.
These findings provide an unambiguous answer to meeting our research objective 1b: Sweden has by far the densest corporate network of the Nordic countries in this study by density, number of interlocks and number of strong interlocks.

6.2.2 The most central firms in the Nordic network

In table 5 we present the results for identifying the most central firms, called by Heemskerk “the organizing pillars” (2013, p. 89-90) and in figure 4 the results of the NetDraw-analysis of these companies are visualized. These results will later (in section 6.2.4) lead us to meet the research objective 1c.

Table 5: Descriptive data of the most central firms in the Nordic network

<table>
<thead>
<tr>
<th>Denmark: Company</th>
<th>Sector:</th>
<th>ID:</th>
<th>Finland: Company</th>
<th>Sector:</th>
<th>ID:</th>
<th>Sweden: Company</th>
<th>Sector:</th>
<th>ID:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novo Nordisk B</td>
<td>Health Care</td>
<td>10</td>
<td>Rautaruukki Basic Mat.</td>
<td>12</td>
<td>Svenska Handelsbank Financials</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novozymes B</td>
<td>Health Care</td>
<td>10</td>
<td>Stora Enso Basic Mat.</td>
<td>12</td>
<td>Industrivärden Financials</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vestas Wind Systems</td>
<td>Oil&amp;Gas</td>
<td>9</td>
<td>Sampo Financials</td>
<td>10</td>
<td>SSAB Basic Mat.</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALK-Abelló B</td>
<td>Health Care</td>
<td>8</td>
<td>Wärtsilä Industries</td>
<td>10</td>
<td>Ericsson Technology</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topdanmark</td>
<td>Financials</td>
<td>7</td>
<td>Fiskars Cons. Goods</td>
<td>8</td>
<td>Husqvarna Cons. Goods</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLSmith &amp; Co.</td>
<td>Industrials</td>
<td>6</td>
<td>Neste Oil Oil&amp;Gas</td>
<td>8</td>
<td>Investor Financials</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DFDS</td>
<td>Industrials</td>
<td>5</td>
<td>Tikkurila Industrials</td>
<td>8</td>
<td>Sandvik Industrials</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NKT Holding</td>
<td>Industrials</td>
<td>5</td>
<td>Finnair Cons. Services</td>
<td>7</td>
<td>SCA Cons. Goods</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDC</td>
<td>Telecom.</td>
<td>5</td>
<td>Amer Sports Cons. Goods</td>
<td>6</td>
<td>Skanska Industrials</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.P. Møller - Mærsk</td>
<td>Industrials</td>
<td>4</td>
<td>Kone Industrials</td>
<td>6</td>
<td>Atlas Copco Industrials</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coloplast B</td>
<td>Health Care</td>
<td>4</td>
<td>Nokian Tyres Cons. Goods</td>
<td>6</td>
<td>LE Lundbergföretagen Financials</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Lundbeck A/S</td>
<td>Health Care</td>
<td>4</td>
<td>Outopec Industrials</td>
<td>6</td>
<td>Holmen Basic Mat.</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schouw &amp; Co.</td>
<td>Industrials</td>
<td>4</td>
<td>Stockmann Cons. Services</td>
<td>6</td>
<td>SKF Industrials</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tryg A/S</td>
<td>Financials</td>
<td>4</td>
<td>Nokia Technology</td>
<td>5</td>
<td>Volvo Industrials</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auriga</td>
<td>Materials</td>
<td>3</td>
<td>Sanoma Cons. Services</td>
<td>5</td>
<td>Alfa Laval Industrials</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own database

The 15 companies from each market is purely an arbitrary number and a convenient choice. However, the figures are comparable between each other and it is easy to corroborate the previous finding of the densest network being in Sweden. Most central Swedish companies also create more interlocks than the Danish and Finnish companies together. Moreover, the figure 4 shows how “small world” the corporate network between these 45 companies is:
The figure 4 exemplifies the intertwining of the most central companies, emphasizing the finding that all companies are at least indirectly connected to each other through the director interlocks. In other words, when the networks among the 15 most central companies from each country are analysed, we see that they are all connected through the board members; it also exemplifies that interlocks in the studied Nordic countries go across the borders.

6.2.3 The Corporate Elite

According to the corporate Code, the directors in the corporate elite are ultimately responsible for the decisions made in corporations. And, as Bohman (2010, p. 11-13) puts it “the directors of the largest firms constitute the economic elite, and their decisions influence the economic life of the society”. These decisions are made in a context which is captured by the interlock networks, and therefore we now concentrate on the corporate elite. The results in this section will later be combined with the results in 6.2.2. in order to be able to meet our research objective 1c in section 6.2.4.

Of the 844 individuals, 177 were linkers, i.e. individuals creating at least one interlock. In other words, 20.97% of the individuals in this study created all the interlocks, i.e. 79.03% of individuals had only one board position. In order to be able to present the findings in a reasonable space and in order to make the visualizations easier to interpret, we present the 52 individuals who in this study had 3 or more corporate board positions.
In addition to presenting the individuals, figure 5 provides the results of the NetDraw analysis in order to exemplify the interconnectedness of the corporate elite within each country:

Figure 5: Visualization of the national networks of the 52 biggest linkers (3 or more corporate positions) of the study country by country:

**Denmark:**

![Diagram of Denmark's national network of the 52 biggest linkers.](Image)

Source: own database

1. A red circle represents an individual
2. A blue square represents a company

11 individuals concentrated in two clusters and two isolates

**Finland:**

![Diagram of Finland's national network of the 52 biggest linkers.](Image)

Source: own database
14 individuals, distributed in two clusters and one individual isolated, providing no national interlocks.

**Sweden:**

![Diagram of Sweden's corporate elite network](image)

Source: own database

Clearly the largest representation of the elite in the sample countries with 27 individuals; also the most interconnected as all individuals in the elite are at least distantly linked to each other. This could be an indication in line with Bohman’s reasoning (2010, p. 26-27) that there are more blockholding companies represented on the boards in Sweden.

In this study, 11 directors from Denmark, 14 from Finland and 27 from Sweden constitute the corporate elite. The directors and their corporate connections are presented in the figure 5. This is the group of directors, who are “the most significant decision makers and users of power within a corporate framework”. Visualizations in figure 5 emphasize the differences of the level of intertwinement of the elite in the different countries.

However, these visualizations in figure 5 only show the national networks (to corporations inside each country) of the 52 most connected individuals of this study, ignoring the cross-border interlocks (for example, an individual being on boards of a Finnish and a Swedish company and therefore connecting them) among the Nordic network.

Therefore, we also present here a post-hoc finding and as an additional piece of information we present the figure 6 in order to emphasize the overall interconnectedness of the corporate elite within and between the Nordic countries of the sample. This figure exemplifies the cross-border connectedness of the corporate elite in the Nordic area. Apart from two individuals, all the rest are at least indirectly connected to each other. This corporate elite of 52 directors create interlocks between 92 of the 150 possible companies, and only two of them do not share any boards with someone else among the elite.
Figure 6: Visualization of the transnational network of the 52 big linkers in the Nordics
Source: own database
1. A red circle represents an individual
2. A blue square represents a company

Figure 6 shows that the 52 big linkers constitute a staggeringly interconnected network: apart from two individuals, all the rest are interconnected with each other on the Nordic cross-border level. However, if we compare these same individuals on the national levels (Figure 4), we can see that, apart from the fully interconnected Swedish network, there are national clusters created by individuals in Danish and Finnish companies. There are altogether 8 unconnected clusters (or individuals) among the corporate elite, while there is only one cluster and two isolated individuals if we take into account also the cross-border interlocks. This implies that the full Nordic network on this level of 52 biggest linkers is much more interconnected than the national networks separately; the cross-border interlocks act as important connectors of the national networks to a larger, pan-Nordic network. The full Nordic cross-border network is significantly more connected than the national networks.

Although this cross-border dimension doesn’t contribute this study by helping us to meet any of the objectives, we think that the finding is important to point out and we also suggest further studies around the subject (in section 7.4).

6.2.4 The involvement of the most central directors with the most central companies
The findings in 6.2.2 and 6.2.3 now facilitate us to answer the research question 1c about the involvement of the elite in the most central firms:

As the 52 individuals is quite large a group to analyze, we concentrate on the top of the elite; the directors holding the most board positions.
Table 6: The top of the elite in the Nordic countries (4 or more board positions)
Source: own database

<table>
<thead>
<tr>
<th>Name</th>
<th>Birth year</th>
<th>Nationality</th>
<th>Board seats</th>
<th>Seats in the most central firms</th>
<th>% of seats in the most central firms</th>
<th>Seats in financial companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lundberg, Fredrik</td>
<td>1951</td>
<td>Sweden</td>
<td>7</td>
<td>6</td>
<td>86 %</td>
<td>4</td>
</tr>
<tr>
<td>Nyrén, Anders</td>
<td>1954</td>
<td>Sweden</td>
<td>7</td>
<td>7</td>
<td>100 %</td>
<td>2</td>
</tr>
<tr>
<td>Litzén, Ulla</td>
<td>1956</td>
<td>Sweden</td>
<td>6</td>
<td>4</td>
<td>67 %</td>
<td>0</td>
</tr>
<tr>
<td>Martin-Löf, Sverker</td>
<td>1943</td>
<td>Sweden</td>
<td>6</td>
<td>6</td>
<td>100 %</td>
<td>2</td>
</tr>
<tr>
<td>Ryöppönen, Hannu</td>
<td>1952</td>
<td>Finland</td>
<td>6</td>
<td>4</td>
<td>67 %</td>
<td>0</td>
</tr>
<tr>
<td>Livfors, Mia Brunell</td>
<td>1965</td>
<td>Sweden</td>
<td>5</td>
<td>0</td>
<td>0 %</td>
<td>1</td>
</tr>
<tr>
<td>Wallenberg, Marcus</td>
<td>1956</td>
<td>Sweden</td>
<td>5</td>
<td>2</td>
<td>40 %</td>
<td>2</td>
</tr>
<tr>
<td>Westerberg, Lars</td>
<td>1948</td>
<td>Sweden</td>
<td>5</td>
<td>4</td>
<td>80 %</td>
<td>0</td>
</tr>
<tr>
<td>Bergh, Kaj-Gustaf</td>
<td>1955</td>
<td>Finland</td>
<td>4</td>
<td>3</td>
<td>75 %</td>
<td>0</td>
</tr>
<tr>
<td>Nielsen, Kurt Anker</td>
<td>1945</td>
<td>Denmark</td>
<td>4</td>
<td>3</td>
<td>75 %</td>
<td>0</td>
</tr>
<tr>
<td>Schörling, Melker</td>
<td>1947</td>
<td>Sweden</td>
<td>4</td>
<td>0</td>
<td>0 %</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>59</td>
<td>39</td>
<td>66 %</td>
<td></td>
</tr>
</tbody>
</table>

The top of the corporate elite is a relatively homogenous group of individuals. The majority of them are male, they generally were born in late 1940’s and 1950’s, and the majority of them are Swedish. The column ‘seats in financial companies’ shows how many of the board seats of the directors are in companies operating in the financial sector, which is directly related to the (corporate governance aspects of) CRD IV (OJ No: L176/338, 27.06.2013). While the spread of seats is 0-4, only six of the most connected 11 directors are involved in the financial sector, and have the potential to be affected by the CRD IV board position limitations and therefore need to assess their board duties before the CRD IV is fully implemented. Although the sample used in this study wasn’t primarily designed to capture the magnitude of impact of the CRD IV (as this study mainly concentrates on the supervisory boards), it seems that the current impact of the CRD IV will be rather small in the studied geographical area, and has more likely been developed to control the interconnectedness between large financial institutions in Central Europe.

However, this 1,30% of the individuals create 7,48% (48) of all interlocks (642) in this study. The best connected Swedish director had 7, Finnish 6 and Danish 4 board seats. Table 6 shows that almost two-thirds of the seats of the most connected corporate elite members in the three countries are in the most central firms, indicating very concentrated corporate power.

Keeping in mind that according to principles of corporate governance the concentration of power is considered riskier, and if we look at this situation from Bohman’s perspective (2010, p. 11-13) and see these directors as “the most significant decision makers and users of power within a corporate framework”, and on the other hand big companies as very important social actors in western society, we can question whether this situation is in line with the corporate Codes. Therefore, considering the findings in table 6 and the networks presented above in figures 5 and 6, and on the other hand the independencies of the directors, a question arises: for whom is this interconnectedness beneficial?
From an agency theory perspective (Fama & Jensen, 1983), the interests of the directors may very well be aligned with those of the companies and vice versa, as the interlocks may provide advantages for both in the form of information channels and by having impact on performance and recruitment, as suggested by Bohman (2010, p. 26-27).

However, if taking a look at the situation outside of the directors and companies, from the stakeholder perspective, in which all constituents (not just the shareholders) are to be taken into account (Gibson, 2000, p. 245), the situation looks a little different. For example, EU doesn’t see concentration of corporate power as beneficial for all constituents, and is therefore implementing the CRD IV in the financial sector (OJ No: L176/338, 27.06.2013). In other words, in order to enhance governance and transparency, EU legislation is at the moment trying to prevent too much of interconnectedness exactly like this regarding directors who are involved with the financial sector. Our findings combined with the ongoing legislative development in EU suggest that maybe these individuals, because of their interconnectedness, are not really able to be as independent directors as they appear.

Furthermore, as Post et al. (2002) argue that in the long run, the stakeholder approach is the most useful management model in order to create organizational wealth, and on the other hand, Gibson (2000, p. 255) argues for stakeholder theory’s moral justification. Disregarding what would be the reason for adopting the stakeholder approach further, it seems that there may very well be reasons for doing so and according to our findings, it appears that there still is a lot to do to if a wider stakeholder approach is seen desirable to be adopted in the studied Nordic countries. However, regarding the interconnectedness of corporate directors in financial sector and the impact of CRD IV, the situation seems to be quite balanced as there appears to be only few directors potentially affected by the CRD IV.

Because we agree with John & Senbet (1998, p. 379-380) and consider the independent directors crucial in any company for their monitoring role, we think this is an important issue to raise. This leads the discussion to the next and the last section, independence.

6.3 Board Independence
First, we examined the companies’ independence statements from the principles in the domestic Codes country by country. Then we calculated them into the following table to compare the aggregated level of independence. The results are presented in tables 7 and 8.

6.3.1 Independence information towards the company
Here are the independencies as provided by the companies in the traditional way of assessing them into insiders and outsiders, required by the corporate Codes.

<table>
<thead>
<tr>
<th></th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent directors</td>
<td>216</td>
<td>74,48%</td>
<td>316</td>
<td>353</td>
</tr>
<tr>
<td>Non-independent directors</td>
<td>74</td>
<td>25,52%</td>
<td>40</td>
<td>53</td>
</tr>
<tr>
<td>Total:</td>
<td>290</td>
<td>100,00%</td>
<td>356</td>
<td>406</td>
</tr>
<tr>
<td>N/A</td>
<td>(5)</td>
<td>(5)</td>
<td>(0)</td>
<td></td>
</tr>
</tbody>
</table>

Table 7: Independence information towards the company provided by the companies themselves
Source: own database
1. 15 CEOs without board position excluded from the original sample.
2. Matas 5 board members (D) and Basware, also 5 board members, (F) did not provide any independence info, therefore they were also excluded.
3. Sample size: 1052 entries.
The Finnish companies state the highest percentage of independent directors on their boards, while Sweden has a little lower and Denmark the lowest. This is still aligned with all the three Code requirements (>50% independent towards the company). We accept this is perhaps not being the most accurate way of comparing these since the Danish Code only has one independence measurement requirement, while companies in Finland and Sweden divide the independence into two parts; towards company and towards major shareholders. In the Danish code you are either independent towards both company and major shareholders, or you are not; which makes you non-independent no matter the reason. All in all, the companies are good at complying with the principles in the Codes, providing independence information towards the companies since only 1 out of 150 did not provide any explanation at all to why they did not provide any independence information, while 149 out of 150 either complied to the recommendations or gave an explanation for the deviation.

Of the excluded companies, the Danish company Matas explained in their corporate governance statement: “Currently, the Board of Directors consists of five members and has elected a chairman and a deputy chairman among its members. Four of the five members of the Board of Directors, including the chairman, are independent, while one member is a partner of CVC Capital Partners that manages and advises certain CVC funds which indirectly owns shares in the company”. They give the information, but we could not determine who this individual non-independent board member was with certainty so we decided to exclude all five board members in our calculations. For the Finnish company Basware (also five board members), we found no board independence at all in the annual report or in the corporate governance report, so we expect the stock market surveillance in Helsinki (NASDAQ OMX, 2013a) to react to this since it is their job to make sure the Finnish Code is followed by the companies listed at the domestic stock market. In all Swedish companies independence information was provided. Our result is very similar to the result from NASDAQ OMX (2011, p. 22) where they gave a possible explanation to the increased number of deviations from Codes being a result of having smaller companies within the sample, Since we made a convenient choice of 50 companies from each country, we also ended up with Mid- and Small-cap companies in our sample (see Figure 1).

6.3.2 Independence information towards major shareholders
Here are the independencies towards the company’s major shareholders as provided by the companies in the traditional way of assessing them into insiders and outsiders, required by the corporate Codes.

<table>
<thead>
<tr>
<th></th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent directors</td>
<td>116</td>
<td>69,46%</td>
<td>293</td>
<td>82,54%</td>
</tr>
<tr>
<td>Non-independent directors</td>
<td>51</td>
<td>30,54%</td>
<td>62</td>
<td>17,46%</td>
</tr>
<tr>
<td>Total:</td>
<td>167</td>
<td>100,00%</td>
<td>355</td>
<td>100,00%</td>
</tr>
<tr>
<td>N/A</td>
<td>(128)</td>
<td>(1)</td>
<td>(0)</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: Independence information towards major shareholders provided by the companies themselves
Source: own database
1. Danish companies are not obliged to provide specific information on shareholder independence according to the Danish Code. Some of them have chosen to do so anyways, giving us a sample of 928 entries.
2. The reliability of the Danish independence towards major shareholders in this table cannot be considered to be as reliable as for the other countries since 43,39% of the Danish data was N/A.
When analyzing the independence towards major shareholders, we need to remind ourselves once again about the differences in the Codes in the three countries. In Finland and Sweden, that applies an agency approach on the Codes, at least two of the board members that already are independent of the company also need to be independent from major shareholders in order to fulfil the recommendations in the Code. For Sweden, that requirement is fully met while only one board member in Nokia was not accounted for (aside from the five directors in Basware we already excluded earlier due to lack of independence information). In the Danish Code we learned that the companies are only recommended to provide 100% independence of both company and major shareholders from a stakeholder perspective, but we realized in practice during the data collection that while some provided information according to the Danish Code, others chose to provide the information in the same fashion as the Finnish and Swedish Codes suggest. To handle this problem in this research, we simply had to exclude the data where we could not be sure of. We ended up with excluding 128 Danish individual board members, which are 43,39% of all the Danish entries.

Statistically speaking, this means the Danish dataset was not representative for us regarding this part of our study. Nor is the data we actually found as reliable and trustworthy as the data we could collect from the other countries. We cannot make assumptions of what we do not know, nor can we trust what we have to be accurate since we do not know if the non-available data would have given us a different conclusion if the companies in Denmark had provided independence towards shareholders according to their own Code or in the same way as the other two countries in our sample. Therefore, we will only make the conclusion that Finland yet again has the highest percentage of independent directors towards major shareholders on their boards (82,54%) compared to the Swedish companies (70,69%). Or in other words, Swedish boards consist of a higher percentage of board members having interlocks to major shareholders than Finnish boards, with 29,31% compared to 17,46%.

Our overall impression on how the companies provide their independence information is according to the Codes, and our result corroborates with both the NASDAQ OMX Nordic study (2011) and the Corporate Governance study on EU-level (RiskMetrics Group, 2009). With a few exceptions most of our sample of 150 companies complied with the domestic Codes, or explained why this did not suit them. Surprisingly many had explanations to their boards not fulfilling the recommended amount of independent directors instead of compliances in this part of the Code, but since that is allowed within this “soft law” we have no reason to question that this self-regulation works.

So, in order to meet the objective 2b we conclude the harmonization could be improved between the countries in our sample. Danish Corporate Code has a stakeholder perspective while the Finnish and Swedish take a pure shareholder view and in none of the Codes there is a clear definition of what an independent director is. Instead, all Codes are providing long lists with different parameters to consider, ruling out the non-independent board members. Since the Danish companies are not consistent in their reporting of independence in the same way as the other two countries, and we cannot compare apples and oranges we needed to find a scientifically accepted and reliable method to do this. That proved to be harder than we expected, mostly because of the fact we are bound to data that is provided
by others and that we cannot rely on previous researchers’ methods and models since we have not found any studies combining the interlocking directors network with a corporate governance independence study. After a lot of research we finally found a method we could accept, although we acknowledge there are still few tools within the scientific world to measure differences in independence. This is something that could be improved in the future, since this is not a problem in just our study. RiskMetrics Group (2009) also found variations in the Codes in other EU-countries.

6.3.3 Insider-outsider theory applied on independence
The rules and regulations surrounding the companies are supposed to be harmonized as much as possible, to show a “true and fair view” of the company towards shareholders (and stakeholders when they are implemented in the Code), with special focus on non-independent (inside) directors and independent (outside) directors according to John & Senbet (1998), Tonello (2010) and Zorn et al. (2012). We have also seen these thoughts in the aftermath of the Enron scandal (Cohan, 2002; Healy & Palepu, 2003; Heath & Norman, 2004). On the other hand, Bathala & Rao (1985, p. 62) but also Zorn et al. (2012) point out that there is a risk of having too many outsiders on a board monitoring one or a few insiders instead of a healthy mix of both insiders and outsiders working together towards the best interest of the firm and shareholders. This mix is also supported by Vinten (2002).

In order to be able to assess if the independence information gives a “true and fair view” (objective 2c), even if the information is provided in two totally different forms, we will apply the insider-outsider theory on our data with the same method used by Beasley (1996), Coles et al. (2008) and Rosa et al. (2004). They divide the board members into not only two groups of insiders and outsiders, but three different groups based on the director’s level of independence. Outsiders are the board members that are totally independent both towards the company but also towards major shareholders, while insiders are the non-independent directors towards the company, and “grey directors” are in this study the individual directors that are left after we have listed the pure insiders (non-independent) and outsiders (independent). The benefits of this method is that we can both measure and compare the information between the countries but also make comparisons to the results we got in the previous tables from the information provided by the companies.

<table>
<thead>
<tr>
<th></th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside directors</td>
<td>171</td>
<td>57,97%</td>
<td>274</td>
<td>77,18%</td>
</tr>
<tr>
<td>Grey directors</td>
<td>45</td>
<td>15,25%</td>
<td>42</td>
<td>11,83%</td>
</tr>
<tr>
<td>Inside directors</td>
<td>79</td>
<td>26,78%</td>
<td>39</td>
<td>10,99%</td>
</tr>
<tr>
<td>Total:</td>
<td>295</td>
<td>100,00%</td>
<td>355</td>
<td>100,00%</td>
</tr>
<tr>
<td>N/A</td>
<td>(11)</td>
<td>(1)</td>
<td>(0)</td>
<td></td>
</tr>
</tbody>
</table>

Table 9: Independencies calculated by the insider-outsider theory
Source: own database
1. Sample size in this table is 1056, and we lack information for 3,59 % of the Danish companies.  
2. Hence, we suggest the Danish numbers should be interpreted with little more caution since they are only forced by law to provide information about total independence and some use the same methods of providing independence as the Codes in Finland and Sweden recommends.

In comparison to the independence information the companies provide in their annual reports and corporate governance (table 7 and 8), we find with help of the insider-outsider theory method that Denmark’s percentage of totally independent directors increases from 50,21% to 57,97%, while the proportion of independent directors on the Finnish boards is
reduced from 82.54% to 77.18% and the proportion of independent board members in Sweden is reduced even more from 70.69% to 61.58%.

Independent directors are according to theory considered to be beneficial to the company, especially when it comes to the monitoring and supervisory functions to protect shareholders and stakeholders (RiskMetrics Group, 2009, p. 101). If we then look at the calculations of Inside directors and Grey directors, we can see that the increase of independent directors in Denmark is followed by a reduced percentage of the ones being non-independent or possibly having another agenda (the “grey directors”). And of course, the opposite happens in the Finnish and Swedish columns with an increase in Insiders and Grey directors compared to the information provided by the companies.

Overall, all countries have higher proportion of outside directors than in other independence studies (Beasley, 1996; Rosa et al. 2008). What is significant to us is that, even if all information is in line with the domestic Codes, our calculations of independence do not fully correlate to the ones provided by the corporations. The Danish proportion of independence increases while inspected on aggregated level with this method, while the proportions decrease in the countries that use the two-fold independence statements (Finland and Sweden) compared to what is given by the corporations. From a Finnish and Swedish perspective, the Danish Code deviates from the required information to be presented since the Danish companies only are obliged to present if they are totally independent (from both company and major shareholders) or not. Whereas from a Danish perspective, it is the Finnish and Swedish standards that deviate from the European harmonization idea.

We can see pros and cons with both types of disclosure. One benefit of having companies providing two different independence measurements such as in Finland and Sweden, is that the stakeholders get more information about not only if the directors are independent, but also if it is towards the company or major shareholders. This is not covered by the Danish Code, where they either are independent or not. An active investor could though, with help of the additional information about “other significant information”, i.e. interlocks (if provided by the company) or via subscriptions to databases (like Retriever Business or AMADEUS) figure out if the non-independence is towards the company itself or towards a major shareholder of the company. Personally we are more in line with the harmonization idea, since all countries are part of the EU and we also consider stakeholders to be important.

Since harmonization between countries is considered to be important and good from an EU-perspective, we then suggest this is one area to look into for legislators and Code groups in these countries, both regarding what defines an independent director but also how this information should be measured so that the information in the annual reports or corporate governance report easily can be assessed and compared within the EU-area. A “comply or explain” approach assumes stakeholders and shareholders to be active and informed, but can we really expect everyone to know all these smaller but also important differences we have found during this research? We would like to say that is asking too much. This task of trying to make the companies present a “true and fair view” should be the responsibility of regulators. And even if we appreciate the increased amount of
additional information, we still believe in a harmonized corporate Code between all EU-countries to be more beneficial to all stakeholders.

6.3.4 Independence of the most central directors according to insider-outsider theory

To even further explain what we mean by the need for a reconsideration regarding the way independence is provided today and if the tools recommended in the Codes really are enough to present a “true and fair view”, we examine the most central directors in our sample from the independence perspective. Table 10 shows their total number of board assignments, but also the distribution of their positions measured by the insider-outsider theory.

<table>
<thead>
<tr>
<th>Name</th>
<th>Birth year</th>
<th>Nationality</th>
<th>Gender</th>
<th>Board seats</th>
<th>Insider</th>
<th>Grey</th>
<th>Outsider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lundberg, Fredrik</td>
<td>1951</td>
<td>Sweden</td>
<td>M</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Nyrén, Anders</td>
<td>1954</td>
<td>Sweden</td>
<td>M</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Litzén, Ulla</td>
<td>1956</td>
<td>Sweden</td>
<td>F</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Martin-Löf, Sverker</td>
<td>1943</td>
<td>Sweden</td>
<td>M</td>
<td>6</td>
<td>0</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Ryöppönen, Hannu</td>
<td>1952</td>
<td>Finland</td>
<td>M</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Livfors, Mia Brunell</td>
<td>1965</td>
<td>Sweden</td>
<td>F</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Wallenberg, Marcus</td>
<td>1956</td>
<td>Sweden</td>
<td>M</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Westerberg, Lars</td>
<td>1948</td>
<td>Sweden</td>
<td>M</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Bergh, Kaj-Gustaf</td>
<td>1955</td>
<td>Finland</td>
<td>M</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Nielsen, Kurt Anker</td>
<td>1945</td>
<td>Denmark</td>
<td>M</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Schörling, Melker</td>
<td>1947</td>
<td>Sweden</td>
<td>M</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

| Total                 | 59         | 5           | 31       | 23         |

Table 10: Independence of the most central directors according to insider-outsider theory
Source: own database

Out of 844 unique individuals in our sample, these 11 people hold 59 of the total 1083 board positions. These are the very same 1.30% of individuals we have explained connecting the most central firms (the organizing pillars), creating 7.48% of all existing interlocks in this study (see table 6). We can now also add the information of these individuals that are holding not only most of the board assignments and have a more extensive interlocking networks, but they also hold more “grey positions” than the average board members in our sample, i.e. more than half of their board positions are due to them having major shareholder interest. These are also the ones that are really important to shareholders and others to get accurate information about, since they are board members but their interest in the company might deviate from what is in the best interest of all the owners of the firm because of their high proportion of “grey directorships”.

We are suggesting that Bohman (2010, p. 26-27) may be correct when he says that linked firms have the same organizational structure, as we can see a pattern of many of the corporate elite individuals are not only on the board of many firms. They are also often on the board of major shareholders to the very same companies (since we defined individuals with major shareholder interest to be “grey directors”). And, if we refer back to our findings in chapter 6.2.4, the very same corporate elite also are on the most central firms.
After we have measured the level of independence and the interlocking directorates network we would like to say these individuals are in fact not at all as independent as they are stated to be in the annual reports and corporate governance documents, since they are connected to many other companies at the same time. This is an independence finding that the current Codes are not capturing due to the fact each independence is to be disclosed by the companies one by one, as if they operated in solitude. From the network study part, we can say this is not the case. Firms are connected to each other, at least through the network of directors which makes their independence questionable to us.

6.4 Concluding discussion

In this paper, we deal with independence not only within the network of aggregated corporate framework, but also on individual and corporate levels since this is where the data and regulatory framework derive from and usually is viewed upon from an outside perspective. This makes our research question both extensive and also complex to its nature. Although we chose a sample that we expected to be harmonized in most aspects, we encountered practical problems during the research process and have consulted literature over and over to find the best suitable ways of dealing with these problems. So, in order to be able to answer our research question, objective 3, we will need to combine and discuss our findings in both objective 1 and 2:

A picture can say more than a thousand words, so we have included visualisations to support our findings in this paper whenever possible. Sweden proved to have most individuals with interlocks between corporations, and also has the most interconnected network compared to the other two. And, Sweden proved by far to have the densest network while our findings for Denmark and Finland are aligned with van Veen & Kratzer’s findings (2011). We also identified the corporate elite and the central firms and with help of these findings, we were able to examine the involvement of the most central directors in the most central companies. Combining our findings with recent regulatory development by EU, we found implications that there is concentration of power among the organizing pillars and the elite, and that this may not be a desirable situation for all stakeholders. As the corporate governance principles are considering concentration of power to be more risky, they recommend independent directors to be present on the boards to decrease the risks. From an agency theory perspective this is often debated as something to be of shareholders interest only with the argument that they are the ones electing the board members at the AGM, choosing the directors they believe to be most beneficial to them. This is the case in Finland and Sweden. Denmark, in line with OECD and EU-principles, has chosen to take on a stakeholder perspective which makes the business of the firm not only relevant to the owners but also towards all stakeholders around the company.

As all three countries share a long history of cooperation and they are all members of the European Union, we expected the domestic Codes to be very harmonized. This was not the case due to their totally different theoretical foundations. It was positive that all but one company complied or explained their independence, although many had explanations instead of complying to the recommendations in this section. We believe that harmonizing the independence disclosure would improve the credibility and enhance trust on corporate governance providing a “true and fair view”. We also believe that a mutual theoretical basis for the Code within the EU would also be beneficial. We can see that the agency
perspective is easy for countries and firms to implement, although we are more in favor of a stakeholder perspective since huge scandals like Enron have proved to harm many more than just the owners of the firm. It would also be easier to assess and compare the information between firms in different countries if the outline was clear (shareholder or stakeholder view) for everyone, and if we want active investors and keep agency costs low we should try to provide the disclosed information in a similar way to reduce the risk of misinterpretations. One could of course argue that an EU-decree would reduce the autonomy of the individual countries. On the other hand, no decision is made on EU-level without democracy and countries have already agreed to have a very strict regulatory framework within the banking sector in EU in favor to reduce the risk of a new credit crisis, especially regarding in the form the financial information should be presented to make sure it is provided in the very same way no matter which country the information comes from. They also agreed on making sure the accountability of the board members are increased, the number of board seats has been limited to make sure the board members in these systemic important sector have time to focus on their tasks, but also making sure the board members stay independent and can monitor efficiently.

The deviations between the current disclosure and our method of dividing the directors in three groups; insiders, outsiders and “grey” is also supporting that there is room for improvement in both definitions on what is to be an independent director but also in how the information is to be provided by the companies. Especially so, if we want active stakeholders which the “comply or explain” approach is in favor for. We are both students in economics and business administration, while the majority of people buying stocks are not and there should be a good reason for all the information in the annual reports and corporate governance documents to be comprehensive. By examining the corporate elite and central firms we identified and examining their level of independence gave us even more reasons to question the independence information as it is to be provided today as not very “true and fair” at all, since two-thirds of the corporate elite’s total number of board positions are within the most powerful (central) firms. They are also the very same individuals with a higher proportion (>50%) of board memberships with clear connections to major shareholders than the average board member in our sample, suggesting that they might have other agendas and goals than all the stakeholders to the company. So, even if the independence information as it is to be disclosed today is both accurate and willingly provided by the companies when we only consider one company at the time, we begin to question if this solitary information really is contributive and useful to stakeholders. When we take the whole interlocking network into account, and even more the corporate elites’ network, we cannot support the way independence information is to be disclosed today since it is not really saying anything about the independence of the directors. The information from the 150 companies we went through from the three countries are not “true or fair” to the stakeholders, nor harmonized to each other or EU-principles. Independence is not even defined or assessed in a similar way, making comparisons by active stakeholders merely impossible.

All in favor of stakeholders (and shareholders), we have two suggestions to legislators and Code groups. They are to harmonize the Codes, at least within the EU so the information more easily can be assessed. That means to form a definition of what is to be considered an independent director, but also to list the parameters for deciding upon this and also state in
what form the independence should be disclosed by the companies. And of course, decide if the information in the domestic Codes should be for shareholders only or if stakeholders are to be included. Based on our findings and discussion above, we argue that instead of the current non-harmonized disclosures on independence, implementing a measurement based on insider-outsider theory would provide a truer and fairer view of the independencies. This would be the most cost-effective solution, although it will not solve the question about how independent directors with many board assignments can be when firms are interconnected. This is why we are leaning towards a solution like the CRD IV stipulates in the financial sector to be applied in other sectors, perhaps on the whole market. That would improve the harmonization, provide a “true and fair view”, limit the number of board seats a single director can have with the benefits of increased credibility and trust in independence.

6.5 Additional findings

The dual role of being a CEO and a member of the supervisory board is more common in Sweden than in the two other countries. Moreover, in the Danish sample dual roles were non-existent.

Disclosure of education and skills differs between Denmark and the two other countries -in Denmark only skills are stated, whereas in Finland and Sweden only the education is provided. All in all, the information disclosed by the companies varied a lot: some companies provided much information, while others were more opaque.

In general, most information in the 150 annual reports and Corporate governance statements were given in a similar form, but the amount of the disclosed information varied. Some companies provided all the interlocks and personal information recommended in the Code (Telia Sonera for example) while others disclosed no more than a minimum (Investor among others). Sometimes we even had to search for the information in several places, especially the independence parameter could be in one single line within a paragraph or as a note to the financial statement instead of in the corporate governance statement or close to the presentation of the individual board members. It may be because of the ownership structure of the company. At least it appeared to us like some companies did not consider that as important information. Harmonization on the disclosure of information would improve the capability of the (outside) stakeholders to assess and compare the companies.
7. Conclusions and contributions

In this chapter we will present our conclusions from the previous chapter and clearly stated answers to the research questions. Then follows our theoretical and practical contributions of our research, recommendations for further studies and last we will discuss the quality criteria.

7.1 Conclusions

We started this journey by asking the following research question:

*Regarding independence, what implications can individual board member’s interlocking network create on an aggregated corporate level in Denmark, Finland and Sweden?*

As we acknowledged the research question to be both extensive but also complex, we chose to form three objectives to outline the steps we are taking to reach our aim. We will therefore also follow the same method here as we stated in the beginning of this thesis.

7.1.1 Objective 1: The interlocking directorates network

We discovered that the Swedish corporate network is very interconnected compared to the other two countries. The network density in Finland and Denmark has remained on the same level in comparison to a previous study by van Veen & Kratzer (2011), while the density in Sweden was over 3.5 times as high in our study. We identified two possible explanations for this: either our sample selection was too different (larger) from the previous study, and therefore we captured a different network, or there has been a significant increase of density in the Swedish corporate network since 2011, when van Veen & Kratzer conducted their study.

Furthermore, we showed that the corporate elite is very interconnected and involved with the most central companies. We also identified that in order to take all stakeholders (such as the society in general) into account, a stakeholder theory approach could serve as a tool for achieving this goal. Furthermore, we pointed out that this is something EU is already trying to achieve, as we recognized that there already is current development by the EU within financial sector to improve transparency and governance, by implementing restrictions on the interconnectedness and concentration of power among the corporate elite.

7.1.2 Objective 2: Independence

The disclosure of independence according to the Code in each country was high, suggesting that the voluntary “comply or explain-approach” works well in practice, although we also noted that many companies are giving explanations instead of complying to the recommendations in the Code regarding the independence of the directors. All in all, our findings are in line with RiskMetrics Group’s study (2009) on corporate governance within the European Union.

Regarding the long Nordic cooperation and all three countries being EU-members, we expected the Codes to be more harmonized to each other than they actually were, but they differed not only from a theoretical point of view where Denmark takes all stakeholders into consideration in the Code while Finland and Sweden exclude everyone aside from shareholders. They also differed in practice in how the companies are to disclose director
independence, is a real problem when trying to make comparisons between the countries so we would like to say there is a lot to do in harmonizing the disclosure of independence on country and legislative level.

Since the independence information in the three countries turned out to be non-harmonized, we ended up measuring and comparing them according to the insider-outsider theory. We found the Danish companies having a higher proportion of independent directors on the boards than what we calculated from their own disclosure, while the proportions in Finland and Sweden decreased with this method. We interpret that Finnish companies, and Swedish to an ever higher extent, have more directors connected to major shareholders than their own disclosure shows, all in line with the Codes. We would like to say this deviation between the disclosed information and our own calculation is not in line with what is meant by “true and fair view”. This also suggests that even if the companies do provide accurate independence information when look at them in solitary, the aggregated calculations of independence information deviate from the disclosed. We cannot fully support the form independence is provided today since it is not really disclosing useful and comprehensive information. We would like to say there is need for either a more harmonized corporate governance code, or a development in scientific methods to deal with this type of problems.

7.1.3 Objective 3: Research question and purpose of this study

Even if the independence recommendations are voluntarily disclosed by almost every company in our sample, we often found explanations in this section instead of compliance. And, the fact that independence is provided by companies as if they would operate in solitude while we here show that there actually exists an extensive social network of interlocking directors, connecting companies to each other both on individual and domestic level but also between the three countries in our sample. We have also showed that the disclosure of independence is not harmonized between the countries, making comparisons impossible without using some kind of scientific method. There are very few methods available when working with information from the annual reports and corporate governance documents, and even less information on what interlocks actually are beneficial for, and for whom.

We therefore suggest the legislators to even further harmonize the Codes to improve the trust and credibility of the use of the a “comply or explain” corporate code so active stakeholders easily can assess and evaluate the information, as we cannot conclude that the independence information really provides a “true and fair view” as it is disclosed today. We also suggest for the scientific researchers to improve or develop better analysis methods (or use the insider-outsider theory) to calculate and compare independence on aggregated level, but also to further in-depth study the implications interlocking directorates network have on the independence. Still, the problem to assess the level of independence remains on aggregated level, especially if we take the interconnectedness of corporate elites’ and central firms’ network into account. Perhaps is it not such a bad idea to apply a limitation on board memberships in other sectors as the CRD IV-package is regulating the banking sector, to ensure that the directors are indeed independent and have sufficient time to focus on their tasks?
7.2 Theoretical contributions
We said in the beginning we were aiming for a theoretical contribution that would give more detailed information about how independence and interlocking directorates network are linked to each other within the three Nordic EU-countries. There have been network studies with a Scandinavian perspective presented earlier (Edling et al., 2012; Sinani et al., 2008), but to include Finland, using a larger sample than both van Veen & Kratzer (2011) and Heemskerk (2013) has contributed to theoretical knowledge by advancing the discussion filling the existing research gap. We have also shown that among these three countries, that share similar legislation, culture and historical cooperation, they have totally different foundation regarding who the legislation is for. Swedish and Finnish corporate governance Codes concerns only shareholders, while the Danish Code includes all stakeholders.

7.3 Practical contributions
The practical contribution is that these results can be of use to legislators, active stakeholders and researchers. By having questioned the accuracy and comprehensiveness of the current independence information disclosure within an aggregated business framework, we have pointed out problems to assess independence information. We recommended insider-outsider-theory as a possible tool for providing an improved and more “true and fair view” on independence disclosure. This paper could also serve as a guide on scientific methods and issues for researchers that would like to conduct further studies within this field, especially regarding deeper knowledge about the implications of an interlocking directorates network, as we merely scratched on the surface of this issue with our exploratory study.

7.4 Recommendations for further studies
Within research on corporate independence and interconnectedness, we provide some directions for further research.

First, the cross-sectional time frame limited the scope of findings in this paper. As this paper lays the foundation for further studies in these topics in the Nordics, employing longitudinal design could capture the change over time in the parameters we measured in order to identify trends within the field, for example if the positions as the most central companies are sought after by companies (in the fashion of Heemskerk, 2013, p. 89-90, 94-95).

Second, qualitative studies could be conducted in order to understand what is the nature and impact of the interlocking directorate networks on companies and society, and for understanding the possible underlying causal relationships and influence of the networks.

Third, once it has been understood what the effect of the networks is, we also realize that in the Nordics, the strength of the interlocks could be measured. For example, the interaction, number of meetings etc. could be assessed and used as a parameter to evaluate the importance of the ties more accurately (instead of using only the number of the interlocks).

Fourth, extending the scope of the network research outside the listed companies towards e.g. interest groups and state-owned companies could capture the magnitude of the
networks and the limits of their spheres of influence. Another direction could be shifting the focus from management towards the ownership networks of the companies and their intertwining.

Fifth, the figure 6 presented a very dense network of cross-border interlocks among the elite. The research in the field of cross-border interlocks in the Nordics could be taken further (in the fashion of Van Veen & Kratzer, 2011) and the reasons behind, and implications of the density could be discovered.

7.5 Quality criteria
Quality criteria is a tool to help a researcher to design a study in order to reduce the possibility of getting the answer wrong (Saunders et al., 2009, p. 156). However, it is also useful to employ quality criteria afterwards to persuade the reader and researcher herself to take the findings of a study account of and to evaluate its credibility -“What is it that makes the study believable and trustworthy?” (Robson, 2002, p. 93). Babbie (2004, p. 140-146) names two criteria: reliability and validity. In addition to these, Bryman & Bell (2011, p. 41-44) also introduce the criterion of replicability. Although Babbie continues that it is impossible to prove the ultimate validity, we discuss the criteria here in order to give the reader possibility to evaluate our assessment on the validity of this paper.

7.5.1 Reliability
Reliability evolves around the question that if a used technique, applied repeatedly in the same circumstances, would each time yield the same result, i.e. whether the measures devised for concepts in a study are consistent or stable, and therefore it is particularly important within quantitative research. (Babbie, 2004, p. 141; Bryman & Bell, 2011, p. 41). As has become clear to the reader, we approached this study from the natural scientist perspective and therefore we have used numerical data throughout this study (except in the few descriptive areas). This data has been collected from publicly available sources, it has been practically impossible to treat in any other way than by pure objectivity -a person either sits on a board of a company or doesn’t; a person either is independent or isn’t. It needs to be reminded, that any interlocks outside of our samples are not present, but that we think the sample size is large enough to convey a reliable picture of the phenomenon under investigation. Therefore we argue, that the stability and reliability of this research is solid - if exactly the same method and measurements on the same sources of data are applied at another point in time, it is unlikely that results would be any different, apart from the ever present possibility of human errors. This leads to the next criterion: replicability.

7.5.2 Replicability
Replicability is a way to provide credibility of a study. For several reasons, for example to test and either confirm or question the findings (Babbie, 2004, p. 8), there may arise a reason to replicate it. In such a case, Bryman & Bell (2011, p. 41) say that “a study must be replicable--if a researcher does not spell out his or her procedures in great detail, replication is impossible”. In this study, we have paid great effort to present our methodology and procedures as thoroughly as we have seen necessary, and therefore we are confident about the replicability of this study.
7.5.3 Validity

In essence, validity is about whether a measurement is accurately measuring what a researcher intends to measure (Babbie, 2004, p. 143). Bryman & Bell (2011, p. 42) consider validity to be “in many ways the most important criterion of research”, and distinguish it into four types that will be discussed here: measurement validity, internal validity, external validity and ecological validity.

Measurement validity questions if what we measure really measures what we think it measures (Robson, 2002, p. 102). On the independencies and descriptive parts of this study, we don’t see any reason to question the measurement validity, since it is purely numerical data of simple attributes we collected, supported by our decision on the cross-sectional method which improves the non-manipulability of the variables (Bryman & Bell, 2011, p. 53). However, the measurement validity on the network study can be argued to be weaker. We have accurately constructed the networks, so as such they are valid - people on the same boards surely know each other on some level. This doesn’t necessarily mean, that these findings have any impact on anything - among other things interlocks are information carriers and have impact on many things as we have stated, but in this study, we don’t know anything about the strength of the ties, the direction of information flow or their real impact etc. Identifying the most dense business network only measures how many people know each other; it hints at, but is not directly a sign of something such as concentration of power or need for improved corporate governance rules etc. That goes beyond the scope of this paper, and therefore measurement validity on the network aspect may be weaker than on other aspects.

Internal validity is concerned with the issue of causality Bryman & Bell (2011, p. 42). Due to our research design and the cross-sectional time horizon, we were not really trying to find causal relationships but associations and therefore we don’t really see internal validity applicable to this study. In the case it were applied, the internal validity would be relatively weak, as from our findings it is hard to make any solid inferences.

External validity is linked to the generalizability of the results beyond the study at hand (Bryman & Bell, 2011, p. 43). This leads to the question whether our sample is representative of the whole population. On the independence, we dare to believe that our sample is quite representative, although it needs to be kept in mind that we selected all the largest companies and the sample was not random, nor stratified. However, we see no direct reason, why the level of independence (and hence the external validity) wouldn’t be roughly the same in a random sample or in a sample of the smaller companies. After all, our sample is rather extensive. Because of our exploratory approach and the nature of this field, in the network study external validity is naturally non-existent. Regression analysis, for example, would assume independent observations, but because the network is only valid for the part studied and it is not random, no generalizations should be inferred (see chapter 3).

The final validity criterion, the ecological validity, deals with the question of “whether or not social scientific findings are applicable to people’s everyday, natural social settings” (Bryman & Bell 2011, p. 43). Since the study was conducted in an objective manner and
tried to meet its goals by using a real world setting, we argue that the ecological validity of this paper is very strong.

7.5.4 Criticism towards our study

If we got to do this over again, we would have included management in our study since they create most interlocks in the Danish companies. The descriptive information regarding the proportion of women among Danish boards would also have been more accurate since we realized the Danish two-tiered system often have women in management level but rarely on the supervisory level we measured. That would have given us more thorough information of the Danish network than we ended up with.

The Danish independence measure also became a shortcoming from our side when we conducted this part of the study, which probably is due to our preconceptions. We were convinced after the pilot study we could compare all three countries in the same way because of the Nordic harmonization in rules and regulations, the long history our countries share, all countries are EU-members and the fact we have encountered numerous of annual reports during the past four years at the University. We were therefore also taken a little by surprise from the fact many companies in Denmark (not all) measure independence from a pure stakeholder perspective and not similar to the Swedish and Finnish Codes. Hence, the comparison between the countries (especially in table 8 about shareholder independence) is not as reliable as we had wished it to be. All independent directors in Denmark we have used are 100% independent towards company, management and shareholders but we cannot tell which are not independent towards shareholders of the non-independent. Another specific difference we encountered is that the Danish companies provide skills instead of education, which is the common disclosure in Finland and Sweden. Overall, the education did not provide much to our study, except for descriptive data.

All in all, for an exploratory study our sample of only supervisory boards and CEO’s with interlocks still served us pretty well.
Reference List


**Appendix 1**

Appendix 1: List of studied companies
<table>
<thead>
<tr>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.P. Møller - Mærsk A</td>
<td>Ahlstrøm Oyj</td>
<td>A. P. Møller A/S</td>
</tr>
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<td>Aktia Bank A</td>
<td>ASSA ABLOY</td>
</tr>
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<td>Amer Sports Oyj</td>
<td>Atlas Copco</td>
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<tr>
<td>Ambu</td>
<td>Basware Oyj</td>
<td>Atrium Ljungberg</td>
</tr>
<tr>
<td>Auriga Industries B</td>
<td>Cargotec Oyj</td>
<td>Axford</td>
</tr>
<tr>
<td>Bang &amp; Olufsen</td>
<td>Citycon Oyj</td>
<td>Axis AB</td>
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