Corporate Governance in Banking Industry: Gender Diversity in Boardrooms

-A quantitative study of Swedish - banks during the period 2001-2010.

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ABSTRACT

Banking as a financial institution and a business has gone beyond providing banking services and making profits for the proprietors to assume macro positions like involving in activities that propel an entire economy. This has earned the interest of national governments and the society as well as the international community as a whole inciting a need for supervision in order to ensure sustainability.

Banks as corporate organizations with the above stipulated stakeholders and management are in a constant tug of war with each stakeholder seeking to protect its own kind which has degenerated to a vice often known in corporate governance as agency cost or principal-agent conflict. In corporate governance there is a board of directors that is designed to align the shareholders interest and management interest in order to check this agency cost.

In our thesis we have expatiated widely on the concept of corporate governance, board of directors and its composition. We have isolated gender diversity, which is one of the compositions of the board to find out how it contributes to control agency cost by establishing its effect on ROE, which is a firm performance indicator. We introduced control variables to check our results.

We collected data from the annual reports of Nordea, Swedbank, Handelsbanken and SEB, which are the listed banks in the OMX NASDAQ exchange Stockholm for period 2001 to 2010. The board characteristic we used is the proportion of females in the entire board and the firm performance indicator we chose is ROE. We carried out a longitudinal study for the whole industry and for individual firms in the industry over the ten-year period.

We have variation in the results over the different firms and in the industry but there is no significant relationship. We concluded that the proportion of females in the board rooms does not necessarily affect firm performance as viewed with the use of ROE but other factors together with gender proportion exert a combined effect and these other factors are correlated and therefore affect the performance of each other either positively or negatively. This scenario was therefore not realistic enough to establish a relationship between gender proportion and ROE.

Key words: Corporate governance, board of directors, board variables, gender diversity, agency cost, ROE and banks.
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CHAPTER ONE

1. INTRODUCTION

Corporate governance has attracted considerable attention over the past decades and is defined as “the structures and processes among the board of directors, shareholders, top management and other stakeholders, and involves the roles of the steward process and exercising strategic leadership, and the objectives of assuring accountability and improving performance” (Chi-Kun Ho, 2005, p. 212). The rapid development of corporate governance and its structures reflect its importance to business entities and communities as well as governments and is particularly important in assuring accountability and improving performance (Chi-Kun Ho, 2005, p. 213).

Jones (1997, p. 5) identifies the role of the board of directors, which is a structure in corporate governance as managing the affairs of the corporation. As defined in some corporate laws and in other laws it is stated that the corporation’s affairs should be managed under the supervision of the board. It is however ridiculous to actually allow the board to run the day to day business of a company as some or many board members could be outsiders (Jones, 1997 p. 5). The board however has the overall duty of harmonizing the interest of the firm and its shareholders and making sure that managers are held accountable to capital providers for the use of assets (Irani et al., 2005, p. 1).

In governance there are two mechanisms that the board of directors have put in place to align the agency problem; monitoring and incentive. They could be used independently and complementarily. The effectiveness of each of these however depends on the conditions under which they are applied (Ward et al., 2009, p. 647). With all these in place together with the variability in the board mix; (size, education, presence of CEO on the board and gender), it is also worth noting that the remuneration of the board is important for its performance and the effect of board remuneration cannot be underestimated. This is because agency problems arise just because of the desire of the individual actors like acting shareholders and management to amass wealth (Porta et al., 2000).

There has been increasing pressure on board of directors around the world to choose more female directors into the board. This is because there is a need to diversify the gender variable in the board rooms with the motivation that women appear to have significant impact on the board governance (Adams & Ferreira, 2009, p. 292). Financial times describe the situation as something to celebrate because these women have created a difference in the way the business world works (Financial times website). The appointment of women into the boardroom even though is a business issue it is also considered as a demographic issue (Chugh, 2008, p. 43). We are going to focus on women, as a business issue because we think that business is not maximized because there is idle human capital, the woman that is yet to be fully exploited.
We therefore set out to find out how useful they are in aligning the agency problem as a board member.

The board of directors have always been considered very important and very powerful and seen to exert a lot of influence in the decisions of corporations. The collapse of the Penn Central Railroad and the Equity Funding scandal raised serious questions about the role of the board of directors, which led to suggestions about changing the structure and composition of the board. It is a delicate issue because some changes in board structure could be more destructive since it could strain the relationship between the management and the board (Buchan, 1981, p. 31). Corporate governance is used generally in corporations like a banking institution in our case.

The Oxford online dictionary (oxford dictionary website) defines a bank as a financial establishment that uses money deposited by customers for investment pays it out when required, makes loans at interest and exchanges currency. Since the turn of the 19th century the role of the banks in economic development has been debated upon either in terms of furthering or hindering industrialization (Pohl et al., 1994, p. 3). In Denmark the transformation of the rural economy from subsistence agriculture to production of commodities that were sold in the cities and abroad saw a breakthrough in the Danish bank as a series of feedback and symbiotic interactions between the state, business men and the international community that led to the development of the Danish bank, Kurantbank in 1736 (Pohl et al., 1994, p. 97) while other banks due to poor management and what one can describe as an ideal existence of information asymmetry between inside stakeholders and outside stakeholders like LEHMAN brothers have experienced a dramatic move from grace to grass (Greenfield & winter, 2010).

Since boards of directors act as a group, board members should have several important qualities in order to make sure that the agency keeps the promise (Somali family website). On the top of it, board of directors in banking institutions and the banking industry at large are themselves supervised by national governments (Spong & Sullivan, 2007, p. 1) which further extends the stake holding. Spong & Sullivan (2007) point out that banks operate in a global market, which has faced much deregulation. This subjects the activities of multinational businesses to multiple and sometimes conflicting systems, as was the case when the EU first welcomed corporate governance with power asymmetry (Arjan & Laura, 2007, p. 137). Like others, banking institutions have got to survive and grow while satisfying their stakeholders whose interest is often divergent (Martimort & Verdier, 2004, p. 1120).

Corporate governance as the liaison between ownership and management comprises mechanisms that ensure efficient decision-making and maximization of the value of the firm (Cuervo, 2002, p. 84). There is a lot of literature on corporate governance and a lot of it focuses on the board of directors. Most studies try to establish the relationship between board attributes and firm performance. A lot of these studies are both on developed as well as developing countries (Sarkar & Sarkar, 2009, p. 271) and cover a wide range of issues. Most of them try to bring out the relationship between size of the board of directors, age of board members, education of board members, gender mix in the board, as well as the presence of
CEO in the board amid others like independence of board members. Most of the studies use performance indicators like Tobin’s Q, return on equity, return on investment, return on asset, total expense ratio (Anders & Vallelado, 2008, p. 2570). Most of the studies we have come across try to establish this relationship during one year. We have not seen any study on any of the attributes that was done on the Swedish market at least published in English language. We therefore seek to find out this relationship in the Swedish market. We are going to cover the first decade of the third millennium, which is a larger scope than any of the studies we have come across. We are going to focus on the banking industry. We will do this for Swedish banks that are listed in the OMX NASDAQ exchange Stockholm. We are going to consider gender and return on equity. We will therefore seek to find out if various gender mixes have any relationship with return on equity. We are focusing on the board and we are going to add control variables which will be other board attributes to ascertain our findings. We will equally include some other factors like PEST factors to make a more realistic picture of the model. This will cover a ten-year period that is the first decade of the third millennium, 2001-2010.

1.1 Background of the study

Cheffins (2001, p. 87) cried out that market forces and management of business enterprises are acting as destabilizers of traditional business structures thereby causing convergence along Anglo American lines. Fundamental changes revolutionized governance, which led to “the end of the family” in Europe and “the end of tycoons” in Asia. Empirical studies in the UK show that ownership and control of businesses declined as the 20th century progressed which gradually led to the “outsider/arms-length” that currently prevails. This process continued gradually and in a manner that one cannot point out to a particular time in history that this present corporate governance became a reality (Cheffins, 2001, p. 89). Euromoney institutional investor PLC (May, 2006) later identified that corporate governance standards are being driven by push and pull factors. The push factors were identified as the shareholders and the state that want to make sure that companies are transparent, open, fair and working for the interest of their stakeholders. On the other hand they identified pull factors to be professionals with a desire for high integrity and who want to conduct business at its best and maintain the ethical fabric and conduct of the organization, which they believe, is not just for morality but a necessary requirement for business success. The major role of corporate governance rests on the board of directors which is a key structure and responsible for aligning the interest of the internal and external stakeholders (Montgomery & Kaufman, 2003, p. 88).

Raja and Kumar (2007) point out a difference between corporate governance in the developed countries and the developing countries. This study is useful because it introduces the idea of cultural differences They say that in developed countries there is a real existence of separation of ownership and management and the reason for this they think is because the legal protection of minority shareholders is quite strong compared to the developing countries and
they compare particularly India as the developing country then US and UK as the developed countries (Raja & Kumar 2007, p. 101). This view is confirmed by a similar study in Asia when they say that because of the presence of government as shareholder majority of the control is by the government which cause individual share-holders to adopt CEO dualism to protect their interest (Tam & Tan, March 2007, p. 208). In this research Raja and Kumar identified three board procedure components; head of audit committee, head of remuneration committee and the head of shareholders grievance committee. They also identified that board procedure components consist of board size and number of committees in the board. They used Tobin’s Q to measure firm performance (Raja & Kumar, 2007, p. 101). In India the company act of 1956 specified a minimum board size of three for public limited companies and two for private limited companies. In their literature review they found that smaller board size could be more effective than larger board size due to rapidity of decision taking and less degree of consulting even though it was not enough evidence to show that smaller boards are more effective. In their findings they found that committee component has a significance relationship with firm performance as well as non-executive independent directors but the firm’s age has negative relationship with the performance of a firm (Raja & Kumar, 2007, p. 111).

Yoshimori (2005) in an attempt to bring out the relative importance of corporate governance among other institutional structures compare Toyota a Japan based car manufacturer and GM (General Motors) an American based car manufacturer as well as Canon and Xerox. In this paper he seeks to test his hypothesis “corporate governance alone does not assure sustained corporate performance” and “values, culture and strategy play an equally or perhaps more important role in corporate performance”. This study is based on the fact that the US is a total advocate and practice “corporate governance” while Japan maintains its traditional management techniques where their CEOs champion the management of companies. They lack the US style of outside board of directors with its structures but from 2000 to 2003 outperformed the US firms that are compared to it in this study (Yoshimori, 2005, p. 447). They proofed that corporate governance played just a limited role in the long-term performance of the company. They highlighted other factors that were quite important in determining the performance of the company such as corporate mission, ethics, culture and strategy (Yoshimori, 2005, p. 455).

Chalhoub (2009, p. 478) when studying the effect of corporate governance on Lebanese banks, viewed corporate governance as involving relationships between the board, shareholders, management and stakeholders. This relationship provides an environment that permits the objectives of the company to be set and the means of attaining these objectives as well as monitoring mechanisms to be put in place. There was a framework for corporate governance proposed which was a form of collaboration triangle between shareholders, senior managers and the board. Here shareholders owned without managing. Managers managed without owning. This is a pure separation of ownership from control. Management then reported to the board, which brainstormed and made key decisions for the banks in Lebanon (Chalhoub, 2009, p. 481). They believed that corporate governance was more important in the banking industry than in other sectors of the economy (Chalhoub, 2009, p. 478).
To describe the relationship between corporate governance and bank performance they selected some characteristics of bank corporate governance or the board and tested them to see how they affect bank performance. They are illustrated in the diagram below.

Source: (Chalhoub, 2009, p. 481)

They developed hypothesis based on the board variables above and conducted an analysis based on the data they collected on 54 Lebanese banks. Their study showed that experience as
a prerequisite to occupy management positions, application of formal code of conduct, engaging shareholders showed positive correlation with bank performance (Chalhoub, 2009, p. 484 & 485).

To conclude Chalhoub defined corporate governance as “an interactive mechanism between shareholders, managers, and directors with emphasis on strategic collaboration for the overall corporate good” (Chalhoub, 2009, p. 485).

Conclusively in corporate governance the protection of shareholders is crucial and in many countries the expropriation of shareholders that are in minority and creditors by controlling shareholders is extensive. The outside investors finance corporations and are exposed to risks of business failures and other hazards due to information asymmetry because the shareholders that are controlling or managers expropriate the shareholders profit. The expropriation is done in many ways like stealing of profit by the insiders, selling of output, assets and additional securities (Porta R. La et al., 2000, p. 4). The important question that arises in corporate governance is to ensure the ways in which the financiers get return on their financial investment. They fundamentally argued that corporate governance is concerned with principle agent problems that arise because of the separation of ownership and control between principals and agents. This shareholder or Anglo-American model of corporate governance is accepted in US, UK and some other countries. The German model of corporate governance takes in to account the interest of shareholders and non-shareholders (stakeholders). The Franco-German model of corporate governance is prevalent in Germany and Japan, where in banks have large equity in non-banking companies (Shleifer & Vishny, 1997, p. 773).

1.1.1 Gender in Sweden

A lot of studies have focused on the female proportion in the boardrooms (Carter et al., 2010 p. 410 & 411, Erhardt et al., 2003 p. 102, Adler 2001 as cited in Claude Francoeur et al., p. 86, Catalyst 2004, as cited in Francoeur et al., p. 86, Shrader et al., 1997, as cited in Carter et al., 2003) and a lot of these studies are in countries with relatively low gender related development indices like the UK, USA and Japan (Nation Master website). This has attracted us to Sweden with relatively fewer studies on the Gender and that has relatively fewer gender related crises. It can be interesting to see how Sweden with a gender-development index of 0.963 (Nation Master website) is affected at the corporate level.

Barbara (2011) acknowledges that women have made a huge progress in the job place but she thinks they however get lower salaries and less top jobs than men. In Sweden there has been a tremendous increase in the number of women involved in management of academic institutions between 1990 and 2010 (Peterson, 2011, p. 619). A survey carried in Sweden, Germany and Spain in 464 firms found out that 64 % of these companies had no women at all in their boards and only 5 % were represented equally by both genders (Kanyama et. al., 2010). In 2004 the Swedish government had a plan to increase females in the corporate boards to up to 25 %. This led to an increase in females in the boards but not as expected. Agreements were signed with trade unions as a consequent in a bid to foster the number of
females in the boards (813930 Labour unions and similar organisations 2004). As the fight to increase the participation of women in executive positions continue, the importance of the representation of this gender remains another issue under consideration the reason for which we want to find out the effect of the female gender in the Swedish banking industry.

1.2 Research Question

The main issues we are focusing on in this thesis are boards of directors, which is an important and main aspect of corporate governance. We will study boards in the banking industry in Sweden by looking at the relationship between gender diversity and bank performance.

Based on the preceding discussion, we have established the core research question of this thesis.

*Is there a relationship between gender diversity in the boardroom and performance of the Swedish banking industry?*

In order to operationalize the research question above, we will examine the two following sub-questions.

*What is the gender diversity in boardrooms in Swedish banking industry?*

*Does presence of the female gender in the boardroom affect ROE?*

The first sub-question will be used to explore the gender perspective and settle the frame of our research.

The second sub-question is intended to operationalize the research question by using ROE as the proxy for performance.

1.3 Research Purpose

The purpose of this research is to find out if there is a significant relationship between the board characteristic gender and firm performance using the return on equity. We want to know if it is better to have more men or women or just a single gender in the board or even have an equal proportion based on how the gender variable affects firm performance. This will enable us to infer the usefulness of the female gender in the board in satisfying shareholders interest, which is the purpose for which a board of directors is created. We are therefore writing for the shareholders since increase in ROE is a major concern of the shareholders.

We are using the female gender because there are fewer men competent enough to handle executive and board positions than there are vacant positions in this area. This has led to the appointment of incompetent men to the board and executive positions of which there are thousands of competent women who could do these jobs (Walt & Ingley 2003, p. 225). We
seek to provide knowledge that could enable the business executives and shareholders to start thinking about creating more room for the female gender.

1.4 Delimitations

We have to define our scope to make it quite visible. First of all we are in the area of corporate governance and our immediate concern is the board of directors. We are going to hark on the board of directors but we will pay our attention on the gender variable and we will introduce some control variables. We do not have any concern on why each board has a particular gender mix but we just want to know what the mix is for any of the banks we will be torching.

We will not include other variables like age of board members, size of board of directors, competency of board of directors, education of board members, CEO duality, and independence of board members in our analysis but we will consider some of them just to control our correlations between proportion of women in the board and ROE.

We are going to focus on bank performance. The performance variable we will be using is Return on Equity, ROE. This is because we are writing from the perspective of the shareholders and we intend that the findings of this research will be useful to the shareholders.

We are not going to torch other performance measures like ROI, expense ratio, Tobin’s Q, ROA but our focus is only on ROE.

We are on the banking industry and we are specializing in the Swedish banking market. This means that the banks have to be Swedish and based in Sweden. These banks have to be listed in the Stockholm stock exchange and we have identified Nordea, Swedbank, SEB and Handelsbanken.

We have no concern with other industries or other countries but in our literature in order to elucidate issues we could acknowledge issues in other industries or countries as well as other performance measures and board variables but these will not be included in the analytical work.

1.5 Knowledge gap and our contribution

After the above insights into the background and some applications of the modern corporate governance concept we have realized that there is a lot of literature in a lot of industries with studies covering almost every region in the world. There is a lot of research that is focused on the industrialized countries whose contribution to the corporate governance framework are invaluable. We have however not seen a lot of studies on the application of the modern corporate governance studies in Sweden. The few that we found are highly localized and mostly touching particular industries. We however did not find any study on the banking industry in Sweden. Secondly Sweden literally has one corporate governance model that applies to all corporations that are created under the Swedish Company Act (Lekval, 2009). In
most studies the model is applied during a one-year period. Mindful of this we identified a research gap on corporate governance in the banking industry, and we are going to cover a ten-year period unlike past studies that focus on one year. We will carry out longitudinal study unlike past studies that were mostly cross sectional. Also we are concentrating on determining the performance of the firm as the effect of the female gender in the boardroom and we will be using ROE as the measure. This has not been done in the banking industry in Sweden.

Gender is a center of discussion nowadays with human right and other female groups fighting for woman emancipation. Also writers have portrayed women as resourceful in management positions. This equally is a chance to test the applicability of this statement in the banking industry where no studies have been carried in Sweden on the effect of gender in the board.

In the vast literature that we have read a lot of studies focus on a combined effect of the board variables in relation to one or more performance measures. We have not seen any study that isolates a variable and treat them on a one to one basis. We therefore decided to cover this gap by taking gender as an independent variable and ROE as a dependent variable.

We are writing from the perspective of the shareholders in a bid to contribute to the fight against management expropriation of shareholders wealth under agency cost.

1.6 Disposition

This is the outline of the thesis. This gives a presentation of each chapter of the thesis.

Chapter 2: Methodology

In the methodology chapter we will discuss and present the arguments for our choices concerning the design of the study. Our research methodology is quantitative and the research design is longitudinal in which we will describe the relationship that exists between gender diversity and Return on equity over a 10 year period and across the banking industry. Further we state research approach and research philosophy followed in the research thesis. We are going to collect data from the annual reports of the banks and for our sample. We are going to treat all Swedish banks listed in the OMX NASDAQ stock exchange Stockholm. Our research question will be answered with this approach with the help of statistical tools, which will be exploited, with the means of statistical software best known as SPSS.

Chapter 3: Theoretical framework

In this chapter we will do a thorough examination of concepts of corporate governance, board of directors, firm performance, gender diversity in the board, and ROE. We are going to provide explanations for the mode of the study like point of view from which we are writing. And also we are going to try to establish a relationship between board and firm performance
in the light of gender diversity and return on equity as well as briefly discuss the views of other researchers on the board and firm performance who used different independent and dependent variables. This will be useful in making recommendations for future studies. This is in order to clarify issues that will be coming up in the next chapters and provide a better understanding of concepts and terms used in the text.

**Chapter 4: Sample, data collection and presentation**

In this chapter we will discuss our sample and sampling method as well as our data and how we collected it. Later in the chapter we will present the processed data ready for analysis as well as a statistical description of the data we collected.

**Chapter 5: Empirical findings and Analysis**

Here we will carry out the analysis of our data. We will carry out longitudinal study for the whole industry and for individual firms in the industry over the ten-year period.

**Chapter 6: Conclusion**

In this chapter we give an appraisal of the analysis and make our conclusion from them. Then we assess the quality of the research, discuss the limitations and later make recommendations for future studies.

**1.6 DEFINITIONS AND ABBREVIATIONS**

**Corporate governance:** Corporate governance is a system used to define the relationship between management, board of directors and shareholders.

**Bank:** Bank is a financial institution that plays the role of intermediation between borrower and lender.

**Board of director:** Governing body mainly responsible for aligning the interest of management and shareholders.

**Shareholders:** Shareholders are real owners of company that shares the real profit and bears losses incurred.

**Principal-Agency conflict:** The conflict caused due to the difference of interests between Principal (owner) and managers (agent) (Kim & Nofsinger, 2007, p. 3).

**ROE:** Return on equity is a measure to see the effective use of shareholder investment (Horne & Wachowicz, 2008, p. 157).
**Performance indicators**: Performance indicators are measures used to determine the worth of firm such as ROE, ROA, and ROI etc.

**Gender diversity**: Representation of both skilled and qualified men and women in the board of directors.
CHAPTER TWO

2. METHODOLOGY

In this chapter we are going to examine our data collection method and analytical tools as well as reasons for which we selected these particular data collection method and tools. We are going to discuss in detail our research philosophy, approach and strategy as a focus to our research question.

2.1 Choice of study

In corporate governance, the protection of shareholders is crucial and in many countries the expropriation of shareholders that are in minority and creditors by controlling shareholders and management is extensive. Those who finance corporations are often outsiders and are exposed to risks of business failures and other hazards due to information asymmetry because those who are directly in control expropriate the shareholders wealth (Porta R. La et al., 2000, p. 4). The important question that arises in corporate governance is to ensure the ways in which the financiers get return on their financial investment.

Corporate governance means governing corporations of course and this term as we defined previously applies to a modern business structure where ownership delegates power to managers to manage for them and it differs from and is superior to company management. We are finance and investment students and we both have banking experience and as at now we still feel like this is our career line. Banking in every sense and at all times have always been a capital-intensive business and it is almost a must that there has to be multiple share holding for enough capital to be accumulated to make the business worthwhile. All the functions of corporate governance and all the associated structures that have the responsibility of discharging these duties are we will say imperative for a good banking institution. We have thus chosen to examine corporate governance in the field of banking first because we hope to contribute to the betterment of governance in this sector and secondly we hope to get knowledge that will render us valuable employees first to the good of our career and second to whatever institutions we find ourselves in.

Haven read a handful of articles we must comment that there is a lot of literature on corporate governance (Carter et al., 2010, Erhardt et al., 2003, Adler 2001 as cited in Claude Francoeur et al., Catalyst 2004, as cited in Francoeur et al., Shrader et al., 1997, as cited in Carter et al., 2003), ranging from developing to developed countries, from South to North hemisphere and in a wide range of industries. There is however not so much in the field of banking and particularly we found no studies on the Swedish banking market. Also corporate governance is not a very old aspect of company management, it varies between countries and continents but it continues to evolve and is being made better all the times. This is because business is not static and keeps adapting to the constantly changing world. So there is a need to assess
corporate governance from time to time in a bid to make necessary changes to catch up with the demands of time. This was quite important for us in choosing this topic.

2.2 Preconception

We have studied corporate governance and read a lot of articles on corporate governance. One of us has studied the course corporate governance at the USBE and both of us have studied the course corporate finance. We have been able to agree with some of the recommendations of good governance practices like the recommendations for board mix.

An understanding of the past and present system of governance and how they perform like the differences between the Japanese governance style and the US governance style (Yoshimori, 2005, p. 447), which is more recent, and differences in productivity between these have created real impressions in our minds.

We have had the chance from our past work to participate in annual general meetings and to also have an idea about board compositions in our respective earlier jobs. The performance of these boards created impressions in us and we have had wishes on changes that we thought could change the performance of the board and the efficiency of our respective banking institutions. This unfortunately has its effects as we already in some way have premeditated recommendations for what we think is an ideal board.

All these beliefs and experiences played a vital role in the choice of the topic. Our knowledge from past studies is going to be very beneficial for the study as it has helped us identify a research gap that meet our desires, and will guide us through the methodology and in our theoretical chapter.

Our results will not be affected by this pre-knowledge and preconceptions because we are using a quantitative method. We are going to use unaltered numbers that we get from our sample and run it in SPSS and our interpretation is going to be based on the meanings of the statistical outputs and not on opinions.

We are therefore convinced that we are going to carry out an objective study.

2.3 Perspective of the study

In this study we seek to propose a gender mix that will efficiently enhance bank performance. This is from the perspective of the shareholders. We are going to do this by looking at the output of the diverse gender mixes used by different banking institutions. This is useful to shareholders since they can manipulate the board mix to whichever one they agree with depending on which of the performance indicators they seek to maximize or they could choose the optimum board mix regarding gender composition.
2.4 Research philosophy

The philosophical nature of questions facilitates the understanding of knowledge. They should be uncomplicated and unbiased but for us to achieve this objective of uncomplicatedness and “unbiasedness”, we often need to make some assumptions about the world and reality. In a research study the decision to use either quantitative or qualitative approach depend greatly upon these assumptions concerning the nature of knowledge and reality and how we understand them (Daniel & Berinyuy, 2010, p. 19). The assumptions that we make often shape the research process and enable us to select a particular approach. Generally assumptions are ontological or epistemological in nature but for us to be able to settle on a research approach we are going to first try to understand what each assumption stand for.

2.4.1 Ontological assumptions

Ontology can be defined as assumptions about social reality as to whether social entities are objective realities that have an existence on their own and outside of social actors and or whether they should be considered as social constructs that are built up from the perceptions and actions social actors (Bryman & Bell, 2011, p. 20). This is often referred to as objectivism and constructivism respectively.

2.4.1.1 Objectivism

Bryman & Bell (2011, p. 21) define objectivism as an ontological position in which social phenomena and their corresponding meanings have an existence that is different and outside of social actors. Bryman & Bell (2011, p. 21) demonstrate this doctrine with a depiction of an organization as a tangible object and the rules and standards that they adopt and follow as social realities.

2.4.1.2 Constructivism

Constructivism otherwise known as constructionism opposes the view that social realities are separated from us and just confront us. Constructivism is an ontological view that holds that social realities or phenomena and their associated actions are continually being accomplished by the actions of social actors (Bryman & Bell, 2007, p. 23). Bryman & Bell (2007, p. 24) talks about products, which are categories, which we employ in order to be able to understand the natural, and the social world and they do not have a built in essence but have meaning through interaction.

In relation to our study we are going to adopt the objectivist point of view. There are social realities; interests, rules, and governance standards and there are organs like board of directors, managers, and shareholders. There are always rules, and governance standard. A bank forms organs like board of directors; employ its staff after shareholders have provided funds for the running of the establishments. Then there are governance standards and styles.
The board and management could decide on which ever style to implement. They can change from one governance style to another and switch between governance styles but the governance standards and styles exist whether or not banks use them and whether or not the banks exist as well. In the running of the banks they can decide to apply some rules but these rules are social realities that exist in several institutions and when one institution comes up it can either decide to adopt these rules or not and when one institution dies the rules remain unchanged. Sometimes they are these social realities that help to shape the organs and the organizations at large. For example the performance and direction of a bank can be greatly affected by what rules and regulations they decide to use and what governance style they implement. They decide the fate of the institutions, which is a clear depiction of the fact that social constructs are realities exist on their own while we exist also and separate from these social realities.

2.4.2 Epistemological assumptions

Epistemology seeks to understand what should or not be considered knowledge and how this knowledge is supposed to be treated and understood. The major issues raised under epistemological assumptions are whether social realities should or should not be studied in the same way as the natural sciences using the same principles, procedures, and ethos (Bryman & Bell, 2007, p. 16). Again one school of thought agrees and another disagrees as to whether social realities are fit to be studied in the same way as the natural sciences. The two major schools of thought on this issue are referred to as positivist and interpretivist schools of thought.

2.4.2.1 Positivism

According to Bryman & Bell (2007, p. 17) this is the school of thought that agrees that social realities should be studied in the same way as the natural sciences. Here positivism in stretched to include (Bryman & Bell, 2007, p. 17).

- Only phenomena and knowledge that can be grasped and apprehended by the senses can be warranted genuinely as knowledge and this is called the principle of phenomenalism.
- Theory is for the purpose of generating hypothesis, which can be tested thereby, allowing explanations of laws to be assessed and this is referred to as the principle of deductivism.
- We arrive at knowledge from gathering facts, which form the basis for laws, and this is what we call inductivism.
- Science must and presumably can be conducted objectively so that it is bias free.
- Normative statements and scientific statements are distinct from each other and the latter is a true domain of the scientist.
2.4.2.2 Interpretivism

Interpretivism, which opposes positivism, holds that there is a fundamental difference between the subject matter of science and the subject matter of the social sciences that is people and institutions (Bryman & Bell, 2007, p. 17). Interpretivism generally is concerned about empathic understanding of knowledge and not the forces that act on it while positivism goes for the explanations and try to understand the behavior of humans (Bryman & Bell, 2007 p. 18).

We from an understanding of the difference between positivism and interpretivism we will like to disclose that we are going to be looking at knowledge from the positivist point of view. This is because we acknowledge that social realities like corporate governance strategies like gender mix, rules and regulations exist out there and are different from us. We will be treating these social realities mainly governance which is comprised of rules, regulations and strategies as a social reality different from humans and banking institutions. We are going to employ natural science techniques of measuring with precision the use of known and real numbers and applying statistical techniques to be able to understand the relationship between these two different realities from their interactions with each other.

2.5 Research approach

There are basically two research approaches, deduction and induction. They involve a relationship between theory and research (Bryman & Bell, 2007, p. 11). The deductive approach is a representation of the view between theory and the data. In this approach the researcher bases on what is known about a particular domain and on the theoretical considerations about the domain and deduce hypotheses that are then scrutinized empirically. The coined hypothesis has to possess concepts that are translatable into researchable entities. Theory and the hypotheses that are deduced from the what is known and the available theory precede and drive the process of gathering data (Bryman & Bell 2007, P. 11). This is best elucidated in the figure below:
Figure 3: The deductive process

Source: (Bryman & Bell 2007, P. 11)

The other approach is the inductive approach, which is aimed at formulating theories. This means that in an inductive approach, observations are used to draw general conclusions.

Summarily deduction moves from theory to observations and induction moves from observations to theory.

In our research we are going to use a deductive approach. We will use available theories on corporate governance on the data we are going to collect. First of all we are going to formulate hypotheses based on the available theory and what we already know and then collect data that is appropriate to test our hypotheses and then we will carry out the test. We can then publish our findings, which will be available for further research and theoretical formulations.

2.6 Research strategy

Research strategy is a general orientation adopted by researchers to the conduct of business research (Bryman & Bell, 2007, p. 28). Broadly there are quantitative and qualitative research strategies. It is dependent on the need of the researcher to follow quantitative, qualitative or mix of both strategies that best serves the purpose of their research.

Quantitative research strategy follows deductive approach and primarily is concerned with testing of hypothesis/ theory. Quantitative research adopts the norms and procedures of natural science and believes that reality is external to social actors. Quantitative research is
normally undertaken when information regarding the research issues is available in numbers and digits and research observations are available in standard format (Bryman & Bell, 2007, p. 28). Quantitative research strategy follows the principles of positivism and natural science by following deductive approach to test the relationship between theory and research (Saunders et al., 2009, p. 28).

**Qualitative** research follows inductive approach and focus is drawn on generation of theories. In qualitative strategy the researcher seeks to get a clear picture of the research issue by aiming on words rather than numbers and figures (Bryman & Bell, 2007, p. 28). Multiple means are used by researchers to conduct qualitative studies including observations, case studies, and surveys (Bryman & Bell, 2007, p. 28). Qualitative research is concerned with individuals’ attitudes, motivations and behavior. It ensures richly descriptive reports of individual perceptions, attitudes, beliefs, views and feelings (Hakim, 2000, p. 34).

The fundamental differences between quantitative and qualitative research is simplified in the table below

**Table 1: Difference between quantitative and qualitative research**

<table>
<thead>
<tr>
<th>Principal orientation to the role of theory in relation to research</th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deductive: testing of theory</td>
<td>Inductive: generation of theory</td>
<td></td>
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</tbody>
</table>

Epistemological orientation  
Natural science model, in Particular positivism  
Interpretivism

Ontological orientation  
Objectivism  
Constructionism

Source: (Bryman & Bell, 2007, p. 28)

Our research strategy is quantitative. In this research work we are going to use statistical method to explore and analyze the relationship between a gender mix of the board and the performance indicator in the banking industry (ROE). We try to be neutral and independent in data collection and thus it is not possible to alter, change or modify the substance of collected data. In the research thesis we will gather data of four banks operating in the Swedish banking industry. For data collection we will approach annual reports of banks. These determinants motivated our choice to follow quantitative strategy in our research thesis by following positivism and objectivist stance of epistemological and ontological considerations.
2.7 Research objectives

After explaining research strategy, philosophy and approach it is important to put light on the objectives of research. It is very hard for a researcher to identify the research problem and highlight the objectives of research. Broadly research objectives are divided in to three categories (Saunders et al., 2009, p. 30).

- Exploratory research
- Descriptive research
- Casual research

While exploratory studies investigate and attempt to understand the problem to be studied when there are few or less studies done on the research problem, descriptive studies explain characteristics of phenomenon, and independent of individual and organizational concerns. The aim of descriptive study is to describe the data and characteristics of what is being studied. The rationale behind descriptive study is to identify frequencies, averages and other statistical calculations. In fact this type of study is very accurate, but it does not explain the cause behind a situation. Explanatory/Casual/relational studies involve studying the impact of one variable on the other and also the relationship between two variables. Explanatory studies are undertaken when there is correlation between two variables (Srivastava & Rego, 2011, p. 44).

In the light of this discussion we can say that our research objectives are aligned with exploratory and casual groups. The objective of our research is to find out if there is significant relationship between board variable (gender) and performance indicator in banking industry (ROE). In this research work we will try to understand the relationship between different genders mixes and firm performance by focusing on Swedish banking industry. Further, we are interested to follow the view of shareholders by using the return on equity that leads to shareholder satisfaction.

2.8 Research design

“Research design is a compressive plan of sequence of operations that a researcher intends to carry out to achieve the objectives of a research study” (Srivastava & Rego, 2011, p. 42). The objective of research design is to ensure maximum information by utilizing minimum resources (Srivastava & Rego, 2011, p. 42). Research design establishes methodology for

- Collection of data
- Measurement of data
- Analysis of data

Bryman (2008, p. 35) identified five different types of research design: Experimental design, longitudinal design, case study design, Cross- sectional design and comparative design.
Longitudinal studies are done to study changes and developments in research subject’s overtime. In longitudinal research design researcher is interested to cover longer time period and collection of data is done at least two times. In longitudinal research design researcher is interested to observe changes that takes place over time period and enables researcher to make causal relationship between variables. This type of research is costly and time consuming and thus not used that much in social research (Bryman, 2008, p. 49).

Cross sectional research design involves the collection of data on more than one case (normally quite a lot more than one) at a single point in time with a view to collecting a body of quantitative data in connection with two or more variables (normally more than two), which are then inspected to identify patterns of association (Bryman & Bell, 2007, p. 55). This type of research design is considered relatively inexpensive, quick and easy to perform (Admas & Berzonsky, 2005, p. 5). In cross sectional research design research is interested in variations to inspect people, organizations, nations, states etc. In cross-sectional research data is gathered more or less simultaneously on variables.

Experimental research design brings confidence in the robustness and trustworthiness of casual findings. In business and management research true field experiments are rare, primarily because of the problems of getting the required level of control in dealing organizational behavior. An experimental research design produces confidence in the robustness and trustworthiness of casual findings (Bryman & Bell, 2007, p. 44).

After analyzing different research designs we select the longitudinal research design in our research work. In the research work we will gather quantitative data on the gender mix of a board and ROE and that of the control variables we are going to use over a period of ten years to find the relationship between them with the help of quantitative data gathered for the research work. The quantitative data on all banks is collected for the period from 2001 to 2010 on the banking industry in Sweden.

2.9 Selection of theories

Agency theory or principal agent problem arise because of the conflicts of interest between principals (owners) and managers (agents). This is the fundamental cause of corporate governance. The managers are supposed to act and work on behalf of owner. If shareholders are not capable to effectively monitor the activities of managers, then managers might be interested to use the assets of firm to their own benefit, at the expense of shareholders (Kim & Nofsinger, 2007, p. 3). In the light of separation of ownership and control agency theory is very important to mitigate agency problem. In our theoretical framework we will discuss sparsely the role of board of directors in mitigating the principal agent conflict. We are going to pay a lot of attention on the gender variable of the board and how it affects return on equity amongst other variables.
2.10 Data collection

The collection of data is third step in deductive research process. The collection of data is very vital for quantitative research work. In this research work we will approach banks and gather data from these banks and they should have a base in Sweden.

In general data types are divided in to two main categories

- Primary data
- Secondary data

Primary data is gathered by observations of researcher. It includes asking questions, conducting interviews, doing experiments, observing behaviors, recording and thus enables researcher to directly judge and notice the behaviors of research objects. The collection of primary data is helpful for researcher to feel the observations and not only observing the activities that are happening around researcher (Saunders et al., 2009, p. 289-292). Bryman & Bell argued that time period for collection of primary data should be long and it requires more attention and efforts of researcher. Primary data is not only hard to gather it is more costly and needs more time in relation to secondary data (Bryman & Bell, 2007, p. 297).

Secondary data is data collected and treated by others for purpose other than problem at hand. The advantage of this type of data is pre availability of data within or outside an organization. In secondary data researchers have access to both internal secondary data and external secondary data. The purpose of study determines the nature of data either it is primary or secondary (Wegner. T, 2008, p. 27).

Secondary data needed to answer research question might not serve the purpose adequately. Sometimes secondary data collected for research work may not fit in to problem solving. Sometimes the data is not collected from the right sources and in correct units of measurement. The accuracy of secondary data is important and researchers should try to find secondary data from primary sources and not from second hand sources, because secondary data gathered from secondary sources creates credibility and reliability problems.
Table 2: Advantages and disadvantages of secondary data

<table>
<thead>
<tr>
<th>Advantages of secondary data</th>
<th>Disadvantages of secondary data</th>
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<tbody>
<tr>
<td>Cost and time</td>
<td>Lack of familiarity with data</td>
</tr>
<tr>
<td>Opportunity for longitudinal analysis</td>
<td>Complexity of data</td>
</tr>
<tr>
<td>Subgroup analysis</td>
<td>No control over data quality</td>
</tr>
<tr>
<td>Opportunity for cross-cultural analysis</td>
<td>Absence of key variables</td>
</tr>
<tr>
<td>More time for data analysis</td>
<td></td>
</tr>
<tr>
<td>Reanalysis may offer new interpretation</td>
<td></td>
</tr>
<tr>
<td>The wider obligation of the social researcher</td>
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</tbody>
</table>

Source: (Social Research Methods, Bryman, 2008, p. 297-300)

In our research work we will use secondary data gathered from different sources. To accomplish this task data collection for financial variable (return on equity) will be done from annual reports of banks. To serve the purpose for board mix (gender) the websites or respective banks and annual reports will be examined. We will use online data base of Umea University that enable us to have an access to different sources to read scientific articles, journals, previous researches and working papers.

2.11 Secondary data and sources of literature

It is already mentioned that certain disadvantages are linked to collection of secondary data. In quantitative study quality, relevancy and accuracy of secondary data are concern of researchers. In our study data for financial variables is gathered from annual reports of banks. The annual report of each bank is monitored and viewed by banks auditors. It is a statutory requirement to make annual report public and must be approved by the authorized auditors. In our research work we believe that our data is accurate and reliable as annual reports undergo several steps to be approved.

The information and data on board mix is gathered from banks websites and annual reports. Every bank has a standard website and to ensure the accuracy and relevancy of data we will cross check all the information gathered from web sources and annual reports. We believe that information available on the banks website are accurate and to the point, since we don’t have any personal contacts and affiliation with monitors of banking activities to confirm the information published on banks websites.
It is very important to get latest and up to date figures and information on subject under study. In this research work we will inspect the latest academic articles related to our research question and that could help us to answer our research question. To serve the purpose we will focus on website of Umeå university library (www.ub.umu.se) that facilitate and make it possible to access to different databases including EBSCO, Science direct, Google scholar, Google books and many more. In order to provide up to date and relevant information to our readers we will not be limited to these sources we will try to visit the websites of other financial institutions and if we feel that information is valuable and relevant to our research thesis and research question would be part of research work.

In general we are sure and confident that sources we selected to grasp the required information and knowledge will enable us to carry research in high spirit and moral.
CHAPTER THREE

3. THEORETICAL FRAME WORK

In this chapter we will do a thorough examination of concepts of corporate governance, board of directors, firm performance, gender diversity in the board, and ROE. We are going to provide explanations for the mode of the study like point of view from which we are writing. And also we are going to try to establish a relationship between board and firm performance in the light of gender diversity and return on equity as well as briefly discuss the views of other researchers on the board and firm performance who used different independent and dependent variables. This will be useful in making recommendations for future studies. This is in order to clarify issues that will be coming up in the next chapters and provide a better understanding of concepts and terms used in the text.

3.1 Corporate governance

3.1.1 The concept of corporate governance

Corporate governance is defined as “The structure and processes among the board of directors, shareholders, top management and other stakeholders, and involves the roles of the steward process and exercising strategic leadership, and the objectives of assuring accountability and improving performance” (Chi-Kun Ho, 2005, p. 212). The fundamental concern of corporate governance is ensuring that management acts ethically and in the interest of both the firm and shareholders which entails that directors and managers are held accountable to shareholders for the use of assets (Irani et al., 2005, p. 1).

Pritchett (1983, p. 994, 995) referred to Professor Dodd as a prophet who argued that corporate directors are trustees for the public as well as shareholders’ interest. He said some decisions of directors and managers are motivated by a desire to contribute to philanthropic mores rather than only focusing on firm and shareholders interest. This was a depiction of the moral aspects of corporate governance, which is vastly discussed in literature (Pritchett, 1983, West 2009, Potts & Matuszewski, 2004) and an introduction of other stakeholders who are different from shareholders as is the case in the continental Europe and Japan (West, 2009, p. 111). In this model of corporate governance they treat stakeholder’s interest as an end in itself and not as a means to increase shareholders wealth. They incorporate the involvement of other stakeholders other than shareholders, which supports a deontological morality that guarantees shareholder interest. This is opposed to the American system of corporate governance, which harks on managerial capitalism on shareholders interest (West, 2009, p. 111). Basically in the American system of corporate governance there is no ethical problem since there is no ethics and focuses instead on an individual manager who is closely watched and is either frightened or incentivized to pursue the interest of others and profit (West, 2009, p. 109 & 110).
Growing concerns over the welfare of several interest groups is compelling corporate management to take into account the environment, public and society as a whole. The rise and expansion of e-commerce and economic liberalizations and market deregulations as well have all together rendered traditional business philosophy irrelevant (Chang & Ha, 2001, p. 32). Greed, speculation, misconduct and complacency, which have often led to public outrage, paved a way for government regulations (Julien & Rieger, 2003, p. 6). The implementation of these rules and the day-to-day running of firms rest on the shoulder of directors and senior management. (Julien & Rieger, 2003, p. 6). In order to ensure good corporate governance practices, Julien & Rieger (2003, p. 7-11) proposed seven rings of Governance attributes, which are distinct from each other but connected with each other and can improve the competitive position of the company in the long run, which include the following

- Board of Directors and committees: the board has the role of directing the company, defining the value system of the company, monitoring performance and protecting the interest of the stakeholders. The responsibility of the board is defined by laws and charters and for boards to function effectively it depends also on a mix of other attributes like board structure and composition, operating practices, group dynamics and chemistry, competency and expertise, and monitoring and self assessment.
- Legal and regulatory: this attribute represents the legal boundaries within which the company operates. They are usually defined by current law and international, local, federal and stage regulations.
- Business practices and ethics: these are moral boundaries within which a company words and encompasses the rules of conduct that shape operations and guide individual behavior.
- Disclosure and transparency: this attribute is concerned with the nature and timing of information that a company discloses to its stakeholders. This involves furnishing stakeholders with as much information as possible and is an aspect of transparency.
- Enterprise wide risk management: here the company is involved in identification, analysis, monitoring, evaluation and management of the full range of business risk.
- Monitoring: boards need to do a regular evaluation of the components corporate governance framework to make sure that everything works as expected.
- Communication: this is an essential attribute for the smooth functioning of any organization.

The connectedness between these attributes is elucidated with the diagram below.
Efficient interaction between these variables is a guarantee to good corporate governance.

3.2 Theories

Corporate governance is an aspect of company management whose need came to be with the introduction of separation of ownership from management, which created a relationship between principals (equity holders or owners) and agents (managers and CEOs) (Tosi et al., 2003, p. 2054), which needed to be managed. In this section we are going to examine the theories associated with separation of power. Basically we have the agency theory and the stewardship theory.

3.2.1 Agency theory

In large corporations with diverse shareholding, management actions deviate significantly from satisfying shareholders interest and tend to seek to maximize their own personal interest at the expense of the shareholders (Davis, Schoorman & Donaldson, 1997, p. 50). Because management often has little or no capital invested in corporations that they manage, they tend to exploit shareholders wealth. This exploitation usually takes the form of higher salaries,
bonuses, and consumption of prerequisites. This is referred to as the agency cost. Management is often referred to as the agent and the shareholders as principals. Principal agent relationship is based on a symbiotic scheme where by principals have capital and lack managerial skills while managers have the skills but lack the capital. They thus come together since they both complement each other for a business to be a reality (Adams, 2009, p. 411) but unfortunately human nature is so possessive that self interest crops in and erodes trust between the two parties.

The agency theory is based on assumptions of man as being a rational actor who seeks to maximize their individual benefits. In the agency theory both the agent and the principal seek to benefit as much as possible with the least possible expenditure but each always seek the option that is most beneficial to their individual utilities. The interests of both the principal and the agent can coincide and in such a situation there is no conflict of interest and both parties seek to maximize their utilities. Principals incur agency costs when there is divergence between the interest of shareholders and agents because agents will rationally seek to maximize their own utilities (Davis et al., 1997, p. 22).

Merrett & Walzer (2004, p. 71) explained that agency theory reflects how the agent should handle situations when selfish stakeholders may want to prevent firm from actions that seek to maximize equity value because of their self-interest. This selfishness could be from the part of management as well, which adds to agency cost, and stakeholders must take action against this selfishness. They point out a series of relationships under which self interest usually brings a cost for another party like agency theory of cash dividends where operating earnings is invested thereby reducing risk of bondholders at the expense of shareholders, as well as shareholders expropriation of creditors. They often do so by obliging creditors to monitor management instead of them the shareholders doing that.

The agency theory is criticized on the claim that it assumes that a rational man is self-interested and acts only to satisfy their egos. This implies that there is no trust and a form of moral skepticism, which is not helpful in building systems of applied ethics (Joseph, 2009, p. 500).

This conflict of interests however exists and needs a solution. It can be solved by the board of directors who often address issues like dilution of stock by letting employees own some, reprising of options if stock price falls, balanced compensation packages, accounting policy for stock options, loans to insiders, stock ownership guidelines among others (Hendricks, 2002, p. 10-12). The objective in the agency theory is to reduce the costs incurred by principals by imposing internal controls in order to check the agents’ egoistic behavior (Davis et al., 1997, p. 22).
3.2.2 Stewardship theory

“Recent thinking about top management has been influenced by the alternative models of man. Economic approaches to governance such as agency theory tend to assume some form of homo-economicus, which depict subordinates as individualistic, opportunistic and self-serving. Alternatively sociological and psychological approaches to governance such as stewardship theory depict subordinates as collectivists, pro-organizational, and trustworthy (Davis et al., 1997, p. 24). Stewardship theory is based on psychological and sociological values and refers to an executive as individuals motivated to act in the best interest of the principals. Under this theory the word man is used to mean individuals whose behaviors are ordered in such a way that pro-organizational behaviors and collectivistic behaviors give them a higher utility than individualistic self-serving behaviors. Under the stewardship theory where there is a conflict of interest between principal and agent, the executive places the interest of the cooperative first than to defect (Davis et al., 1997, p. 24).

Stewardship theory recognizes the non-financial values of managers like the need for achievement and recognition, the intrinsic satisfaction from successful performance, respect for authority and the rule of ethics (Muth & Donaldson, 1998, p. 6). Under the stewardship theory since there is no real case of agency costs the role of the board of directors is a little different and they only act as managerial controllers, managerial empowerment and co-optation (Muth & Donaldson, 1998, p. 6).

3.3 Board of Directors

3.3.1 Board overview

Board of director is a legal authority with in the corporation to protect and represent the interest of shareholders. “The board of directors is a link between shareholders and managers of the firm entrusted with undertaking the day –to-day operation of the organization”(Monks and Minow1995; Forbes and Milliken 1999 as citied in Taylor: boards at work, 2002, p. 4.)

The board of directors is an official and legal entity responsible for the governing of company and is not responsible for taking active part and role in the daily affairs of company, “rather it sits above the day to day operations and advices, represents the membership (or stockholders) and holds the CEO or administrator accountable” (Diamond, 2005, p. 11). The boards of directors are broadly supposed to play key role in corporate governance, especially in the monitoring of top management. The directors sitting in the boardrooms are supposed to supervise and keep an eye on the actions of management give advice and veto poor decisions (Weisbach, 1987, p. 431).

The ownership in corporation provides grounds for power. The shareholders are responsible for nomination and selection of directors that control and run the organization on behalf of shareholders. The directors are stewards and accountable for their action to the shareholders. The shareholders are responsible for the appointment of independent auditors to check the
authenticity of and fair picture of company matters. The regular meeting of shareholders provides an opportunity for directors to clarify and rectify the doubts and answers of the shareholders questions or concerns (Fernando, 2006, p. 51).

The monitoring role of company board of directors is considered central component of corporate governance. The board members carry out monitoring function on behalf of shareholders, because shareholders would think it difficult to exercise control because of wide dispersion of common stock ownership. The effectiveness of board in its monitoring function is determined by considering its composition, independence and size (John & Senbet, 1998, p. 373).

In one tier board CEO and chairman of the board is one person where as in two-tier board the positions are hold by two persons. Two tier boards are considered to be more useful for the companies to avoid the conflicts because of the separation of ownership and control (Dehaene, Vuyst & Ooghe, 2001, p. 386).

3.3.2 Responsibilities of board of directors

The boards of directors are held responsible to perform different duties including fiduciary duty, duty of fair dealing or loyalty, duty of care, duty not to entrench, duty of supervision. The fiduciary duty of board of directors is to be trustworthy and to act in the best interest of ones whom they represent. The duty of loyalty or fair dealing demands that the director should not use his or her corporate position to gain personal profit and other advantages. The duty of supervision means that directors should know about the operations of management, how to make themselves aware, and what to do if there is an issue that requires attention. If the motives of the other parties are to force change that is not in favor of shareholders, under the duty not to entrench, directors are duty bound to oppose the act and needs objective assessment of the company situation (Aluchna.M, as cited in Crowther & Guleraras, A handbook of corporate governance and social responsibility, 2010, p. 162).

3.3.3 Role of board of directors

Boards of directors are supposed to play an important role in corporate governance, especially in monitoring top management. The board serves as first line defense against incompetent management to protect the interest of shareholders (Weisbach, 1987, p. 431). “The board of director is an official and legal entity governing the organization it serves”(Diamond, 2005, p. 11).

The board of directors is trustee of shareholders to safeguard their interest by maximizing shareholder wealth. According to Kim & Nofsinger (2007) board of directors is highest managing body of a firm and responsible to perform the following duties (Kim & Nofsinger, 2007, p. 41).
1. Hiring, evaluation and firing of top management (considering CEO being the most important to focus).
2. To give their expert advises on the affairs of company management.
3. To vote on operating proposals such as capital expenditures and acquisitions.
4. To make it sure that activities of the firm and financial information and figures are fairly reported to the shareholders.
5. Finally to give their expert opinion on financial matters including dividends, stock repurchase etc.

In the successful execution of these functions, directors are supposed to represent the interest of shareholders. Thus corporate board provides an important corporate governance mechanism. As board of directors is part of the firms organizational structure at the top layer of corporate hierarchy and considered to be the most important internal monitor (Kim & Nofsinger, 2007, p. 41). In the light of these responsibilities corporate board is considered as an important organ of organization structure and important for the success and prosperity of organization (Plessis et al., 2011, p. 88). The board of directors serves as the supreme decision center in many ways such as establishing objectives; formulation, approval and adoption of policies; approval of goals and plans; selection of chief executive officer and approval of the action of CEO. The board serves as a source of initiative for changing the firm structure if it is not working effectively (Mohan & Leon, 1985, p. 3).

### 3.3.4 Board composition

The literature on corporate governance recognizes the important role played by the board of directors in keeping an effective organization. This fact is very true in publicly held corporations that are characterized by agency problems caused because of separation of ownership and control. The top management is normally responsible for suggesting and implementing policy initiatives to direct organization, by largely diffuse equity holders considering the risk attached with those decision taken by board members (Prevost, Rao & Hossain, 2002, p. 374).

The literature on the composition of board of directors articulates different relationships between board composition and firm performance. In our research thesis an attempt is made to explore the relationship between board composition factors by focusing on (gender) and firm performance in Swedish banking industry by focusing on (ROE). Board of directors play fundamental role in the corporate governance of publicly listed companies, and thus the understanding of board structure determinants is important to focus.

#### 3.3.4.1 Board Size

The size of board of directors got much attention after the collapse of large corporations such as Enron, WorldCom and Parmalat. Board size and variations in corporate performance
continue to be an important issue in corporate governance literature. The association between board size and variations in corporate performance is noticed because of failures of large board to address the principal agent problem (Cheng, 2008, p. 157).

The numbers of board of directors varies by country, by sector or by company. The business roundtable in U.S estimated the number of board members on the stock exchange were between 8 and 16. “The standards regarding the maximum number of directors relate primarily to the concern to ensure effective operation of the board of directors. A smaller board of directors would operate more effectively, be more cohesive, enable more participation and discussion and thus lead greater involvement and an increased sense of responsibility”(Berghe & Ridder, 1999, p. 76).

Studies done on board size and firm performance argue that small boardrooms lead to more effective monitoring. Larger boards are considered to be less effective due to coordination and process problems that arise in larger team sizes (Lipton & Lorsch 1992; and Jensen 1993; as cited in Tufano & Sevick, 1997 p. 328). Yermack (1996, p. 185) found negative relationship between board size and firm performance in U.S larger firms between 1984 and 1991. Adams & Mehran (2005, p. 1) determined positive relationship between board size and firm performance in US banking industry by using Tobin’s Q. Belkhir (2009, p. 201) investigated the relationship between board size and firm performance in banking industry for the period 1995-2002. The evidence was in favor of positive relationship between board size and firm performance as measured by Tobin’s q and return on asset. Conyon & Peck (1998, p. 291-299) studied the relationship between board size and firm performance in different European countries including UK, France, Denmark, Netherlands, and Italy. The findings of the study demonstrated that board size and corporate performance is negatively linked.

Kim & Nofsinger (2007, p. 46-47) argued on the size of board and firm performance. They argued that board with many members might be less efficient because of the problems to mitigate the principle agent problems. In case of larger boardroom the free riding of director increases and boardroom is considered more symbolic rather than part of managerial process and creates less value for business in relation to smaller boardrooms. This shows that boardrooms with fewer members add more value and members feel to contribute more to fulfill their fiduciary duty. Kim & Nofsinger further argued that in large boardrooms it is difficult for the board members to reach on common conclusion. “Board with few directors, each member may feel inclined to exert more effort than they would have otherwise.” Kim & Nofsinger (2007, p. 47) Thus, in the light of this smaller boardrooms are considered to be more active and vibrant.

3.3.4.2 Age of directors

Cochran & Wartack (1984, p. 53) said that even though calender years accumulated by individuals is not directly related to their mental capacities, but studies have shown that age of board members play an important role in board effectiveness. Generally older people have worked longer and have greater and much valuable experience. Soltanmamedov & Kolosov
argue that even though older people may be more experienced and stand better chances of taking wiser decisions, their younger counterparts do take more risk and hence can generate more returns if their judgements go as expected. Ollendick & Prinz (1993, p. 111) go to extremes when they use age as a proxy for competence. They argue further that this competency is as a result of knowledge, skills, and experience gained over time. Khorana & Tufano (2006) tried to investigate this thought in a research work and they found out that there was not significant relationship between the age of board members and performance. Cochran et. al., (1984) on the other hand found a negative relationship between average age of board members and firm performance in the Fortune 500.

### 3.3.4.3 Board Independence

According to Higgs report “a non-executive director is considered independent when the board determines that the director is independent in character and judgment and there is not relationship or circumstances which could affect, or appear to affect, the director’s judgment” (OECD survey, 2004, p. 93).

Agency theory has been the most appropriate approach to investigate the relationship between board independence and firm performance. Agency theory advocates that asymmetric information’s and difference of objectives between principal (shareholder) and the agent (manager) levy cost on the principal, where agent uses discretionary authority in his/ her own benefit rather than the principal’s benefit. The theory further suggests that, firms might minimize agency cost by developing proper monitoring systems and using board of directors to supervise managers effectively (Byrd & Hickman, 1992; Fama & Jensen, 1983 as citied by Gani & Jermias, 2006, p. 297). “Manager monitoring activities of the board will be more effective when they are dominated by independent-outside directors” (Fama & Jensen, 1983, as citied by Gani & Jermias, 2006, p. 297). Agency theory suggests that supervisory boards should be dominated by independent non-executive directors with a view to generating effective monitoring of executives. Stewardship theory on the other hand suggests that non-executive board should be dominated by inside members with a view to take effective decisions, since inside board members have better information about the firm than outsiders (Ramdani & Witteloostuijn, 2010, p. 608).

In countries where board structure is unitary, a good deal of importance is linked to the role performed by independent or nonexecutive directors, in undertaking management on behalf of shareholders. Independent directors have little, or no, financial concerns and attachment with the company (Conyon & Peck, 1998, p. 294).

Fama & Jensen (1983, p. 301-320) argued on the reasons for which non-executive directors would have sufficient incentives to monitor top management. First, they want to signal their managerial skills and competencies to the external labor market. The non-executive managers who are not able to monitor top management effectively will suffer and their probability of future employment might decrease. Secondly, non-executive directors normally have a great deal of expertise in taking decisions to control the actions of top management.
A number of studies have been done in US to find the relationship between director independence and firm performance. Some researchers have attempted for direct evidence of relationship between board composition in terms of board independence and corporate performance. They studied the correlation between board independence and firm performance as reflected by the accounting numbers. (Baysinger & Butler, 1985; Hambrick and Jackson, 2000; as cited by Garg, 2007, p. 40) found positive correlation between proportion of independent non-executive directors and accounting measures of firm performance. On the other side, studies conducted by (Klein, 1998; Bhagat and Black 1997; and Hermalin & Weisbach 1991; as cited by Garg, 2007, p. 40) found that an independent director does not predict a better future accounting performance. Agrawal & Knoeber (1996, p. 377) found negative relationship between firm performance and board independence.

It is reasonable to understand that executive directors would not be able to monitor themselves, or to effectively monitor the activities and performance of chief executive officer in an independent manner. The careers of executive directors are closely tied and dependent to the incumbent CEO and thus they would not possess enough incentives to criticize, remove or restrict (Crystal, 1992; Jensen, 1993; Hart, 1995 as cited in Conyon & Peck, p. 294).

Bhagat & Black (1999, p. 1-3) illuminated the uncertain relationship between board composition and firm performance. Boards of directors in US public companies that have majority of independent directors behave in different way, than the boards without such a majority. Some of these differences tend to increase firm value: and others might decrease the value of firm. In general, considering the range of board compositions existing today in large public companies, there is no convincing proof that greater board independence correlates with firm profitability. In particular, there is no convincing empirical support for “supermajority-independent boards” with one or two inside directors. On the other side, firms with supermajority-independent boards are less profitable. This proves that it might be useful for firms to focus on moderate number of inside directors (assume three to five with an average eleven board members).

3.3.4.4 Board competence

Board competence is a complex set of contextual, educational, interpersonal, analytical, political and strategic behaviors (Herman, 2005, p. 139-140).

Contextual competency: The board members should understand and take into account the norms, culture and values of the organization they serve.

Educational competency: Board of directors should take important measures and steps to make sure that board members are well informed about the organization, the profession and board’s role and responsibilities.

Interpersonal competency: The board of directors nurtures the development of members as a group and should contribute for collective welfare and promotes a sense of cohesiveness.

Analytical competency: The board members identify complexities and subtleties.
Political competency: The board of directors should broaden the channels of communication by distributing the profiles of board members and annual reports. Here, it requires developing a healthy relationship among key constituents.

Figure 5: Board competence

Source: Own diagram based on literature studied

3.3.4.5 Gender diversity in the boardrooms

“The business case for female directors implies that women are not substitutes for men directors of equal ability and qualifications, but women instead may have unique attributes that increase the performance of the board, and ultimately the performance of the firm. Additionally the consideration of the qualified women for the board positions increases the talent pool for directors and increases the probability that better qualified directors will serve on the board even if the women are perfectly interchangeable with men” (Simpson et al., 2010, p. 27).

Diversity in the boardrooms has been a popular issue getting tremendous attention in academia and mainstream press. Most of the early focus and research was related to impediments to promote women at middle and lower levels of management. But, in the recent past research has started to pay attention on female representation in the top managerial positions and company board of directors (Kesner, 1988; Carter et al., 2003; Bilimoria & Piderit, 1994; Daily et al., 1999 as cited in Farrel & Hersch, 2005, p. 85).

The topic of women directors is not a trivial one for two reasons

1. The inclusion of women in the board may add value to shareholders.
2. Competent women deserve equal opportunities to serve as directors and executives.

The inclusion of women in the board is thus seen as a good business decision but paradoxically the percentage of women directors on many boards is generally low compared to the number of women in the total population and those who occupy managerial positions in corporations (Simpson et al., 2010, p. 27).

In an interview granted to the quarterly by Sandra Dawson, she shows optimism but pointed out that women have some issues and they are several folds. First when there is a woman in a board she is often alone and this probes in a complex of may be they wont listen to me, or but she is a woman, or is my point good enough. She however blames this on the audiences who are often men as she says that this woman fear has a lot to say about the audience. She says that women in any case have to be prepared and take their stance and pass their messages across. She creates the impression that in a board women are productive when they are a reasonable proportion of the board (Meaney et al., 2008).

In our study we will find out what the relationship between gender diversity is to return on equity but before we proceed we will define the term diversity as used in this research. Burton (1991, P. 43) defines diversity in a management context as broadening the merit principal of the board and not just an issue of having people of various works of life represented in the board. He said the representativeness need to take into consideration skillfulness of the representatives. In this light, each time we use the word diversity we will be referring to a representation of both the male and female gender in the board of directors by skilled and competent men and women in the trade. We will equally use phrases like female proportion and woman or women proportion interchangeably with gender diversity. Demographic diversity, which is the one we are more concerned with, is classified into observable and non-observable attributes. By observable factors we mean gender, age, race, and ethnicity while for non-observables we refer to knowledge, education, values, perception, affection, and personal characteristics (Erhardt et al., 2003, p. 102) and we will single out the gender attribute in this study. Campbell (1996) in “Letters to the editor” raised up the fact that what a woman or the minority can contribute to the board is an unexploited perspective. He recognized that these unexploited perspectives are of great value and can bring diversification to the company, which can bring inspiration and quality to the company.

Walt & Ingley (2003, p. 225) highlighted that the reason why women should be appointed to the board include the fact that demographic trends need to be changed. Considering the fact that in most boards the CEO of the firm is a member of the board, it is worth noting that there are not enough men to meet up with the demand for CEOs. This has caused the appointment of incompetent male CEOs. This however is a waste of talent because there are thousands of qualified females that can handle such positions. He also point out that males in the board have a series of constraints including lack of expertise and they do not usually dedicate enough time for preparations and they lack information which makes it important to appoint females into the board. Bilimoria & Wheeler (2000, p. 140) cited fears by CEOs that women will disrupt a cooperative boardroom climate by identifying difficult women issues. They equally identify the fact that women don’t look at themselves as directors but as women...
directors and are aware of the fact that they are referred to as women directors. These women are however conscious of their responsibility in addressing issues relating to the recruitment, retention, development and advancement of women in organizations (Bilimoria & Wheeler 2000, p. 140).

A lot of research has been carried out on board diversification and generally there is common opinion from the majority of the research that firm performance increases with increase diversity in the board. This is because a diverse board is likely to have more independent members and tends to generate high creativity, innovation and quality decisions at individual and group levels (Erhardt et al., 2003, p. 104).

Among the many research works carried out on the effect of gender diversity in the board of directors and firm performance is the work of Carter et al. (2010, p. 410 & 411) where they were looking for the relationship between gender and racial diversity and firm performance. They collected data from firms in the S&P 500 index from the year 1998 to 2002 that is a five-year period. They concentrated on the Tobin’s Q and ROA to determine firm performance. They found a neuter effect of gender and racial diversity on the Tobin’s Q but there was a significant positive relationship between the number of women in the major board committees and ROA. There was also no relationship between presence of ethnic minority in the major board committees and ROA. When these two variables were combined there was no significant effect on the performance of the firm.

In another study Erhardt et al., (2003, p. 102) in a desire to find out the relationship between board diversity and firm performance considered demographic diversification, which they classified into observable and non-observable attributes. They focused on gender and ethnic minority, which are aspects of observable demographic diversity. They used ROA and ROI as the performance indicators. At the end of their research they found out that there was a positive relationship between ROA and ROI and the board variables; gender diversity and ethnic minority in the board (Erhardt et al., 2003, p. 107).

Carter et al., (2003, p. 51) again in another study on the fortune 1000 firms, defined board diversity as the presence of women, African-American, Asians, Hispanics and other minority groups on the board of directors. They found out that there is a relationship between the presence of women and or these minority groups on the board and firm value, which they measure, with the use of the Tobin’s Q. They also found out that firms, which were ready to accept women in the board, equally accepted the minority groups in the board. Another relationship that they realized from the study is that the number of women and minority in the board increases with the size of the firm but presence of insiders in the board reduced the presence of women and the other minorities in the board.

“A Google search reveals 340,000 WebPages for female or women corporate board directors including 25,400 WebPages in the Google scholar”(Terjesen et al., 2009, p. 320). In this study they sought to review the most up-to-date studies of women on the board. They argued that the influence of women on firm performance is in multi-level processes (Terjesen et al., 2009 p. 334). These levels they identified as individual, board, firm and industrial and environmental levels (Terjesen et al., 2009, p. 321). They found out that gender diversity
which involves more women on the corporate boards contributed to firm performance through a variety of board processes. Some of these processes do not exhibit direct influence on the firms’ bottom line, and also through individual interaction. Women play a vital role in the firm as they contribute to important outcomes at the level of the firm when they participate directly as leaders, mentors, and as members of a network and indirectly they also affect the performance of the firm when they pose as a symbol of opportunity for other women, inspiring them to stay and achieve with the firm. However women on corporate board demographics show that as corporate citizens, the majority of women don’t yet have an equitable share of governance in their respective institutions ”(Terjesen et al., 2009, p. 334).

3.4 Corporate governance in Sweden

Revisiting modern corporate governance from the outset, the concept as we use it today became a reality in the USA in the early 1980s when a number of powerful and arrogant boards and executives of some listed corporations had been acting in ways that did not portrait share holding interest which caused leading institutional investors to intervene by exercising their power as owners and formulating corporate governance guidelines. This practice spread to Europe and first in the UK after a series of scandals in the 1980s led to the introduction of the UK corporate governance “comply or explain model”. This practice later followed to Sweden in the beginning of the 1990s when the companies act committee began working on revising the Swedish company act, which led to the enforcement of the new company act in January 1, 2006. Between these years there has been serious evolution within individual companies and various organizations (Swedish corporate governance board website).

Fundamentally corporate governance in Sweden is much like that practiced in most of the industrialized world and has been developed mainly in the past decade (Lekval, 2009, p. 368). Working with and under the Swedish Corporate Governance Board, Lekval developed a model for the Swedish corporate governance. We are going to examine the features of the model as discussed by Lekval (2009).

3.4.1 Regulatory framework

The regulatory framework is made up of legal requirements composed mainly of the company act as well as self-regulation like the stock exchange’s rule and the Swedish corporate governance code. The principle of self-regulation has a long history in Swedish corporate governance, which is made up of corporate governance codes that have been significantly updated over time and based mainly on the “comply or explain” principle. Another important aspect of self-regulation is the Swedish Security Council, which interprets, and issues statements about the meaning of concepts of good governance practices on the security market and which all listed companies are bound to follow.

3.4.2 A different corporate governance structure
The Swedish corporate governance model is based on hierarchical governance structure in which superior authorities have powers to issue directives to the inferior authorities and subordinates. Shareholders’ meeting rules with universal sovereignty on decisions concerning any company matter except for cases where the board has exclusive decision making powers or veto right. The shareholders’ meeting equally has the duty and right to issue express instructions to the board. This right is however not widely in use especially in listed companies since it can trigger the resignation of board directors. Subordinate to the shareholders meeting is the unitary board. Corporate governance in Sweden differs from the US and UK in that boards in Sweden are composed entirely or predominantly by non-executive members. In the case of listed companies not more than one member from the management team is represented in the board that is often mostly the CEO.

The Swedish corporate governance model makes provisions for the one tier as well as two tier governance models as shown on the figure below.

**Figure 6: Swedish corporate governance model**

![Swedish Corporate Governance Model](image)


### 3.4.3 Concentrated ownership

One important institutional precondition for Swedish corporate governance is a relatively concentrated ownership where by there is expected to be a few individuals who own a substantial amount of the shares of the firm as is the case in other European countries. The intention is for these major shareholders to take a major part in controlling the companies. This notion is in an effort to counter what is often referred to as masterless companies, which usually have dispersed, share holding. Under this system the major shareholders are expected
to take on the long-term perspective and hold on to their shareholdings even in rough times, which generally is good for the company.

3.4.4 Strong ownership power

The shareholder meeting as outlined above has far reaching powers. The issue of shares with multiple voting rights enhances these powers and they are often called A and B shares. This system allows for the issue of shares with voting power of up to 10 times the votes of other shares. And almost half of the Swedish listed firms issue these shares. This is still in an effort to the presence of shareholders who are going to take a long-term responsibility for the company by retaining their shares even during rough moments and by actively participating in the governance of the company. They equally are given seats in the board of directors. As such the Swedish rules of independence requires only two members of the board of directors to be independent of major shareholders who are defined as owners of more than 10% of the capital or votes of the company.

The nomination committee in the Swedish corporate governance model is appointed by the shareholders and is made up mostly of major shareholders or their representatives. This differs from other countries where the nomination committee is a subcommittee of the board of directors.

The auditor in this model of corporate governance is appointed by the shareholders’ meeting and they are report to the shareholders’ meeting. They differ from auditors in other countries in that they also examine the accounting practices and also review the performance of the board and CEO of the company in addition to their normal function of examining the annual report.

3.4.5 Protection of minority rights

The Swedish Company Act provides far-reaching protection of the minority shareholders rights. This protection is done in three main ways.

First of all there is a strict legal obligation for all shares to be treated the same unless it is stated in the article of association such as allocation of more powers to some shares. It is further prescribed that the shareholders meeting, board or any other body within the company may not take decisions that give undue advantage to some shareholders at the expense of others or the company. Any such decisions if challenged automatically become invalid.

Secondly individual shareholders have strong rights inherent in the Swedish corporate governance system by tradition. Regardless of shareholder and number of shares, every shareholder has the following rights:

1. To have items and resolution proposal included on the agenda of the shareholders’ meetings.
2. To ask questions at the meeting and have these answered by the board or the CEO as long as such answers can be given without causing harm to the company.

3. To file counter-resolutions at the meeting.

4. To exercise the voting rights of all his or her shares.

To ensure that the right to vote is respected for all, there has been a provision for a form of postal voting proxy for foreign investors.

Finally minorities of various sizes can block certain resolutions at the shareholders meeting. These include decisions as mergers and de-mergers, changes in the share capital structure among others.

3.4.6 Far reaching transparency standards

By law all remuneration of board members and the CEO of the public companies, split into its main components including pension and severance pay obligations, is to be disclosed at an individual level. The remuneration for senior management of the company has to be presented for adoption in the shareholders’ meeting. Other key disclosure requirements are a full disclosure of all transactions related to parties as large shareholders, board members, the CEO and employees of the company and its group companies. Also large transactions with related parties need to be approved by shareholders’ meeting.

3.4.7 Future challenges

The major challenges facing this model are circumstances regarding ownership structures, legislative tradition and other features characteristic of the market. Also ownership in Swedish listed companies has been extended abroad with the UK and US based investors owning almost a third of the total stock market. They often find difficulties understanding the Swedish version of corporate governance. It is thought that this situation may force the Swedish corporate governance system to modify to match the English and the US corporate governance. The aspect of modifying to international governance standards and still maintain a strong foothold in the local traditions is a key challenge (Lekval, 2009, p. 369 to 376).

The blame game story told by Stanley & Ariane (2001) on ERICSSON which he refers to as bleeding has technically been made a system problem. The Stocks of ERICSSON dropped 75% from 2000s high and the president Kurt Hellström was vilified in the Swedish press as the man to blame for an expected 400 million to 500 million dollar loss in the first quarter of 2000. They equivocally shifted the blame to the Swedish governance system, which they referred to as an antiquated system. Detaily Stanley & Ariane (2001) says power in ERICSSON at this time was in the hands of two shareholders, The Wallenbergs Family and a group of holding companies and funds connected to Handelsbanken. They have maintained an iron grip on control even though they have minimal amount of capital in ERICSSON. They got this power by virtue of the fact that they have ERICSSON. A share, which has 1000, votes
more than the B shares, which foreign shareholders are holding in majority. The Wallenbergs and Handelsbanken each have a little over 42% of the votes of ERICSSON and yet they maintain a very small market capitalization of ERICSSONs total market capitalization.

The Swedish corporate governance deviates in a number of ways from the Anglo-Saxon and the continental counterparts. Majority of ownership in Swedish companies are households. Like the Wallenbergs family whose business and managerial skills have impacted a lot on the Swedish corporate governance system (Carlsson, 2007). A lot of control is impacted by these major shareholders on companies as was the case in the companies which were within the Wallenberg Sphere (Carlsson, 2007) and which are reflected in the Swedish corporate governance model (Lekval, 2009, p. 369 to 376).

Holmen & Knopf (2004, p. 167) carried out a study on minority shareholder protections and private benefits of control for Swedish mergers. They realized that the separation of control through pyramids and dual shares, and cross-holdings increased the chances of private benefit of control. These chances are strengthened by the extralegal institutions, tax compliance and newspaper circulation, which act as shields for shareholders. This was evidence of the fact that even though corporate governance systems could be weak in some cases the extralegal institutions play an important role in aligning shareholders interest with that of the management.

The amenability of firms to the influence of small shareholders, and consideration of proposals of small shareholders, has led to more proposals by nomination committees of the board. This is dominated by large shareholders and fewer proposals often come from other shareholders. Also fewer board proposals are often voted against. This is a direct indication of the positive effect of participation of small shareholders (Strand et al., 2010).

3.5 Swedish Banks

A bank is defined by the Oxford online dictionary (Oxford dictionary website) a financial establishment that uses money deposited by customers for investment, pays it out when required, makes loans at interest and exchanges currency. Banks vary according to what functions they perform and what societal need they seek to provide. These needs are meet with the aid of different product packages provided by banks. Some of these include:

- Deposit and transaction accounts.
- Loan and credit accounts.
- Other services include; retirement plans, cash management services, fund transfer services, payment processes, debit cards and others like currency exchange (Dilley, 2008, p. 8-9).

Banks are special institutions because unlike other financial institutions banks act as intermediaries between borrowers and lenders. Banks also ensure liquidity for its customers as customers are guaranteed of their cash on demand and in so doing they also offer and participate in payment systems (Heffernan, 2005, p. 36). Nowadays the services of banks have gone beyond traditional banking practices as mentioned above and banks now provide
services like derivatives and securitization such as bonds & commercial paper, asset backed securities and mortgage backed securities (Heffernan, 2005). Nowadays banks have extended their transaction platforms to electronic transfers, which are instantaneous, telephone transactions, Internet banking and ATM machines for cash withdrawals (Dilley, 2008).

The financial industry in Sweden has experienced a lot of changes recently. Existing companies operate under a broader scope and have broadened scopes themselves, while new institutions have come up as well as an introduction of some foreign institutions. There have equally been a rapid technological break through that makes the use of branch offices to decline as people do transactions at ATM machines, from their phones and using internet banking. The Swedish financial industry is dominated by banks, insurance companies, mutual funds and mortgage institutions, each owning different proportions of the total market as shown on the pie chart below.

Figure 7: Sectorial pie chart of the Swedish financial market

Source: (Sveriges Risk bank as cited in Swedish bankers association, 2011, p. 3).

In Sweden banks are categorized into Commercial banks, Saving banks and Co-operative banks. There are a total of 33 commercial banks 50 saving banks and 2 co-operative banks as at December 31st 2010. There are also 29 foreign banks that operate in Sweden of which 3 of them are subsidiaries and 26 are branches of banking institutions based out of Sweden ((Swedish bankers Association, 2011, p. 4).
### Table 3: List of banks operating in Sweden

<table>
<thead>
<tr>
<th>Type of bank</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Swedish Commercial Banks</strong></td>
<td></td>
</tr>
<tr>
<td>- Four big banks</td>
<td>33</td>
</tr>
<tr>
<td>- Former saving banks</td>
<td>4</td>
</tr>
<tr>
<td>- Swedish commercial banks</td>
<td>14</td>
</tr>
<tr>
<td><strong>Foreign Banks</strong></td>
<td></td>
</tr>
<tr>
<td>- Subsidiaries</td>
<td>29</td>
</tr>
<tr>
<td>- Branches</td>
<td>3</td>
</tr>
<tr>
<td><strong>Savings Banks</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>114</td>
</tr>
</tbody>
</table>

Source: (Finansinspektionen as cited in Swedish bankers association, 2011, p. 4)

The major functions of banks in Sweden include deposits and lending, set interest rates for deposits and credits based on the market rates, mediation of payments and risk diversification (Swedish bankers association, 2011, p. 5).

Our major concern is on the Swedish banks that are listed in the OMX NASDAQ Stockholm which are Nordea, SEB, Handelsbanken and Swedbank.

**NORDEA:** It is the largest financial company in the Nordic region with an employee base of more than 30,000 employees. It operates mainly in Sweden, Finland, Norway and Denmark. They equally are important players in funds and mortgage credits and they own the plusgirot payment systems.

**SEB:** They operate in the Baltic countries and in Germany. In Sweden SEB has a strong influence in fund management and life insurance likewise the mortgage and finance company sector. They are very active in the stock market and they do currency trading and international payments.

**Svenska Handelsbanken:** They own more than 460 branches in Sweden and operate in the Nordic region. Their operations are mainly based in mortgage credit, fund institutions and finance company sector.

**Swedbank:** They own around 340 branches in Sweden and operate in close collaboration with individual saving banks as well as own shares in some saving banks. They operate in the Baltic region and as a group, which includes Swedbank Robur, Swedbank Hypotek (Swedish bankers association, 2011, p. 6).
Below is a tabulated view of the “big four” banks

**Table 4: "Big-four" banking groups in Sweden as at 2010**

<table>
<thead>
<tr>
<th>The “big four” banking groups, 2010</th>
<th>Employees</th>
<th>Lending to the public.</th>
<th>Total Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Of which Sweden</td>
<td>SEK Billions</td>
</tr>
<tr>
<td>Nordea†</td>
<td>33 791</td>
<td>7 675</td>
<td>2 817</td>
</tr>
<tr>
<td>SEB</td>
<td>20 717</td>
<td>8 545</td>
<td>1 075</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>10 850</td>
<td>7 549</td>
<td>1 482</td>
</tr>
<tr>
<td>Swedbank</td>
<td>19 542</td>
<td>8 960</td>
<td>1 187</td>
</tr>
</tbody>
</table>

Source: (Swedish bankers association, 2011, p. 6).

†The figures on Nordea are for the whole Nordic Countries

### 3.6 Firm performance measures

The analysis of financial statements is important for shareholders, creditors and firm’s management. In the financial statements of company sales, profits and other items are mentioned, but it is difficult to interpret unless there is some way to put the numbers in a perspective. A relative measure is needed to analyze the financial statements that normalize size differences (Megginson & Smart, 2008 p. 48).

According to Anthony (1976, as cited in periasamy financial management, 2009) “Financial statements, essentially, are interim reports, presented annually and reflect a division of the life of an enterprise into more or less arbitrary accounting period more frequently in a year” Financial statements are broadly classified in to two groups (periasamy, 2009).

1. Income statement ratios
2. Balance sheet ratios

Financial statements are made to serve the following objectives

1. To provide adequate information on the firm’s financial sources and obligations.
2. To give reliable information of financial performance and financial soundness of business firm.
3. To provide enough information of the results and operations of business during particular time period.
4. To give useful information of the financial condition and movement of resources in and out.
5. To enable users to evaluate managerial performance in forecasting the earning capacity by providing necessary information.
Ratio analysis involves the calculation and interpretation of financial ratios to assess the performance and status of firm (Megginson & Smart, 2008 p. 48). Financial ratios are broadly classified into following five categories:

1. Liquidity ratios
2. Activity ratios
3. Profitability ratios
4. Market ratios
5. Debt ratios

### 3.6.1 Profitability ratio

Profitability ratios are used to measure the return earned by company during a particular period of time (Robinson et al., 2009).

#### Table 5: Profitability ratios

<table>
<thead>
<tr>
<th>Profitability ratios</th>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Return on sales</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross profit margin</td>
<td>Gross profit</td>
<td>Revenue</td>
</tr>
<tr>
<td>Operating profit margin</td>
<td>Operating income</td>
<td>Revenue</td>
</tr>
<tr>
<td>Net profit margin</td>
<td>Net income</td>
<td>Revenue</td>
</tr>
<tr>
<td><strong>Return on investment</strong></td>
<td>Operating income</td>
<td>Average total assets</td>
</tr>
<tr>
<td>Operating ROA</td>
<td>Net income</td>
<td>Average total assets</td>
</tr>
<tr>
<td>ROA</td>
<td>EBIT</td>
<td>Short-and long term debt and equity</td>
</tr>
<tr>
<td>Return on total capital</td>
<td>Net income</td>
<td>Average total equity</td>
</tr>
<tr>
<td>ROE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: (Robinson et al., 2009)

#### 3.6.1.1 Return on Equity

Return on equity is a comprehensive indicator used to examine firm’s performance and it shows how well managers are in employing the funds invested by the shareholders to generate return on their investments (Megginson & Smart, 2009, p. 55). This ratio is an index of rate of return of risk takers. In return on equity numerator is obtained after meeting all claimants of promised dues, in fact it is affected by multiple factors such as asset turnover, financial leverages, sales profitability (Sinha, 2009, p. 126).

\[
\text{ROE (Return on equity)} = \frac{\text{Net profit}}{\text{Shareholders equity}}
\]
Return on equity and return on investment are indicators of firm’s profitability and appear to be similar but in reality it is not the same. The numerators and denominators of ROE and ROI are different. Return on investment speaks about return on investment on assets while return on equity speaks of owners, in fact return on equity is affected by return on investment and not the other way round. The relationship between two ratios would be clear if return on equity is disaggregated. Return on equity can be disaggregated into three or five components (Sinha, 2009, p. 126).

1. Sales profitability
2. Assets turnover
3. Interest factors
4. Tax components
5. Financial leverage

The combined effect of sales profitability and assets turnover yield ROI, and when ROI is multiplied with financial leverage, we obtain ROE

**Two - component disaggregation of ROE**

\[ \text{ROE} = \text{Financial leverage} \times \text{ROA} \]

\[ = \frac{\text{Average total assets/ common equity}}{\text{Net income/ Average total assets}} \]

**Three - component disaggregation of ROE**

\[ \text{ROE} = \text{Financial leverage} \times \text{net sales margin} \times \text{Assets turnover} \]

\[ = \frac{\text{Average total assets/ common equity}}{\text{Net income/ sales} \times \text{sales/ average total sales}} \]

**Five - component disaggregation of ROE**

\[ \text{ROE} = \text{Financial leverage} \times \text{Net income/ earning before tax} \times \text{Earning before tax/ EBIT} \times \text{EBIT/ sales} \times \text{Assets turnover} \]
The Du Pont system expresses return on equity as product of two main ratios: return on assets and financial leverage multiplier. The return on total assets, on the other end, is the product of net profit margin and total assets turn over (Chandra, 2010). Thus,

\[
\text{Profit after tax/ net worth} = \frac{\text{Profit after tax}}{\text{Net sales}} \times \frac{\text{Net assets}}{\text{Total assets}} \times \frac{\text{Total assets}}{\text{Net worth}}.
\]

Figure 8: Determinants of ROE

Source: (Sinha, 2009, p. 127)

Figure 9: Diagramatic presentation of ROE

Source: (Chandra, 2010)
There are a lot of studies that used ROE as a performance measure but before we go into them we will like to infer the fact that ROE is a measure of performance and that it seeks to protect shareholders interest since we are writing from the perspective of the shareholders.

Going by definition, maximization of shareholders wealth entail, a rise in prices of common stock, maximization of the present value of future cash flows to shareholders like dividend, and proceeds from the sale of common stock, and minimization of risks associated with expected future flows to the shareholder (Moyer et al., 2009, p. 5). As stated earlier

ROE (Return on equity) = Net profit / Shareholders equity (Sinha, 2009, p. 126) implying that the size of Net profit has a direct effect on the size of ROE.

Dividend pay out is one of the common identifiers of the health of a firm (La Porta et al., 2000, as cited in Adjaoud & Amar, 2010, p. 649) and in a normal business scenario it is made from net profits. In this light one will argue that ROE has a direct positive relationship with shareholders wealth first because its numerator makes it possible for dividends to be paid out to shareholders. Second dividend payment sends a signal to the market, which has an effect on the shares of the company and a reputation of the company (La Porta et al., 2000, as cited in Adjaoud & Amar 2010, p. 649). Third a firm could decide to plough back its profits, which go further to add value to the shareholders stockholdings as implied from Bhattacharyya et al., (Fenn & Liang 2001, as cited in Bhattacharyya 2008, p. 524) when they talk about the negative relationship between dividend pay out ratio and value of common stocks. Finally dividend payments mitigate the agency problem and reduce idle balances (Lie, 2000, p. 219). On the basis of the above we thus infer that ROE is related to shareholders wealth and implicitly firm performance if the company’s management is tailored towards meeting the shareholders objectives.

Wei wu (2009, p. 43-44) examined some relations in a bid to study how board variables affect firm performance with the use of ROE as performance indicator amid other factors and tabulated their findings as shown on the table below.
Shrader et al., (1997, as cited in Carter et al., 2003) investigated the relationship between female proportion in the boardrooms and firm performance with the help of accounting measures of profit including ROE and ROA. They found out that there was a significant negative relationship between the proportion of female in the boardrooms and ROE, as well as ROA.

Zahra & Stanton (1988, as cited in Carter et al., 2003) attempted to test the relationship between proportion of female directors and different measures of accounting profit including ROE and EPS. They did not find any significant relationship between female representation in

---

**Table 6: Some previous studies on ROE and their related findings**

<table>
<thead>
<tr>
<th>Author name</th>
<th>Country</th>
<th>Performance tool</th>
<th>Time period</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conyon &amp; Peck</td>
<td>UK, Denmark, Italy, France and Netherlands</td>
<td>ROE &amp; Tobin’s Q</td>
<td>1990 to 1995</td>
<td>Inverse relationship was found between board size and firm performance</td>
</tr>
<tr>
<td>Jiang</td>
<td>China</td>
<td>ROE, ROA &amp; Tobin’s Q</td>
<td>2003</td>
<td>Negative relationship was found between ownership concentration and firm performance</td>
</tr>
<tr>
<td>Li &amp; Zhao</td>
<td>China</td>
<td>ROE &amp; ROA</td>
<td>1998 to 1999</td>
<td>No relationship was found between firm performance and independent directors</td>
</tr>
<tr>
<td>Zeitun &amp; Tian</td>
<td>Jordan</td>
<td>ROE, ROA, MBR &amp; Tobin’s Q</td>
<td>1989 to 2002</td>
<td>Negative relationship was experienced between ownership and firm performance</td>
</tr>
<tr>
<td>Postma</td>
<td>Netherland</td>
<td>ROE, ROA, ROI &amp; Tobin’s Q</td>
<td>1996</td>
<td>No relationship was observed between firm performance and independent directors</td>
</tr>
</tbody>
</table>

Source: (Wei Wu, 2009, p. 43- 44)
the boardrooms and firm performance implying that female proportion does not affect ROE and EPS.

On the other hand Adler (2001 as cited in Claude Francoeur et al., p. 86) found positive relationship between fraction of women on boardrooms and firm performance. Adler used ROE, ROA and ROS as measures of financial profit.

In 2004, Catalyst (as cited in Francoeur et al., p. 86) a famous organization conducted a study to explore the relationship between gender diversity in the boardrooms and firm performance. In this study diversity was regarded as the proportion of females in the boardrooms and financial performance was measured in terms of ROE and stock returns. This study came to the conclusion that diverse boards can better achieve financial performance.

3.7 Other factors that affect ROE or firm performance as a whole

Apart from the board of directors there are a lot of other factors that affect ROE. First of all there are four factors of production, land, Labour, capital and entrepreneur. Banks as corporations mainly base their strength on labour and capital. When we explore the board of directors, we are talking about an aspect of labour. This labour interact in an environment with the use of capital to generate income and make returns from the investment of capital entrusted to them. Generally the welfare of service or product based firm depends on the society and the economic situations of that society. When the economic situation of a country is good businesses prosper and otherwise businesses have to struggle harder to survive under normal conditions. Baten & Schulz (2005) found out that during the first world war, there was a drop in economic activities in all sectors in Germany that led to a drop in GDP and there was a huge drop in company profits. The 921130 Public Finance Activities, (2012) a Russian federation in their 2012 publication stated that there was an increase in seasonally adjusted real domestic products. They noted that corporate profits especially manufacturing profits increased. Robert Lenzer of Forbes (2011) stated that at 2.5% GDP growth in the USA contributed to an increase in the momentum of the profits of leading companies like Caterpillar. These are indicators that companies automatically do well when the economy is doing good.

Considering the factor capital one can say that banks which is a business that lends out money will do better if they had more money to lend out. It is therefore reasonable to consider the market capitalization of banks as a factor that has direct effect on firms profitability and hence ROE. Goddard et. Al., (2004, p. 1070) observed that some firms have so large sizes that they impose effects in the market that favor them and often lead to abnormal profits because the market forces are not strong enough to upset the market disequilibrium. This is possible because there are giant firms in the market that use their size to manupulate the market and this obvious affects ROE since it affects profits.

These factors are embedded in the PEST analysis which further suggests that the well being of a business depends on the political, economic, social and technological situation of a country and or the immediate environment of the business especially the industry and the market.
3.8 Summary of the Chapter

Because of separation of power between ownership and control, an agency problem arises because of the desire of individual stakeholders to maximize their benefits, which in a lot of cases infringes on the right of other stakeholders. In order to check the agency problem the shareholders and other stakeholders in some cases appoint or elect a board of directors to ensure conformity to laid down company objectives. However this covetous nature of stakeholders who in this case are often employees and active shareholders is exceptional under the stewardship theory that views these actors as people with high moral values and who are pro-organizational. In reality both personalities are present in Corporations.

In constructing a board of directors, concern is often laid on the size, age, independence, how many shareholders and executives should be represented, as well as what proportion of each gender to be considered. All of this is geared towards ensuring transparency, efficiency and sustainability as well as a system that is rewarding to all the stakeholders.

This generally is the logic in the theoretical chapter and we have dwelled a lot on studies that try to portray how relevant various board attributes are in attaining this ultimate goal of aligning the objectives of all the stakeholders. Particularly we have been trying to establish the extent to which ROE is affected by the proportion of women in the board of directors from past literature.

It is however unrealistic to think that ROE is affected only by board variables. We have equally found a lot of other factors that affect ROE. Some we have discussed in the literature and some we have not but it's a vast list. All of them are an interaction of the ordinary factors of production which entails that they do interrelate. This makes it difficult for us to make a reliable assertion about how gender affects ROE without taking these other factors into consideration because it will not be realistic. Granted that we are focusing on the board we are going to add control variables which will be other board attributes to ascertain our findings. We will equally include some other factors like PEST factors to make a more realistic picture of the model. Due to the fact that when recording data we do make mistakes and also that we are not able to know all the factors that could affect ROE, we introduce an error term which compensates for the mistakes and the other factors that are absent. The model of factors explaining ROE should thus look like this

\[
ROE = B0 + B1*WP + B2*BS + B3*AAB + B4*BI+ B5*MC + B6*GDPGR + B7*P + B8*E + B9*S + B10*T + Er
\]

Where: \( B0 = \text{constant} \)

- \( WP = \text{Women proportion} \)
- \( BS = \text{Board size} \)
- \( AAB = \text{Average age of board members} \)
BI = Board independence
MC = Market capitalisation of the Company
GDPGR = GDP growth rate
P = Political situation of the country
E = Economic situation of the country
S = Socio Culture Environment
T = Technological situation of the firm
Er = Error term

Due to the fact that we cannot get data for all these and also based on the limitation of our analytical tools we are going to constrict this model to fit the data we have been able to collect. The model we will be using in this thesis during our regression analysis will look like this

\[ \text{ROE} = Bo + B1*WP + B2*BS + B3*AAB + B4*MC + B5*GDPGR + Er \]

Where: WP, BS, and AAB, are proxies for board attributes

- MC is the Proxy for firm size
- GDPGR is the Proxy for economic situations
CHAPTER FOUR

4. SAMPLE, DATA COLLECTION AND PRESENTATION

4.1 Sample

We are writing on the Swedish banking industry and our sample is defined as all banks based in Sweden and that are listed in the Stockholm stock exchange. In Sweden we found a total of 114 banks which are both foreign and national banks. Among the national banks the main categories are commercial banks of which we found 33 in 2010, 79 saving banks, and 2 cooperative banks. There are four major commercial banks and these four are the ones that are listed in the Stockholm stock exchange market. They are Nordea, Swedbank, Svenska Handelsbanken, and SEB bank (Swedish bankers Association, 2011, p. 4). They comprise 75% of the market capitalization of the banking sector (Svenska Bankföreningen). We limited ourselves to these four banks because they have to meet all the standards required by “The Swedish Corporate Governance Model” before they can be listed in the stock exchange market.

4.2 Data Collection

We collected data on the four big banks in Sweden between 2001 and 2010, which are the ones that are listed in the stock exchange. We collected all of our data from the annual reports of these banks. In order to access these annual reports we went into the official websites of the banks. For Nordea and SEB we found all the ten annual reports in their websites. For Swedbank and Svenska Handelsbanken we got part of the annual reports from the official websites and the rest we ordered soft copies and they were sent to us.

For data on ROE we got them directly from the annual reports. Concerning the gender mix of the board for all the ten years and for all the four banks, we got them through counting with the help of the pictures of the board members that we found on the annual reports. For the market capitalization we got them also from the annual reports.

The data on GDP growth rate of Sweden during this period we got this data from Swedish economy website (Ekonomifakta).

4.3 Presentation and description of the data

As stated earlier our sample absorbs 75% percent of the market capitalization of the Swedish banking industry. This therefore has enough impact on the industry and a reasonable base for generalization.
We are going to present our data in a longitudinal manner for the whole industry and for individual firms in the industry over the ten year period.

### 4.3.1 Return on equity between 2001-2010

**Table 7: Return on Equity of Swedish banks from 2001-2010**

<table>
<thead>
<tr>
<th>Year</th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>Swedbank</th>
<th>SEB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>21.2</td>
<td>13.8</td>
<td>14.7</td>
<td>11.9</td>
</tr>
<tr>
<td>2002</td>
<td>20</td>
<td>7.5</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>2003</td>
<td>14.9</td>
<td>12.3</td>
<td>15.9</td>
<td>12.3</td>
</tr>
<tr>
<td>2004</td>
<td>16.6</td>
<td>16.9</td>
<td>21.8</td>
<td>14.7</td>
</tr>
<tr>
<td>2005</td>
<td>18</td>
<td>18</td>
<td>24.6</td>
<td>15.8</td>
</tr>
<tr>
<td>2006</td>
<td>20.9</td>
<td>22.9</td>
<td>19.3</td>
<td>20.73</td>
</tr>
<tr>
<td>2007</td>
<td>23.3</td>
<td>19.7</td>
<td>19.9</td>
<td>19.92</td>
</tr>
<tr>
<td>2008</td>
<td>16.2</td>
<td>15.3</td>
<td>15.2</td>
<td>13.19</td>
</tr>
<tr>
<td>2009</td>
<td>12.6</td>
<td>11.3</td>
<td>-12.5</td>
<td>1.89</td>
</tr>
<tr>
<td>2010</td>
<td>12.9</td>
<td>11.5</td>
<td>8.1</td>
<td>8.65</td>
</tr>
</tbody>
</table>

**Figure 10: Return on Equity of Swedish banks from 2001-2010**
4.3.2 Women proportion in boardrooms between 2001-2010

Table 8: Women proportion in boardrooms between 2001-2010

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>Swedbank</th>
<th>SEB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>16,66</td>
<td>20,00</td>
<td>35,29</td>
<td>15,38</td>
</tr>
<tr>
<td>2002</td>
<td>15,38</td>
<td>18,18</td>
<td>31,25</td>
<td>21,42</td>
</tr>
<tr>
<td>2003</td>
<td>25,00</td>
<td>33,33</td>
<td>42,85</td>
<td>21,42</td>
</tr>
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<td>2004</td>
<td>30,76</td>
<td>35,71</td>
<td>46,15</td>
<td>21,42</td>
</tr>
<tr>
<td>2005</td>
<td>30,76</td>
<td>40,00</td>
<td>53,84</td>
<td>26,66</td>
</tr>
<tr>
<td>2006</td>
<td>30,76</td>
<td>33,33</td>
<td>50,00</td>
<td>24,42</td>
</tr>
<tr>
<td>2007</td>
<td>30,76</td>
<td>20,00</td>
<td>58,33</td>
<td>21,42</td>
</tr>
<tr>
<td>2008</td>
<td>33,33</td>
<td>25,00</td>
<td>58,33</td>
<td>28,57</td>
</tr>
<tr>
<td>2009</td>
<td>25,00</td>
<td>20,00</td>
<td>66,66</td>
<td>23,07</td>
</tr>
<tr>
<td>2010</td>
<td>25,00</td>
<td>21,42</td>
<td>50,00</td>
<td>23,07</td>
</tr>
</tbody>
</table>

Figure 11: Women proportion in boardrooms between 2001-2010
4.3.3 Size of the board

Table 9: Size of boardrooms in Swedish banks 2001-2010

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>Swedbank</th>
<th>SEB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>12</td>
<td>15</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>2002</td>
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<td>15</td>
<td>14</td>
<td>14</td>
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<td>12</td>
<td>14</td>
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<td>2007</td>
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<td>14</td>
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<tr>
<td>2008</td>
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<td>16</td>
<td>12</td>
<td>14</td>
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<td>2009</td>
<td>12</td>
<td>15</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>2010</td>
<td>12</td>
<td>14</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

Figure 12: Size of boardrooms in Swedish banks between 2001-2010
4.3.4 Average Age of board of directors

Table 10: Average age of board members in Swedish banks between 2001-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>Swedbank</th>
<th>SEB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>56.25</td>
<td>55.06</td>
<td>55.17</td>
<td>58.76</td>
</tr>
<tr>
<td>2002</td>
<td>55.92</td>
<td>56.21</td>
<td>55.06</td>
<td>53.35</td>
</tr>
<tr>
<td>2003</td>
<td>53.16</td>
<td>54.93</td>
<td>53</td>
<td>54.35</td>
</tr>
<tr>
<td>2004</td>
<td>52.83</td>
<td>56.64</td>
<td>52.53</td>
<td>54.28</td>
</tr>
<tr>
<td>2005</td>
<td>53.65</td>
<td>57.73</td>
<td>53.61</td>
<td>54.46</td>
</tr>
<tr>
<td>2006</td>
<td>53.84</td>
<td>57.53</td>
<td>51.58</td>
<td>54.07</td>
</tr>
<tr>
<td>2007</td>
<td>54.86</td>
<td>56.93</td>
<td>53</td>
<td>54.5</td>
</tr>
<tr>
<td>2008</td>
<td>56</td>
<td>55.25</td>
<td>55.16</td>
<td>52.85</td>
</tr>
<tr>
<td>2009</td>
<td>56.25</td>
<td>55.66</td>
<td>54.41</td>
<td>52.38</td>
</tr>
<tr>
<td>2010</td>
<td>57.25</td>
<td>57.21</td>
<td>53</td>
<td>54.61</td>
</tr>
</tbody>
</table>

Figure 13: Average age of board members in boardrooms between 2001-2010
4.3.5 GDP growth rate of Sweden from 2001 to 2010

Table 11: Swedish GDP growth rate between 2001-2010

<table>
<thead>
<tr>
<th>Years</th>
<th>Swedish GDP growth rate (In %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>1.26</td>
</tr>
<tr>
<td>2002</td>
<td>2.48</td>
</tr>
<tr>
<td>2003</td>
<td>2.34</td>
</tr>
<tr>
<td>2004</td>
<td>4.23</td>
</tr>
<tr>
<td>2005</td>
<td>3.16</td>
</tr>
<tr>
<td>2006</td>
<td>4.3</td>
</tr>
<tr>
<td>2007</td>
<td>3.31</td>
</tr>
<tr>
<td>2008</td>
<td>-0.61</td>
</tr>
<tr>
<td>2009</td>
<td>-5.33</td>
</tr>
<tr>
<td>2010</td>
<td>5.69</td>
</tr>
</tbody>
</table>

Figure 14: Graph of Swedish GDP growth rate between 2001-2010
4.3.6 Market capitalization of Swedish banks for the period 2001-2010

Table 12: Market capitalization of Swedish banks between 2001-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>Swedbank</th>
<th>SEB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>106</td>
<td>155.76</td>
<td>68</td>
<td>66.9</td>
</tr>
<tr>
<td>2002</td>
<td>80</td>
<td>110.88</td>
<td>70</td>
<td>50.85</td>
</tr>
<tr>
<td>2003</td>
<td>102</td>
<td>154</td>
<td>75</td>
<td>74.39</td>
</tr>
<tr>
<td>2004</td>
<td>116</td>
<td>186.56</td>
<td>87</td>
<td>90.38</td>
</tr>
<tr>
<td>2005</td>
<td>129</td>
<td>208.56</td>
<td>115</td>
<td>115.02</td>
</tr>
<tr>
<td>2006</td>
<td>131</td>
<td>266.64</td>
<td>128</td>
<td>149.25</td>
</tr>
<tr>
<td>2007</td>
<td>129</td>
<td>260.48</td>
<td>94</td>
<td>113.45</td>
</tr>
<tr>
<td>2008</td>
<td>79</td>
<td>114.4</td>
<td>32</td>
<td>41.6</td>
</tr>
<tr>
<td>2009</td>
<td>127</td>
<td>252.56</td>
<td>82</td>
<td>97.33</td>
</tr>
<tr>
<td>2010</td>
<td>134</td>
<td>290.4</td>
<td>109</td>
<td>123.02</td>
</tr>
</tbody>
</table>

Figure 15: Graph of Market capitalization of Swedish banks for the period 2001-2010
4.4 Statistical description of collected data

The statistical description of data is going to give the reader a better understanding of the averages of independent and dependent variables presented above. This is also going to assist us to be able to make conclusion about the diversity of the variables described in the data above which will be the first attempt to answer our first sub research question of “what is the composition of the board of directors in the swedish banking industry”. To start with we are going to run a longitudinal description of the data at the level of each bank succeeded by industrial descriptions which is going to run over the ten year period that covers the scope of the study.

4.5 Descriptive statistics

4.5.1 Description of Industrial data from 2001 to 2010

By industry level presentation we are going to give a ten year based based statistical description of the four banks that rule the banking industry in Sweden. This is in a bid to provide answers to the first research sub question "What is the gender diversity in the board rooms.”

Table 13: Descriptive statistics for industrial data from 2001-2010

<table>
<thead>
<tr>
<th>Statistics</th>
<th>women_proportion</th>
<th>Board_size</th>
<th>Average_age</th>
<th>ROE</th>
<th>GDPGR</th>
<th>MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid N</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
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<tr>
<td>Missing N</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>31.4830</td>
<td>13.6250</td>
<td>54.8573</td>
<td>14.8720</td>
<td>2.0830</td>
<td>122.8857</td>
</tr>
<tr>
<td>Median</td>
<td>28.5700</td>
<td>13.5000</td>
<td>54.7350</td>
<td>15.2500</td>
<td>2.8200</td>
<td>113.9250</td>
</tr>
<tr>
<td>Mode</td>
<td>21.43(^a)</td>
<td>12.00(^a)</td>
<td>53.00</td>
<td>12.30(^a)</td>
<td>-5.33(^a)</td>
<td>129.00</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>12.81209</td>
<td>1.33373</td>
<td>1.65844</td>
<td>6.56061</td>
<td>3.00950</td>
<td>60.60049</td>
</tr>
<tr>
<td>Variance</td>
<td>164.150</td>
<td>1.779</td>
<td>2.750</td>
<td>43.042</td>
<td>9.057</td>
<td>3672.420</td>
</tr>
<tr>
<td>Minimum</td>
<td>14.28</td>
<td>12.00</td>
<td>51.58</td>
<td>-12.50</td>
<td>-5.33</td>
<td>32.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>66.67</td>
<td>17.00</td>
<td>58.76</td>
<td>24.60</td>
<td>5.69</td>
<td>290.40</td>
</tr>
</tbody>
</table>

a. Multiple modes exist. The smallest value is shown
4.5.2 Description of firm level data from 2001 to 2010

By firm level presentation we are going to give a ten year based statistical description of each bank. This also is in a bid to provide answers to the first research sub question stipulated above.

4.5.2.1 Handelsbanken

Table 14: Descriptive statistics of Handelsbanken from 2001- 2010

<table>
<thead>
<tr>
<th>Statistics</th>
<th>women_proportion</th>
<th>Board_size</th>
<th>Average_age</th>
<th>GDPGR</th>
<th>MC</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
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<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Valid</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Mean</td>
<td>26.3420</td>
<td>12.5000</td>
<td>55.1010</td>
<td>2.0830</td>
<td>113.3000</td>
<td>17.6600</td>
</tr>
<tr>
<td>Median</td>
<td>27.8800</td>
<td>12.5000</td>
<td>55.3900</td>
<td>2.8200</td>
<td>121.5000</td>
<td>17.3000</td>
</tr>
<tr>
<td>Mode</td>
<td>30.76</td>
<td>12.00(^a)</td>
<td>56.25</td>
<td>-5.33(^a)</td>
<td>129.00</td>
<td>12.60(^a)</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>6.20056</td>
<td>.52705</td>
<td>1.40926</td>
<td>3.13238</td>
<td>20.80625</td>
<td>3.64484</td>
</tr>
<tr>
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<td>15.38</td>
<td>12.00</td>
<td>53.16</td>
<td>-5.33</td>
<td>79.00</td>
<td>12.60</td>
</tr>
<tr>
<td>Maximum</td>
<td>33.33</td>
<td>13.00</td>
<td>57.25</td>
<td>5.69</td>
<td>134.00</td>
<td>23.30</td>
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</tbody>
</table>

\(^a\) Multiple modes exist. The smallest value is shown

4.5.2.2 Nordea

Table 15: Descriptive statistics of Nordea from 2001- 2010

<table>
<thead>
<tr>
<th>Statistics</th>
<th>MC</th>
<th>GDPGR</th>
<th>ROE</th>
<th>Average_age</th>
<th>Board_size</th>
<th>women_proportion</th>
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</thead>
<tbody>
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<td>10</td>
<td>10</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
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<td>200.0240</td>
<td>2.0830</td>
<td>14.9200</td>
<td>56.3150</td>
<td>14.8000</td>
<td>27.7360</td>
</tr>
<tr>
<td>Median</td>
<td>197.5600</td>
<td>2.8200</td>
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<td>56.4250</td>
<td>15.0000</td>
<td>26.7850</td>
</tr>
<tr>
<td>Mode</td>
<td>110.88(^a)</td>
<td>-5.33(^a)</td>
<td>7.50(^a)</td>
<td>54.93(^a)</td>
<td>15.00</td>
<td>20.00</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>65.51526</td>
<td>3.13238</td>
<td>4.57112</td>
<td>1.04514</td>
<td>.63246</td>
<td>7.48470</td>
</tr>
<tr>
<td>Variance</td>
<td>4292.250</td>
<td>9.812</td>
<td>20.895</td>
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<td>.400</td>
<td>56.021</td>
</tr>
<tr>
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<td>-5.33</td>
<td>7.50</td>
<td>54.93</td>
<td>14.00</td>
<td>20.00</td>
</tr>
<tr>
<td>Maximum</td>
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<td>5.69</td>
<td>22.90</td>
<td>57.73</td>
<td>16.00</td>
<td>40.00</td>
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</table>

\(^a\) Multiple modes exist. The smallest value is shown
### 4.5.2.3 SEB

#### Table 16: Descriptive statistics of SEB from 2001-2010

<table>
<thead>
<tr>
<th>Statistics</th>
<th>women_proportion</th>
<th>Board_size</th>
<th>Average_age</th>
<th>ROE</th>
<th>GDPGR</th>
<th>MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid N</td>
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<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>22.5830</td>
<td>13.8000</td>
<td>54.3610</td>
<td>13.1080</td>
<td>2.0830</td>
<td>92.2190</td>
</tr>
<tr>
<td>Median</td>
<td>22.2550</td>
<td>14.0000</td>
<td>54.3150</td>
<td>12.7450</td>
<td>2.8200</td>
<td>93.8550</td>
</tr>
<tr>
<td>Mode</td>
<td>21.43</td>
<td>14.00</td>
<td>52.38 (^a)</td>
<td>1.89 (^a)</td>
<td>-5.33 (^a)</td>
<td>41.60 (^a)</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>3.81096</td>
<td>0.63246</td>
<td>1.72444</td>
<td>5.40929</td>
<td>3.13238</td>
<td>34.04896</td>
</tr>
<tr>
<td>Variance</td>
<td>14.523</td>
<td>0.400</td>
<td>2.974</td>
<td>29.260</td>
<td>9.812</td>
<td>115.9332</td>
</tr>
<tr>
<td>Minimum</td>
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<td>13.00</td>
<td>52.38</td>
<td>1.89</td>
<td>-5.33</td>
<td>41.60</td>
</tr>
<tr>
<td>Maximum</td>
<td>28.57</td>
<td>15.00</td>
<td>58.76</td>
<td>20.73</td>
<td>5.69</td>
<td>149.25</td>
</tr>
</tbody>
</table>

\(^a\) Multiple modes exist. The smallest value is shown.

### 4.5.2.4 Swedbank

#### Table 17: Descriptive statistics of Swedbank from 2001-2010

<table>
<thead>
<tr>
<th>Statistics</th>
<th>women_proportion</th>
<th>Board_size</th>
<th>Average_age</th>
<th>ROE</th>
<th>GDPGR</th>
<th>MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid N</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>49.2710</td>
<td>13.4000</td>
<td>53.6520</td>
<td>13.8000</td>
<td>2.0830</td>
<td>86.0000</td>
</tr>
<tr>
<td>Median</td>
<td>50.0000</td>
<td>12.5000</td>
<td>53.3050</td>
<td>15.5500</td>
<td>2.8200</td>
<td>84.5000</td>
</tr>
<tr>
<td>Mode</td>
<td>50.00 (^a)</td>
<td>12.00</td>
<td>53.00</td>
<td>-12.50 (^a)</td>
<td>-5.33 (^a)</td>
<td>32.00 (^a)</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>10.85249</td>
<td>1.89737</td>
<td>1.24564</td>
<td>10.47378</td>
<td>3.13238</td>
<td>27.55197</td>
</tr>
<tr>
<td>Variance</td>
<td>117.777</td>
<td>3.600</td>
<td>1.552</td>
<td>109.700</td>
<td>9.812</td>
<td>759.111</td>
</tr>
<tr>
<td>Minimum</td>
<td>31.25</td>
<td>12.00</td>
<td>51.58</td>
<td>-12.50</td>
<td>-5.33</td>
<td>32.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>66.67</td>
<td>17.00</td>
<td>55.17</td>
<td>24.60</td>
<td>5.69</td>
<td>128.00</td>
</tr>
</tbody>
</table>

\(^a\) Multiple modes exist. The smallest value is shown.

From the firm level description of data it is worth noting that we have means which are different from the minimum and maximum values, which is the justification for the non zero standard deviation and gives us the first proof of diversity in the board rooms when we take into considerations the variables of interest. Also the ROE figures follow the same trend.
which is also a first call for concern as to whether this variation in ROE is due to variation in Board variables (independent variables) or if this variation in ROE can be accused to other causes. This we shall know soon and most probably be able to explain how and why.
CHAPTER FIVE

5. EMPIRICAL FINDINGS AND ANALYSIS

5.1 Hypothesis generation and statistical tests

We seek to establish if the presence of women in the boardrooms has an effect on ROE. In order for us to be able to establish this cause-effect relationship, we are going to use hypothesis testing, which is a better way to statistically infer this relationship. “A statistical hypothesis is an assumption about an unknown population parameter” (Bajpai, 2010, p. 308). We are going to introduce control variables in order to check the dependability of the presence of the female gender in the board on other determinants of ROE. We are going to do this in two steps first will find out the relationship between gender and ROE in a correlation analysis, and then we introduce the control variables types one and then the other to see their relative effects. Like in any other statistical analysis, we have gathered data from our sample, which is a valid representation of the population. In order to be able to employ this data in a reasonable manner we are going to hypothesize a forecast as stipulated by hypothesis testing. We are going to duel mainly on the null hypothesis, which is denoted as \( H_0 \) and is the hypothesis, which is usually tested, and the basis for rejecting it is if the analysis proves to be insignificant. This implies that the model is useful.

We are going to have one hypothesis for our case since we have only one dependent and one independent variable with four control variables. We are going to apply this hypothesis on the firms during the longitudinal analysis and in the industry when we do industrial longitudinal analysis of the data.

• Level of significance

For us to reject the null hypothesis we are going to adopt a significance level of 5%. There will therefore be a 95% probability that our findings are correct.

• Statistical test

For us to be able to establish the relationship we are going to do a correlation analysis and our main statistical tool is going to be the Pearson’s correlation coefficient. Our test statistics is the significance test.

We are equally going to carry out ANOVA analysis, which will enable us to establish and quantify the relationship between our independent and the dependent variable. This will be done with the help of a linear regression model. The regression approach is advantageous because it allows us to consider all models in one unified framework and thus allows complete control of the comparisons made. Also the calculation of the coefficients and standard errors allow us to use confidence intervals rather than relying on hypothesis tests only (Platt, 1997, p. 52 -53).
• **Hypothesis**

**H₀:** There is no significant relationship between the proportion of women in the boardroom and ROE.

**Ho: r = 0**

Where \( r \) is the correlation between two variables represented here by the Pearson’s correlation coefficient.

The null hypothesis, Ho = 0 will be accepted at 95% confidence interval.

We are going to run linear regression analysis to determine how the independent variables affect dependent variables. We will first of all look at the correlation between our variables to check if the model is appropriate. As stated already we are going to use the Pearson’s correlation coefficient. It is denoted by \( r \) and the value usually lies between -1 and 1. When \( r \) is negative it shows that there is inverse relationship and when it is positive it depicts a proportional relationship and the strength of this relationship depends on how far away \( r \) is from zero. So the closer \( r \) is to zero the weaker the relation.

**5.2 Industrial level Correlation analysis**

**5.2.1 Correlation analysis for the period 2001 – 2010 between ROE and women proportion**

Table 18: Correlation analysis for industrial data for the period 2001- 2010

<table>
<thead>
<tr>
<th>Correlations</th>
<th>ROE</th>
<th>women_proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>-.128</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.432</td>
</tr>
<tr>
<td>ROE</td>
<td>N</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>-.128</td>
</tr>
<tr>
<td>women_proportion</td>
<td>Sig. (2-tailed)</td>
<td>.432</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>40</td>
</tr>
</tbody>
</table>

From the diagram above women proportion and ROE correlate with a coefficient of -.0128. This is an almost neutral negative correlation but it is however insignificant at 95% level of significance.
### 5.2.1.1 Handelsbanken

Table 19: Correlation analysis for Handelsbanken for the period 2001-2010

<table>
<thead>
<tr>
<th>Correlations</th>
<th>ROE</th>
<th>women_proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.084</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>10</td>
</tr>
<tr>
<td>women_proportion</td>
<td>Pearson Correlation</td>
<td>.817</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>10</td>
</tr>
</tbody>
</table>

There is a weak negative correlation between women proportion in the boardrooms and ROE with a significant level of 0.817, which is considerably higher than our recommended level of 0.05.

### 5.2.1.2 Nordea

Table 20: Correlation analysis for Nordea for the period 2001-2010

<table>
<thead>
<tr>
<th>Correlations</th>
<th>women_proportion</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.317</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>10</td>
</tr>
<tr>
<td>women_proportion</td>
<td>Pearson Correlation</td>
<td>.317</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.372</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>10</td>
</tr>
</tbody>
</table>

Women proportion and ROE have a fair positive correlation at 0.372 significant level, which is above our recommended level of significance and hence considered insignificant.
5.2.1.3 SEB

Table 21: Correlation analysis for SEB for the period 2001-2010

<table>
<thead>
<tr>
<th>Correlations</th>
<th>women_proportion</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>women_proportion</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>10</td>
</tr>
<tr>
<td>ROE</td>
<td>Pearson Correlation</td>
<td>.110</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.763</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>10</td>
</tr>
</tbody>
</table>

The correlation between board size and ROE is mildly positively correlated and statistically insignificant.

5.2.1.4 Swedbank

Table 22: Correlation analysis for Swedbank for the period 2001-2010

<table>
<thead>
<tr>
<th>Correlations</th>
<th>women_proportion</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>women_proportion</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>10</td>
</tr>
<tr>
<td>ROE</td>
<td>Pearson Correlation</td>
<td>-.333</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.347</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>10</td>
</tr>
</tbody>
</table>

Here we have a correlation coefficient of -0.333 which is a fairly weak negative correlation but is however insignificant at 95% degree of significance.
5.3 Linear regression of the data

The Linear regression model

Generally

\[ \text{ROE} = B_0 + B_1 \times \text{WP} + B_2 \times \text{BS} + B_3 \times \text{AAB} + B_4 \times \text{MC} + B_5 \times \text{GDPGR} + \text{Er} \]

Where: \( B_0 \) = constant

\( \text{WP} \) = women proportion

\( \text{BS} \) = board size

\( \text{AAB} \) = average age of board members

\( \text{MC} \) = Market capitalisation of the company

\( \text{GDPGR} \) = GDP growth rate

\( \text{Er} \) = error term

Our linear regression is going to be structured into five sections. First we will do the regression for the industrial data. This will be followed by the analysis of the individual firms data. Each section will be structured into two parts. This is because we are introducing control variables to check the correlation results between ROE and gender. We will first of all control with other board variables to see how the present of other board variables affect the proportion of women. And in the second part of each section we will then introduce other factors that affect ROE that are not board members as stipulated in our model.

5.3.1 Industrial analysis

From the correlation results the proportion of women and ROE have a correlation coefficient of -0.123. This means that a percentage change in the proportion of women which is our independent variable will lead to 0.123 multiple of the percentage of female change in ROE. This relationship is however insignificant.

We are going to check the reliability of this by introducing control variables, first we will bring in more board attributes and later on we will add other determinants of ROE to the board variable to see the effect on ROE.

Now we are introducing board size and average age of board members as our control variables and lets see how the picture will look like. First our model reduces and looks like this

\[ \text{ROE} = B_0 + B_1 \times \text{WP} + B_2 \times \text{BS} + B_3 \times \text{AAG} + \text{Er} \]
Table 23: ANOVA test results for part 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>31.266</td>
<td>3</td>
<td>10.422</td>
<td>.228</td>
<td>.876</td>
</tr>
<tr>
<td>Residual</td>
<td>1647.358</td>
<td>36</td>
<td>45.760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1678.625</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE  
b. Predictors: (Constant), women_proportion, Board_size, Average_age

Table 24: Regression test results for part 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>18.901</td>
<td>40.578</td>
<td>.466</td>
</tr>
<tr>
<td>1</td>
<td>Average_age</td>
<td>-.095</td>
<td>.710</td>
<td>-.133</td>
</tr>
<tr>
<td></td>
<td>Board_size</td>
<td>.231</td>
<td>.853</td>
<td>.271</td>
</tr>
<tr>
<td></td>
<td>women_proportion</td>
<td>-.063</td>
<td>.094</td>
<td>-.676</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE

From the ANOVA table we have a significance level of 0.876, which is much higher than our agreed level of 0.05, which makes the model not useful. When we take a good look at the table of coefficients we realize that the significance level of women proportion has increased from 0.432 in the correlation analysis to 0.504 here. This means even if we keep increasing our level of significance it will approve the results of the correlation sooner before it can ever do for this case. From this we can thus say that other board factors affect how the proportion of women in the board affects ROE. The coefficient of the proportion of women is -0.063. This means that if we increase the proportion of women by 1% and holding board size and average age of board members unchanged ROE will decrease by 0.063. Which agrees with the correlation figures at least in that it is an inverse relation.

Looking at the control variables, average age has a coefficient of -0.095 and board size, 0.231 both of them are insignificant at 95% level of significance.
Generally in spite of the observed effects on the women proportion, it is still insignificant and we thus conclude that irrespective of the above control variables the proportion of women in the board do not have a significant effect on ROE.

From this case we cannot reject our null hypothesis concluding that the proportion of women do not have a significant effect on ROE in the banking industry in Sweden during the first decade of the 21st century.

Now we introduce our second set of control variables and see the effect that it will have on the women proportion. These variables that we are adding to the board variables are market capitalization of the banks and the GDP growth rate of Sweden over the years. This brings us to the original model

\[ \text{ROE} = B_0 + B_1 \times \text{WP} + B_2 \times \text{BS} + B_3 \times \text{AAB} + B_4 \times \text{MC} + B_5 \times \text{GDPGR} + \varepsilon \]

**Table 25: ANOVA test results for part 2**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>469.419</td>
<td>5</td>
<td>93.884</td>
<td>2.640</td>
<td>.040</td>
</tr>
<tr>
<td>Residual</td>
<td>1209.205</td>
<td>34</td>
<td>35.565</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1678.625</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE  
b. Predictors: (Constant), GDPGR, Average_age, Board_size, women_proportion, MC

**Table 26: Regression test results for part 2**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>24.194</td>
<td>39.117</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average_age</td>
<td>-.219</td>
<td>.690</td>
<td>-.055</td>
<td>-.317</td>
</tr>
<tr>
<td>Board_size</td>
<td>.075</td>
<td>.766</td>
<td>.015</td>
<td>.098</td>
</tr>
<tr>
<td>women_proportion</td>
<td>-.057</td>
<td>.083</td>
<td>-.112</td>
<td>-.692</td>
</tr>
<tr>
<td>MC</td>
<td>.010</td>
<td>.018</td>
<td>.093</td>
<td>.542</td>
</tr>
<tr>
<td>GDPGR</td>
<td>1.066</td>
<td>.324</td>
<td>.489</td>
<td>3.289</td>
</tr>
</tbody>
</table>
a. Dependent Variable: ROE

In the ANOVA table the significance level is 0.04, which makes our model significant unlike when we had only board variables. In the table of coefficients, we have a constant of 24.194. Looking at the female proportion we realize that it has a significance level of 0.493. This is slightly closer to the agreed level of significance than the case when we had only board variables. The B coefficient has slightly increased from -0.063 when we had only board variables to -0.057, which is a sign that it is affected, by other variables that affect ROE apart from just board variables.

Among the control variables the GDP growth rate has a coefficient of 1.066 and is significant at 0.002 level of significance. Average age, board size and market capitalization has coefficients -0.219, 0.075, 0.010 respectively which are all insignificant at 95% level of significance. This means that the effect they have on ROE in this model is approximately zero. And we can thus say that ROE is better explained by the economic situation of the country.

Coming back to our variables of concern, the effect of the proportion of females on ROE even though has been altered with the introduction of GDP growth rate and market capitalization of the banks, it is still insignificant. We therefore conclude that in spite of the interaction between the determinants of ROE with the proportion of females, it still does not have any significant effect on ROE.

We also conclude that we cannot reject the null hypothesis and conclude that the proportion of females in the board of directors does not have a significant effect of ROE.

Now that we cannot find any evidence that the proportion of women in the boardroom has significant effects on the industry, we will go at a lower level to investigate this relationship between the banks and as stated earlier we will do it in two parts.

5.3.1.1 Handelsbanken

Based on the correlation coefficients we found a correlation coefficient of -0.084 these results are however insignificant because the 0.817 level of significance is higher than our accepted level of 0.05.
To check this results we introduce controle variables. This will be done in two stages, first we will control with other board variables. Board size and average age of board members. After we will introduce other factors affecting ROE apart from board variables particularly market capitalization of the banks and GDP growth rate of Sweden during the period of the study. Lets see how this behaves in the anova and coefficient tables below first with board variables. Our model with only board variables is

\[ \text{ROE} = B_0 + B_1 \times \text{WP} + B_2 \times \text{BS} + B_3 \times \text{AAG} + \text{Er} \]

**Table 27: ANOVA test results for Handelsbanken for part 1**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>50.372</td>
<td>3</td>
<td>16.791</td>
<td>1.456</td>
<td>.317b</td>
</tr>
<tr>
<td>Residual</td>
<td>69.192</td>
<td>6</td>
<td>11.532</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>119.564</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE  
b. Predictors: (Constant), women_proportion, Board_size, Average_age

**Table 28: Regression test results for Handelsbanken for part 1**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-.37220</td>
<td>77.124</td>
<td>-.483</td>
<td>.646</td>
</tr>
<tr>
<td>women_proportion</td>
<td>-.137</td>
<td>.203</td>
<td>-.233</td>
<td>.525</td>
</tr>
<tr>
<td>Board_size</td>
<td>4.593</td>
<td>2.496</td>
<td>.664</td>
<td>.115</td>
</tr>
<tr>
<td>Average_age</td>
<td>.019</td>
<td>1.010</td>
<td>.007</td>
<td>.985</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE

From the ANOVA table above we have a level of significance of 31.7%, which is beyond our margin of 5%. This makes our model not a good fit. When looking at the regression analysis in which we have included two control variables we see that board size has a coefficient of 4.57 but insignificant with 0.06 significant level against our recommended 0.05 and can be considered as having zero effect. The average age of board members on its part has a significance level of 98.5%, which far outsmart our 5%. And with a coefficient of 0.019 we consider its effect to be insignificant as well. The constant for this regression equation is -
37.22.

Now giving a closer look at the gender proportion we see that the level of significance improves as compared to what we had during the correlation where we considered only gender against ROE. This does not still help anyway since it remains insignificant.

We thus conclude that regardless of the board size, and average age of members, ROE of the firm is not affected by the proportion of female in the boardrooms in the case of Handelsbanken.

We therefore accept Ho and conclude that there is no significant relationship between female proportion and ROE in Handelsbanken during the first decade of the 21st century based on the two board control variables.

Now that we have seen that even though board variables affect how the proportion of women affect ROE in handelsbanken and the fact that this still does not give the gender proportion a significant power, we will proceed to control for other variables that are non board variables particularly market capitalization of the bank and the GDP growth rate of Sweden between 2001 and 2010. The model for this case is

\[
ROE = B0 + B1*WP + B2*BS + B3*AAB + B4*MC + B5*GDPGR + Er
\]

**Table 29: ANOVA test results for Handelsbanken for part 2**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum Squares of df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>52.473 5</td>
<td>10.495</td>
<td>.626</td>
<td>.693b</td>
</tr>
<tr>
<td>Residual</td>
<td>67.091 4</td>
<td>16.773</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>119.564 9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE
b. Predictors: (Constant), MC, Average_age, GDPGR, women_proportion, Board_size
Our ANOVA gives us a significance of 0.693 higher from the previous analysis, which was at 0.317 making the model more and more unreliable for Handelsbanken. However when we look at the table of coefficients we have a constant of -36.948. The board size, average age, GDP growth rate and Market capitalization have coefficients of 4.5, 0.067, 0.091, and 0.024 respectively. These are insignificant and can be considered to have zero effect on ROE.

Now looking at the women proportion it has a coefficient of -0.108, which is lower than when we had only board variables, which was -0.063. This means that a percentage change in the proportion of women will lead a change in ROE by 0.063 to the opposite direction. The negative correlation thus maintains all along the analysis in Handelsbanken. The effect also remains statistically insignificant.

We therefore conclude that regardless of the effects of other board variables, the size of the bank and the economic situations the proportion of women in the board of directors do not have a significant effect on ROE.

We do not reject our null hypothesis and state that the proportion of women in the board does not have a significant effect on the size of ROE.
5.3.1.2 Nordea

From correlation table for Nordea we have a positive correlation of 0.317 between female proportion and ROE. This means that a percentage change in the proportion of females in the board room leads to an increase in ROE by 0.317% these results are however insignificant because the 0.372 level of significance is higher than our accepted level of 0.05.

To check this results we again introduce two control variables, board size and average age of board members. With this our correlation table looks like this;

\[
\text{ROE} = B_0 + B_1 \times WP + B_2 \times BS + B_3 \times AAG + \epsilon
\]

**Table 31: ANOVA test results for Nordea for part 1**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>118.404</td>
<td>3</td>
<td>39.468</td>
<td>3.400</td>
<td>.094&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>69.652</td>
<td>6</td>
<td>11.609</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>188.056</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE  
b. Predictors: (Constant), women_proportion, Board_size, Average_age

**Table 32: Regression test results for Nordea for part 1**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-227.067</td>
<td>83.385</td>
<td>-2.723</td>
<td>.034</td>
</tr>
<tr>
<td>Average_age</td>
<td>3.064</td>
<td>1.249</td>
<td>.700</td>
<td>2.453</td>
</tr>
<tr>
<td>Board_size</td>
<td>4.540</td>
<td>1.930</td>
<td>.628</td>
<td>2.352</td>
</tr>
<tr>
<td>women_proportion</td>
<td>.082</td>
<td>.163</td>
<td>.134</td>
<td>.499</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE

From the ANOVA table we have a significance level of 9.4%, which is more than the set 5%. Coming to the coefficients from the regression, we have a constant of -227.067.
Taking a look at the control variables we realize that average age with a coefficient of 3.064 has a significant effect on ROE. This contradicts the results from correlating average age and ROE alone implying that average age of board members is affected by either proportion of females in the boardrooms or the size of the board or both. This means that each time there is a unit change in the average age, we experience an increase in ROE by 3.064%. On the other hand board size with a coefficient of 4.54 has an insignificant effect on ROE because it has a high significant level of 0.057 slightly above 0.05.

Now zooming on our main variable, women proportion there is an increase in the level of significance from 0.372 to 0.636. It has a coefficient of 0.082 implying that a percentage change in the proportion of women leads to 0.082 increase in ROE. However as seen from the significance figures above it is insignificant.

We hereby conclude that in spite of the introduction of board size, and average age of members, ROE of the firm is not affected by the proportion of female in the boardrooms in the case of Nordea.

We therefore accept Ho and conclude that there is no significant relationship between female proportion and ROE in Nordea during the first decade of the 21st century.

We proceed to control further by introducing market capitalization and GDP growth rate as control variables. In this case our model looks like this

\[
\text{ROE} = B_0 + B_1 \times WP + B_2 \times BS + B_3 \times AAB + B_4 \times MC + B_5 \times GDPGR + \text{Er}
\]

Table 33: ANOVA test results for Nordea for part 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum Squares of df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>139.652</td>
<td>27.930</td>
<td>2.308</td>
<td>.219</td>
</tr>
<tr>
<td>Residual</td>
<td>48.404</td>
<td>12.101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>188.056</td>
<td>19.252</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE
b. Predictors: (Constant), MC, women_proportion, Board_size, GDPGR, Average_age
Table 34: Regression test results for Nordea for part 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-130.312</td>
<td>120.414</td>
<td>-1.082</td>
</tr>
<tr>
<td></td>
<td>Average_age</td>
<td>.991</td>
<td>2.150</td>
<td>.227</td>
</tr>
<tr>
<td></td>
<td>Board_size</td>
<td>5.318</td>
<td>2.138</td>
<td>.736</td>
</tr>
<tr>
<td></td>
<td>women_proportion</td>
<td>.149</td>
<td>.209</td>
<td>.243</td>
</tr>
<tr>
<td></td>
<td>GDPGR</td>
<td>.564</td>
<td>.517</td>
<td>.386</td>
</tr>
<tr>
<td></td>
<td>MC</td>
<td>.027</td>
<td>.029</td>
<td>.387</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE

The ANOVA table presents a significance level of 0.219, which is above our level of significance. This makes the model not a good one for the data since it is insignificant.

From the table of coefficients we have a constant of -130.312. All our control variables have an insignificant effect on the dependent variable ROE. For predictors however, average age, board size, GDP growth rate and market capitalization have 0.991, 5.318, 0.564, and 0.027 respectively. But they have a near zero effect because their effects are not significant at 95% confidence interval.

Paying attention to the proportion of females, which is our variable of concern, we have a significance level of 0.517 up from 0.094. This means that the introduction of market capitalization and GDP growth rate erodes the effect of the proportion of women making it more insignificant. However it has a predictor of 0.149 meaning that a percentage increase in the proportion of women leads to an increase in the ROE by 0.149 every other variable being constant. This means that there is a positive relationship same as in the correlation and in the first regression.

We thus conclude that regardless of the board size, and average age of members, the size of the bank and the economic situations, ROE of the firm is not affected by the proportion of female in the boardrooms in the case of Nordea.
We therefore accept Ho and conclude that there is no significant relationship between female proportion and ROE in Nordea during the first decade of the 21st century based on the two board control variables.

5.3.1.3 SEB

Focusing on gender from the correlation table, the proportion of women in the board has a negative relationship to ROE with a pearsson correlation coefficient of 0.110. This effect is annulled by the fact that the effect is insignificant at 95% confidence interval.

We then introduce control variables to see how far these results can be generalized. As before we are using board size and average age of board members as control variables in the first part. These variables will be used in the model immediately below

\[ \text{ROE} = B_0 + B_1 \times \text{WP} + B_2 \times \text{BS} + B_3 \times \text{AAG} + \text{Er} \]

Table 35: ANOVA test results for SEB for part 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>141.867</td>
<td>3</td>
<td>47.289</td>
<td>2.336</td>
<td>.173b</td>
</tr>
<tr>
<td>Residual</td>
<td>121.477</td>
<td>6</td>
<td>20.246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>263.343</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE
b. Predictors: (Constant), women_proportion, Board_size, Average_age
Table 36: Regression test results for SEB for part 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-143.526</td>
<td>85.792</td>
<td>-1.673</td>
<td>.145</td>
</tr>
<tr>
<td>Average_age</td>
<td>1.294</td>
<td>1.408</td>
<td>.412</td>
<td>.919</td>
</tr>
<tr>
<td>Board_size</td>
<td>6.138</td>
<td>2.887</td>
<td>.718</td>
<td>.078</td>
</tr>
<tr>
<td>women_proportion</td>
<td>.070</td>
<td>.723</td>
<td>.050</td>
<td>.926</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE

From the anova table our model is insignificant with a significance level of 0.173 against the agreed level of 0.05. This notwithstanding a careful look at the interaction between the dependent variables starting with the control variables we see that average age is insignificant both in the correlation analysis and in the regression. It has a coefficient of 1.294. Board size also is insignificant with a coefficient of 6.138. The level of significance of the board size has greatly improved in the model as compared to the correlation, that is 0.777 in the correlation and 0.078 in the regression. This shows that the other variables have a reasonable effect of board size. The model has a constant of -143.526, which implies that everything being equal if all our variables are zero, ROE drops by a 143.526.

Considering our main variable the female proportion, it has a regression coefficient of 0.07. This means that a percentage increase in the proportion of women in the board leads to a decrease in ROE by 0.07. Since they have an inverse relationship. This however is also insignificant as it was in the correlation results. Looking at the significance level, we realize an increase in the significance level in the correlation to 0.929 from 0.347 at the correlation results. However the relationship remains insignificant at 95% confidence interval.

We thus conclude that regardless of the board size, and average age of members, ROE of the firm is not affected by the proportion of female in the boardrooms in the case of SEB.

We therefore accept the null hypothesis and conclude that there is no significant relationship between female proportion and ROE in SEB during the first decade of the 21st century.

We then proceed further to test with other control variables market capitalization of SEB and the GDP growth rate of Sweden. The new model look like this

\[
\text{ROE} = B_0 + B_1 \times WP + B_2 \times BS + B_3 \times AAB + B_4 \times MC + B_5 \times GDPGR + Er
\]
Table 37: ANOVA test results for SEB for part 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>178.403</td>
<td>5</td>
<td>35.681</td>
<td>1.680</td>
<td>.318</td>
</tr>
<tr>
<td>Residual</td>
<td>84.941</td>
<td>4</td>
<td>21.235</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>263.343</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE
b. Predictors: (Constant), MC, Average_age, Board_size, GDPGR, women_proportion

Table 38: Regression test results for SEB for part 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-95.929</td>
<td>98.489</td>
<td></td>
<td>-.974</td>
</tr>
<tr>
<td>women_proportion</td>
<td>-.066</td>
<td>.758</td>
<td>-.047</td>
<td>-.087</td>
</tr>
<tr>
<td>Board_size</td>
<td>5.151</td>
<td>3.249</td>
<td>.602</td>
<td>1.585</td>
</tr>
<tr>
<td>Average_age</td>
<td>.661</td>
<td>1.531</td>
<td>.211</td>
<td>.431</td>
</tr>
<tr>
<td>GDPGR</td>
<td>.555</td>
<td>.640</td>
<td>.322</td>
<td>.868</td>
</tr>
<tr>
<td>MC</td>
<td>.026</td>
<td>.051</td>
<td>.163</td>
<td>.503</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE

The model has a significance level of 0.318 as seen from the ANOVA table, which is insignificant at 95% level of significance.

The coefficient table shows a constant of -95.929 while board size, average age, GDP growth rate and market capitalization of the banks have 5.151, 0.661, 0.555, 0.026 as predictors respectively. All of these are insignificant because they have levels of significance that are higher than the agreed 0.05 for the study. The effects that they have on ROE are therefore not significant and considered to have a zero effect.

The proportion of women has a predictor of -0.066 which means that a percentage increase in the proportion of women in the boardrooms will lead to a reduction in ROE by 0.066 this implies a negative relationship. This contradicts the results from the correlation analysis, which expressed a positive correlation with a coefficient of 0.11. The significance level during the correlation analysis was 0.762 and 0.926 during the first part of the regression
analysis and now it has dropped to 0.188. This means that the control variables enhance the
effect of the proportion of women in the boardroom. This however does not help much
because they are still insignificant at 95% confidence interval.

We hereby conclude that in spite of the introduction of board size, and average age of
members, as well as the market capitalization and the GDP growth rate, ROE of the firm is
not affected by the proportion of female in the boardrooms in the case of SEB. This is because
the effect is insignificant and approximates to zero in statistics.

We therefore accept Ho and conclude that there is no significant relationship between female
proportion and ROE in SEB during the first decade of the 21st century.

5.3.1.4 Swedbank

Taking a look at the correlation results again we restate again that the proportion of women
and ROE have a negative correlation with a coefficient of -0.333. This correlation is
insignificant at 95 % confidence interval.

As we have been doing we introduce control variables to find if they have any effect on how
the proportion of females in the board affect ROE. In the first part we introduce other board
variables, board size and average age of board members. With this our model becomes

ROE = Bo + B1*WP +B2*BS + B3*AAG +Er

Table 39: ANOVA test results for Swedbank for part 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>300.593</td>
<td>3</td>
<td>100.198</td>
<td>0.875</td>
<td>.504b</td>
</tr>
<tr>
<td>Residual</td>
<td>686.707</td>
<td>6</td>
<td>114.451</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>987.300</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE
b. Predictors: (Constant), women_proportion, Average_age, Board_size
Table 40: Regression test results for Swedbank for part 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>215.941</td>
<td>163.706</td>
<td>1.319</td>
</tr>
<tr>
<td></td>
<td>Average_age</td>
<td>-2.807</td>
<td>3.887</td>
<td>-.334</td>
</tr>
<tr>
<td></td>
<td>Board_size</td>
<td>-1.586</td>
<td>4.970</td>
<td>-.287</td>
</tr>
<tr>
<td></td>
<td>women_proportion</td>
<td>-.614</td>
<td>.775</td>
<td>-.636</td>
</tr>
</tbody>
</table>

As has been the case through out most of the analysis our model as seen from the ANOVA table is insignificant. It has a significance level of 0.504 which is above our recommended level of 0.05.

Paying attention on the predictors we have a constant of 215.941 which means that no matter how the other factors combine unless some factors have a reducing effect our ROE will be atleast 215.941. In the real sense of it average age and board size have negative predictors of -2.807 and -1.586 which mean that if there is a unit increase in any of them, there will be a drop in ROE and if they decrease ROE will instead increase. These results are however insignificant at 95 % level of significance.

Focusing on the gender variable we have a negative regression coefficient of -0.614. this means that a reduction in women proportion by 1% will lead to an increase in ROE by 0.614. This implies inverse relationship as predicted by the correlation results. In the correlation we have a significance of 0.347 but in this linear regression we have significance of 0.458 which is higher indicating that the combination of other board variables dilutes the effects of the proportion of women in the board. However the female proportion maintains an insignificant effect with a significance level of 0.458 which is out of our confidence interval.

We thus conclude that regardless of the board size, and average age of members, ROE of the firm is not affected by the proportion of female in the boardrooms in the case of Swedbank.

We therefore accept Ho and conclude that there is no significant relationship between female proportion and ROE in Swedbank during the first decade of the 21st century based on the two board control variables.

Haven concluded with the first control variables we move to the next level where we
introduce more control variables. As in other cases our control variables that add to the above treated board variables are market capitalization and the GDP growth rate.

With these our model resurfaces

$$\text{ROE} = B0 + B1*WP + B2*BS + B3*AAB + B4*MC + B5*GDPGR + Er$$

Table 41: ANOVA test results for Swedbank for part 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>680.232</td>
<td>5</td>
<td>136.046</td>
<td>1.772</td>
<td>.300</td>
</tr>
<tr>
<td>Residual</td>
<td>307.068</td>
<td>4</td>
<td>76.767</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>987.300</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE  
b. Predictors: (Constant), MC, women_proportion, GDPGR, Average_age, Board_size

Table 42: Regression test results for Swedbank for part 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-15.317</td>
<td>258.568</td>
<td>-.059</td>
<td>.956</td>
</tr>
<tr>
<td>Average_age</td>
<td>-1.713</td>
<td>4.510</td>
<td>-.204</td>
<td>.380</td>
</tr>
<tr>
<td>Board_size</td>
<td>5.434</td>
<td>5.166</td>
<td>.984</td>
<td>.352</td>
</tr>
<tr>
<td>women_proportion</td>
<td>1.082</td>
<td>1.001</td>
<td>1.121</td>
<td>.341</td>
</tr>
<tr>
<td>GDPGR</td>
<td>4.407</td>
<td>2.030</td>
<td>1.318</td>
<td>.096</td>
</tr>
<tr>
<td>MC</td>
<td>-1.166</td>
<td>.170</td>
<td>-.437</td>
<td>.384</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROE

The model has a significance of 0.3 which is insignificant at 95 % & confidence interval. This is therefore not a a good model. However we still want to know the effect of other variables on how the proportion of females affect ROE. First we have a constant predictor of -15.317 and our control variables have predictors of -1.713, 5.434, 4.407 and -0.166 for average age,
board size, GDP growth rate and market capitalization respectively. They are however insignificant at 95% confidence interval.

Considering the proportion of women, it has a predictor of 1.082 which means that a percentage increase in the proportion of women in the boards will lead to an increase in ROE by 1.082 implying a positive relationship. This differs from the correlation results above and the regression predictors of the first part of the analysis of Swedbank which show negative relationships. This means that the economic situation of the country and the capital situation of the company combine with other board variables to add value to the proportion of women in the board rooms. The significance level of the proportion of women here is 0.352 down from 0.458 in the first regression and slightly higher than that during the correlation between female proportion and ROE for Swedbank due to the combination with the control variables. These still leave the situation insignificant.

We conclude that regardless of the control variables ROE is not affected by the proportion of female in the boardrooms in the case of Swedbank.

We therefore accept Ho and conclude that there is no significant relationship between female proportion and ROE in Swedbank during the first decade of the 21st century based on the two board control variables.

**Table 43: Summary of regression analysis**

<table>
<thead>
<tr>
<th>Year</th>
<th>Null hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>There is no significant relationship between women proportion in the board room and ROE</td>
<td>Accepted</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>There is no significant relationship between women proportion in the board room and ROE</td>
<td>Accepted</td>
</tr>
<tr>
<td>Nordea</td>
<td>There is no significant relationship between women proportion in the board room and ROE</td>
<td>Accepted</td>
</tr>
<tr>
<td>SEB</td>
<td>There is no significant relationship between women proportion in the board room and ROE</td>
<td>Accepted</td>
</tr>
<tr>
<td>Swedbank</td>
<td>There is no significant relationship between women proportion in the board room and ROE</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
5.4 Discussion of Results

All along we have sought to identify the relationship between the participation of the woman in the board of directors and what effect it has on the ROE in the Swedish banking industry under the agency theory. This has been in a bid to make recommendations that will be able to relax the agency problem. Before making an appraisal of our findings, we will revisit our research question.

Is there a relationship between gender diversity in the boardroom and performance of the Swedish banking industry?

Specifically, our analyses were tailored to answering the following sub-questions.

What is the gender diversity in boards in Swedish banking industry?

Does presence of the female gender in the boardroom affect ROE?

From the descriptive statistics in Chapter four we realise that our standard deviations are greater than zero as well as our variances. By definition a standard deviation shows how much a set of data deviates or is dispersed from the mean of the data. A zero standard deviation mean that all the data has the same value or is the same as the mean. If the standard deviation is greater than zero then it implies that one or more data items differs from the mean. In our description non of the standard deviations was zero. This shows that our gender diversity is variable over the different years and for the different firms in the industry. This also applies for the control variables that have used. Conclusively we have a gender diversity represented by the women proportion, which has all non-zero data entries, and this diversity is variable between the firms and over the different years demonstrated by the non-zero standard deviation. We therefore answer the first question by saying that there is gender diversity and that this diversity is variable over the different firms and during the different years in consideration with a few being the same.

Conceptually the banks we have reviewed exist as corporations basically because a group of capital owners had enough trust on a people whom they probably considered to be collectivists, pro-organizational, and trust worthy (Davis et al., 1997, p. 24). These people who most probably are not the same as from the start represent executives in a corporation, which is an absolute depiction of the stewardship theory. The incorporation of the board of directors in the Swedish banking industry brings to light the existence of an agency problem which Donaldson & Davis (1991, p. 50) described as a situation where management action deviate significantly from satisfying shareholders interest. Merrett & Walzer (2004, p. 71) reflect how agents should handle selfish stakeholders who often want to prevent the firm from actions that seek to maximize firm and shareholder utilities and other actions that aggravate the agency problem.
The board of the reviewed banks is structured like an ordinary board and takes into consideration board size, board competence, gender diversity and board independence among other board variables. Representation of Minority groups in the Swedish board like the introduction of women in all the boards is a vital instrument in mitigating the agency problem since it increases board diversity first for the fact of the representation of women who are less represented in companies and second it brings in another gender to compete with the male. This is important because a diverse board is likely to have more independent members and tends to generate high creativity, innovation and quality decisions at individual and group levels (Erhardt et al., 2003, p. 104).

The gender diversity in the banking industry in Sweden is varied and interacts in a well of other board variables and in a complex model as described by Lekval (2009). We have isolated the female gender and are comparing it with ROE while controlling the results with internal and external variables.

To be able to establish the relationship between female in the boardrooms and ROE, we carried out a Pearson’s correlation test. We further carried out linear regressions, which enabled us to know exact quantitative variations of the ROE in respond to unitary changes in the gender proportion, which is the independent variable. We did this along side other variables, control variables in order to see how their presence will affect how the proportion of women in the board will affect ROE.

When we carried out correlation analysis on the industry we had a very weak negative correlation between the female proportion and ROE. There was a weak positive correlation in Nordea and a very weak positive correlation in SEB. In Handelsbanken we had an almost neutral negative correlation and in Swedbank we had a below average weak negative correlation. These relationships were found to be insignificant and we therefore conclude that the female proportion did not have a significant effect on ROE of the banking industry of Sweden during the first decade of the third millennium.

Looking at the regression analysis, we observed some alterations in the effects of women proportion on ROE when we introduced control variables. When we carried out the industrial analysis our model was significant at 95% confidence interval but the relationship between women proportion was insignificant. We however found that GDP growth rate had a significant positive relationship to ROE. This significance could possibly have contributed considerably in making the model significant during this second part of the industrial analysis in which our model was fully operational. We think so because all the other independent variables were insignificant but however the main issue is that the proportion of women did not show a significant effect on ROE.

When we did the firm level longitudinal analysis our model was insignificant for all the four banks and during all the two parts of the analysis. However we observed differences in levels of significance as we introduced control variables in all the two levels of analysis but none of the variations ended up is a significant effect of women proportion on ROE.
We want to make a comment here that in Swedbank we had a negative correlation results and in the first part of the regression when we introduced board control variables we equally had a negative correlation but when we had both board control variables, market capitalization and GDP growth rate, the correlation switched to a positive correlation. So women proportion switched from a negative correlation with ROE to a positive correlation when whole model was operational. This phenomenon repeated in SEB bank but this time around it changed from being positive during the correlation analysis and the first part of the regression analysis to a negative correlation when the whole model went operational.

We therefore have observed changes in how the women proportion affect ROE when we introduce control variables but these however still left the effect of women proportion on ROE insignificant bringing us to the conclusion that regardless of other board variables and other factors that affect ROE, the effect of the women proportion in the board room does not have a significant effect on ROE. This is in line with the findings of Zahra & Stanton (1988, as cited in Carter et al., 2003) who also concluded that there is no significant relationship between presence of female in the boardrooms and ROE.

Generally we realized that there is no significant relationship between the proportion of female in the boardrooms and ROE at the firm level and industrially during the decade.

When we compare these results to other studies that use the gender diversity as an independent variable but uses other performance measures like the study of Carter et al., (2010, p. 410 & 411) where they mapped gender diversity to Tobin’s Q and ROA in the S&P 500. They found out that gender had no significant effect on Tobin’s Q which on a general bases agree to our findings that gender diversity has no effect on firm performance.

Erhardt et al., (2003, p. 107) established a significant positive relationship between ROA and ROI. In 2003 again Carter et al., (2003, p. 51) studying the fortune 1000 firms established a positive relationship between gender diversity and Tobin’s Q. These two studies are in the USA and there was a relatively high GDP growth of 2.50% and the highest in USA for the period 2001 to 2010 was in 2004 with growth rate of 3.58%. Worth noting is the fact that in 2004 Sweden equally had a very high GDP growth rate of 4.23%. This brings the argument that performance of the female proportion in the board could be affected by the level of economic growth or the general situation of the economy, as it might have been the case in the Swedish banking industry in 2004. This is in a way evidenced in our work because during the industrial analysis we had a significant model and we had indications that this was because of GDP growth rate that had a significant positive relationship to ROE.

Finally we conclude that the female gender does not have any significant effect on ROE. We also want to comment that the effects of the female gender are affected by the presence of other performance determinants demonstrated by the fact that when we introduced control variables, the behavior of the women proportion was often altered. We agree to this general conclusion and conclude that there is no significant relationship between women proportion and ROE.
We also observe that our model is not significant and we think that if we had massive data it could make our model better. However we cannot draw valid conclusions from an invalid model. Our final conclusion there is that the linear regression model is not a good model to measure the relationship between female proportion and ROE in the Swedish banking industry but the database if broadened could make the model more useful.
CHAPTER SIX

6. CONCLUSION

6.1 Conclusion

Conclusively the agency theory explains and seeks solutions to the agency problem. Consequently a board of directors have been created and is composed of diverse, competent and independent people whose supposed objectivity and unbiasedness alongside goodwill, pro-organizational and collective drives enable them to handle situations when selfish stakeholders may want to prevent firms from actions that foster shareholder interest.

The board of directors is composed of different variables of which we have singled out the gender variable and are treating the female representativeness in this board and how they affect ROE, which is a firm performance measure.

We collected data from the listed banks in Sweden and carried out a quantitative analysis of this data to answer the research questions. We hypothesized the research questions thus

Ho: There is no significant relationship between women proportion in the boardroom and ROE

First of all we justify ROE as firm performance measure and indicator of shareholders interest. By definition, maximization of shareholders wealth entail maximization of the present value of future cash flows to shareholders like dividend, and proceeds from the sale of common stock, and minimization of risks associated with expected future flows to the shareholder (Moyer et al., 2009, p. 5).

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\text{ROE (Return on equity)} = \frac{\text{Net profit}}{\text{Shareholders equity}} \quad \text{(Sinha, 2009, p. 126)}
\]

implying that the size of Net profit has a direct effect on the size of ROE. This means that a high ROE shows that there are high profits that can be distributed to shareholders clarifying the fact that ROE is an indicator of shareholders interest and therefore a performance variable.

Boards being there to protect shareholders interest, which is manifested through firm performance of which ROE is one of the indicators and the female gender being part of the board we conclude that the female gender seek to protect shareholders interest in principal.

Going by our case the female proportion has no significant effect on ROE, we therefore conclude that we do not find enough evidence that the female gender affects firm performance and subsequently do not protect shareholders interest when ROE is the dependent variable.

These findings are quite different when compared to other studies. When we examine some of the studies cited in chapter three, a lot of them like that of Shrader et al., (1997, as cited in
Carter et al., 2003) identify a significant negative relationship between the female proportion and ROE as well as ROA. Adler (2001 as cited in Claude Francoeur et al., p. 86) and Catalyst (2004, as cited in Francoeur et al., p. 86) found that there was a significant positive relationship between the proportion of women in the boardrooms and ROE. Studies using other performance measures apart from ROE like Carter et al., (2010 p. 410 & 411) and Erhardt et al., (2003 p. 102) found positive relations between the female proportion and ROA as well as ROI. We strongly recommend another study on this same topic that takes into account more board attributes and other factors that affect ROE in order to be able to check further the correlation problem between variables.

6.2 Quality criteria

The quality of a research in business generally is determined by measuring the validity and reliability of the data and the measures used for the study. By validity we refer to how well the measures we have used and the our research activities are in achieving in answering the research questions and achieving the research purpose while reliability is concerned with the possibility of having the same results if the research was carried out again in another time frame (Bryman & Bell, 2007, p. 162-164).

6.2.1 Validity

In our study we considered two variables, one dependent and one independent and we introduced some controle variables. We first of all carried out a correlation analysis to find the relationship between the dependent and the independent variable and the relevancy of our model. Later we carried out a linear regression to solve our model. Our dependent variable was ROE and our independent variable was gender proportion. Our control variables were average age of board members, board size, market capitalization and GDP growth rate. We carried out both an industrial and firm longitudinal study and the research strategy in the study was quantitative. As stipulated for a typical quantitative research we viewed reality from a positivistic viewpoint and used a deductive approach. This is enough guarantees for a right logical sequence and renders our study valid.

6.2.2 Reliability

Going by the definition of reliability, which is concerned with the possibility of repeating the study, in the future (Bryman & Bell, 2007, p. 40). It is worth noting that we collected data from an official source. The annual reports of the banks in the study are always available either on their websites or upon demand and a researcher has access to the reports of any year for any of the banks. It is therefore very possible for any person to repeat this study at any point in time.
Also the model we used for the analysis the linear regression model, is an old model and has been used over and over and can be applied again in future studies. It is therefore possible to repeat this study at different times in the future.

6.3 Limitations

We concentrated our effort extensively on the effect of the female proportion in the boardroom on ROE and a few control variables. The results stand in isolation because there are a lot of other and possibly more important factors that affect ROE. So in order to best understand the findings it could have been better if we considered a wider operating environment.

The second limitation is that the listed banks are just 3.5% of the total number of banks even though they own 75% of the market capitalization. It is however possible that the other banks, which though are minority in terms of, market capitalization are also a significant number. If we included them it would have equally been a better base for generalization.

The collection of data in the research work was done with the help of different sources and mainly annual reports of all the banks in the sample. We believe that annual reports are published after certain checks and balances and we are sure that all the information in respective annual statements was correct. But still we were dependent on them in the entire period of the writing process; it was not possible for us to check the reliability of the figures, as we did not have any access to such authority.

The fourth limitation we faced was limited time to execute the study. The time for the study we think was short and this gave us quite much pressure.

6.4 Future recommendations

The study was centered just on the effect of females in the board on ROE. We recommend that in the future researchers should try to extend the variables in order to create a more realistic scenario, as ROE is mainly the concern of company shareholders by using other dependent variables as in Carter et al., (2010, p. 410 & 411) they used gender and racial diversity and measured their effect on firm performance with the use of ROA and Tobin’s Q. They found out that there was no relationship between racial and gender diversity to Tobin’s Q but there was a positive relationship between the number of women in the board and ROA. We therefore recommend that further research in the Swedish banking industry with more dependent and independent variables could create a more comfortable and convincing results.

We equally recommend that studies be carried to establish the relationship between board size, board independence and board competence as independent variables and other financial ratios like liquidity ratios, activity ratios market ratios and debt ratios as well as other profitability ratios including ROE. These are unexploited areas in the banking industry in Sweden and we think that the effect of these board composition factors on the ratios is very
important and could ease the job of the board of recruiting personnel and in taking other major decisions.

A lot of studies including ours have focused so much on the agency theory. We will want to recommend that some studies also be carried using the stewardship theory. This is because there is a lot of negative impression about management in the agency theory and there is a need to counter this by emphasizing in some study the good will of employees and their “patriotism” to their firms. This is also important because it sheds light on the state and mentality of employees and the impact this has on businesses nowadays.

Carter et al., (2003, p. 51) found out that firms that were ready to accept more women in the board were equally willing to accept other minority groups in the board. This gives us the impression that the more minority groups are represented in the board the more performance could be improved. We therefore recommend that apart from the female minority the effects of other minority groups on the financial industry in Sweden would be invaluable knowledge to the stakeholders of this sector.

In order to see the impact of the relationship between women presence in the board we recommend also that a qualitative study be carried out. This will be a better opportunity for interaction between firms and researchers, which will give the researcher a more realistic picture of the firm and better reasons to inference as a qualitative study provides in-depth knowledge and explanations to circumstances under which and for which the female gender is given a chance in the board of directors.

We carried out our study under the assumption that the Swedish corporate governance model as described by Lekval (2009) is strictly applied in the banking industry. We however think that this may be a slippery statement as it is no evident from any documents we had access to. We however want to recommend a study on how far Swedish banks implement the Swedish corporate model. This is an important study because it can help to bring to light the difficulties with the model and provide groundwork for reforms on the model, which already is facing criticisms.

In this study, performance of banking industry we considered ROE which is a quantifiable measure of performance. It would be good if researchers in the future could focus on non-financial indicators like reputation of the firm, credit ratings of the firm to have a wider picture of the effect of women proportion on firm performance.

It will equally be good to carry out a study on the general banking industry as well as other separate studies on various categories of banks. In another sense we also recommend doing more studies at the level of the finance industry.
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