

Gender Diversity on Banking Boards

A study on gender diversity
on boards and the impact on
performance from 2007-
2010

Preben
Master Thesis

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Executive Summary

This thesis examines the gender disparity present amongst banking boards and its subsequent impact on company performance within a selection of established international banking companies, spanning from the period of 2007-2010.

The empirical research conducted within this thesis was undertaken using 165 companies operating within the banking sector from a range of geographical areas; 33 from North America, 71 from Asia, 51 from Europe, 5 from Australia and 5 from “Other” parts of the world. The geographical diversity of the population sampled encouraged the discovery of three key findings.

Firstly, the research suggested that gender diversity resulted in limited improvement over the four year period examined. Though there were slight increases in the quantified representation of women on boards throughout four geographic regions, the banks from the “other” region showed a general decline in performance.

Secondly, the empirical research indicated that banking boards with female directors in Europe/Australia and Asia/Others had significantly higher averages of ROAE and stock growth performance in comparison to boards void of any females. For Asia/Others this relationship was found for ROAA as well. However, this relationship of improved performance was not found for ROAA of the European/Australian banks, where contrary results were produced. In North America the banks with three or more female directors showed the highest averages of ROAE, ROAA and stock growth.

Finally, the hypothesis within this paper tested for the existence of a positive correlation between the percentages of female directors in relation to three performance variables; ROAE, ROAA and Stock performance. The results show that only ROAE and the percentage of female directors in Asia had a positive correlation in each of the four years examined. For the hypotheses relating to North America, Europe, Australian and Other, inconclusive mixed correlations were produced. Therefore, it appears that only one conclusion can be drawn to suggest a link between the percentage of women and ROAE in Asia.

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1.0 Introduction

“if Lehman Brothers had been Lehman Sisters, today’s economic crisis clearly would look quite different”

-Christine Lagarde, IMF President, (2010, The International Herald)

In the aftermath of the global financial crisis, assessments of the significant gender disparity present on corporate boards gained traction amongst corporate, political and academic communities. This discussion explored whether corporations were engaging in active efforts to ensure that women were not under-represented in management and decision making roles. Further, this instigated proposals from numerous politicians within a range of countries; increasing the number of women on the boards will lead to increased performance. Though two influential papers were heavily cited within the political debates; 2007 Catalyst report, Mckinsey “Women Matter” 2007, critics argued that these papers were not backed by sufficient data. This has led to conflicting political views; whether a stronger representation of women on corporate boards would increase or result in no effects for company performances.

This paper examines the gender diversity present amongst corporate boards from 2007-2010. Firstly, there will be a presentation of the theory surrounding board diversity and company performance, as well as theories as to why there appears to be discrepancies between the number of male and female board members. This information serves as a backdrop to the underlying assumptions and information used to develop the empirical approach within this thesis.

Lastly, this paper aims to provide solid data in regards to the banking industry and gender diversity. This has been achieved by utilizing empirical data from a large number of banks from around the world to illustrate how gender diversity on the boards has progressed after the financial crisis. Furthermore, the thesis examines the relationship between gender diversity and performance in order to supplement current research.

1.1 Research Questions

In order to complete the goal of highlighting gender diversity and its relation to company performance, two research questions have been created.

1: “Have gender diversity on the banking boards improved since the financial crisis?”

2 “Is there a positive relationship between gender diversity on boards and company performance?”

By exploring the gender diversity on the banking boards this thesis will be able to highlight if this is an area that has seen improvement since the financial crisis.

Further, by examining the relationship between the diversity on the boards and financial performance this thesis might be able to provide a solid argument as to why diversity on the banking boards matter.

1.3 Structure

The structure of this paper will be accordingly; Firstly the introduction and motivation is presented, thereafter the assumptions and limitations to this research will be discussed in order to set the boundaries of the research area. This will be followed by a brief discussion of the theoretical background relating to gender diversity on the boards and management and its impact on company performance. This will be followed by a presentation of the current political landscape in which many of these banks operate under. Thereafter the thesis is divided into two parts, one part focusing on empirical research relating to gender diversity and performance, the other part focusing on testing of the hypotheses. There will be a brief discussion after each of these two parts. Lastly the findings will be summarized and concluded upon.

1.4 Limitations

The major limitation to this research is the linkage between correlation and causation which is not investigated. Part of this thesis aims to examine the data for a significant correlation between two variables however a possible correlation does not imply

causation. The lack of research on the topic explored in this thesis makes it hard to compare findings in this paper to those in others. The varying ways previous research has been conducted in terms of method and selection process contributes to this.

1.5 Method

The aim of this paper is to provide insight to the gender diversity on the banking boards around the world. In addition to this the aim is to identify if this diversity leads to increased performance for the banks. In order to do this the paper will make use of an empirical analysis as well as a quantitative study. The gender diversity on the boards will be tested against performance using three performance measures, Return on Average Equity, Return on Average Assets and the stock price movement.

Firstly this paper will review the theoretical background that pertains to gender diversity and corporate performance. Within the theory on diversity some focus will be on why there would be an intrinsic difference between men and women serving on corporate boards. In addition to the traditional scientific theory the political situation regarding some of the countries where the bank's headquarters are located will be discussed. This is necessary in order to either get an understanding why some boards are composed the way they are in this study, or to serve as an indicator how the composition of the boards needs to change in the future to meet new legislative standards. By utilizing this with descriptive statistics about the banking boards in this period the paper aims to discuss the future direction of gender diversity.

To examine how gender diversity matters the paper utilizes empirical research to study the impact of gender diversity on performance. Firstly in the form of examining the data by means of looking at average performances of different samples, secondly a correlation study is performed to measure if there is a positive correlation between the percentage of female directors and the performance measures. The findings are then discussed in order to conclude if gender diversity has led to increase performance for the banks over the period examined.

2.0 Theoretical Background

The theoretical research on gender diversity on the boards and its impact on company performance is scarce. This thesis is therefore reliant on some underlying assumptions as to why gender diversity on the board should matter. The underlying assumptions such as risk awareness are not tested in this thesis. Firstly, the underlying assumptions are presented. Secondly, the research linking gender diversity to performance is discussed.

2.1 Risk-Awareness

A study from 1994 showed that brokers' perception of women were that they were far more risk averse than their male counterparts (P.Wang 1994). It showed that in general men were perceived as more investment "savvy" than women. In support of this was a study from 1997 who showed that men were somewhat more risk tolerant than females (Barsky, Juster, Kimball and Shapiro, 1997). What they found was that men were statistically more likely to choose the most risk tolerant options when presented with several options. In support of this difference is also a study from 1985 that showed that when military personnel were faced with risky alternatives men were more inclined to take risk than women (Hudgens and Fatkin, 1985). Further support for this divide between the genders was found in a study that women were far more risk adverse when faced with gambling decisions (Levin, Snyder and Chapman 1987). A meta-analysis of 150 studies also showed that male participants were more likely to take risks than their female counterparts (Byrnes, Miller and Schafer, 1999).

The validity of this research has however been challenged by those who argue that there might be a deeper context that pushes subjects to respond in a more risk adverse manner (Schubert et al 1999). The research further supports a view where in a contextual decision making process, there are no differences in the risk preference between the genders. This view is also supported by Hershey and Schoemaker who challenge the context in which a decision is reached (Hershey, Schoemaker 1980). They argue that "*it is reasonable to conjecture that the context effect will be stronger yet in (real world) situations where probabilities and outcomes are not known with certainty*" p114.

The theoretical review of studies on Male/Female risk aversion is clearly divided. It seems to be reliant on the context of the situation men and women are put in and could be reliant on other sociological factors.

2.2 Availability of Women

One of the things that often are overlooked when it comes to discussions around gender diversity on boards is the availability of talent. For women to enter the workplace arena in particular the banking industry one of the major factors would be education. Traditionally there have been more men taking MBA degrees than women. Harvard Business School reported that in 2010 38% of students taking MBA's were women¹. That was a considerable increase from just 28% in 1995. Wharton business school saw an increase from 32% (2007) to 40% (2011) in regards to female MBA enrollment. Business studies are also becoming the most popular degree for women and in 2009 compromised a total of 18% of the degrees awarded to women².

There is also a clear trend towards more and more females entering the work force³. A catalyst study from 2012⁴ showed that in Canada in 2011 women made up 47.3% of the work force and compromised 35.4% of the management positions. A number expected to increase in the future.

These numbers are only concerning the North American region and therefore might not be applicable to the rest of the world.

Why studies like these are important, is because they can go a long way in projecting increases in gender diversity on the boards in the future. As more women enter the labor force and obtain business degrees they are acquiring the tools to be valid candidates for director positions in the future.

2.3 Female perspective

¹ <http://www.forbes.com/2010/04/16/mba-women-business-school-forbes-woman-leadership-education.html>

² <http://www.forbes.com/2010/03/02/top-10-college-majors-women-forbes-woman-leadership-education.html>

³ <http://www.collegetimes.tv/10-surprising-statistics-on-women-in-the-workplace/>

⁴ <http://www.catalyst.org/publication/219/statistical-overview-of-women-in-the-workplace>

It is argued that women may add unique perspective and work style to the boards (Daily, Dalton 2003). In addition to the new perspective boards with female directors are also sending strong signals to their stakeholders and could have a trickledown effect in the company⁵. Out of this it is expected that female directors will have positive effects on the company's bottom line.

2.4 Gender diversity and performance

Gender diversity is only one of the many characteristics relating to the board. Van der Walt and Ingley (2003) describes board diversity as being "*the composition of the board and the combination of different qualities, characteristics and expertise of the individual members in relation to decision-making and other processes within the board*". What researchers have looked for is to find what good corporate governance should achieve and if gender diversity is one of these aspects. Therefore if women are part of good corporate governance but this does not lead to improved performance, then who serves as directors on a board has no practical value (Brown, Brown, Anastopoulos 2002).

Research by Finkelstein and Hambrick (1996) show two main reasons why composition of the boards might impact company performance. The first being, that the board has influence on the company's strategic decision making process and therefore impacts the future of the company. The other being that the board has a supervisory role in the firm and therefore through representing the shareholders monitor the company. Since each director plays a part in the decision making within the boards they can affect the company performance.

Luckerath-Rovers (2010) argues that the presence of female directors might lead to improved company performance, since diverse teams consider a greater range of perspectives and therefore must reach better decisions. Better decisions will ultimately lead to a higher business value as well as improved business performance (Singh and Vinnicombe 2004). In relation to this, some researchers argue that boards that use too much time to weigh up options might delay the decision making abilities and might make the boards more divided (Rose 2007).

⁵ <http://www.forbes.com/sites/katetaylor/2012/06/26/the-new-case-for-women-on-corporate-boards-new-perspectives-increased-profits/2/>

A study by Adler (2001), who examined 215 Fortune 500 companies, showed that companies with the highest number of female executives delivered earnings above the median. In support of this is research by Brown, Brown and Anastasopoulos (2002), who tracked the performance of Canadian firms with two or more women on the board. They found that these companies were far more likely to be leaders in terms of revenue or profit compared to all male boards.

Scientific studies on the relationship between performance and diversity are scarce. A study by Rose (2007), examining Danish listed firms in 1998-2001, showed no significant link between Tobin's Q and female board representation. However a study by Carter, Simkins, Simpson (2003) showed a statistically positive relationship between the presence of women and Tobin's Q for Fortune 1000 companies. A study by Judge (2003) however found that a negative correlation existed between women on boards and company performance. This study was done by examining the data from the FTSE 100 Index in 2003. These three studies detail how divided the scientific studies are when it comes to board diversity and company performance. It also highlights that there very well might be cultural and geographical differences as none of these studies are focusing on the same group of companies.

There have been few studies regarding the appointment of men and women and their impact on the financial performance. A study by Ryan and Haslam (2005) indicates that companies that appointed female directors had a worse performance 5 months prior than those who appointed men, which entails that companies in trouble might be more likely to hire women. When it comes to the appointment of a CEO it is shown that the stock prices often fall and the fall is greater if the new CEO is a woman (Lee, James 2003).

Luckerath-Rovers (2010) argues that shareholders are likely to intervene with regards to the board composition in difficult times. By moving away from a homogenous board towards a more diverse, then the more critical the board will be to top level management decisions and as such lead to a better company performance.

2.5 Popularly cited research

There are two research reports that are heavily cited by politicians⁶⁷ and others trying to make a case for how diversity leads to improved performance. The first is a 2007 report from the non-profit organization Catalyst⁸. They examined the relationship between female directors and financial performance for firms in the United States. The study was done by examining the number of female board directors in 2001 and 2003, thereafter they examined the financial performance using three performance measures; Return on Equity, Return on Sales and Return on Invested Capital⁹. The report divides the companies into four quintiles with banks with the lowest number of female directors being in the bottom and those with the most being the top. The results show that companies in the top quintile is outperforming those in the bottom one, however for financial firms this is not the case with ROE and ROIC.

The other study heavily cited is one made by the global consulting firm McKinsey from 2007 called “Women matter”¹⁰. The study is done in collaboration with the Amazone Euro Fund, and consists of 89 European listed firms. The firms are divided up by a diversity score and the firms with the best score are then compared to the industry average in terms of ROE, EBIT (Earnings before interest and taxes) and stock price growth. The results showed that on average the ROE for diverse firms would be 10% higher, for EBIT it would be 48% higher and for stock price growth it would be 70% higher.

The McKinsey report is often misused by politicians as an argument for gender diversity on the boards as the report deals with women in top level management positions and not board members¹¹.

⁶ <http://sloanreview.mit.edu/improvisations/2012/10/15/europe-weighing-boardroom-quotas-for-women/#.UlaHMMXMipo>

⁷ <http://www.dr.dk/P1/Detektor/Udsendelser/2012/03/13131436.htm>

⁸ <http://www.catalyst.org/publication/261/2007-catalyst-census-of-women-board-directors-of-the-fp500-voices-from-the-boardroom>

⁹ <http://www.catalyst.org/file/139/bottom%20line%202.pdf>

¹⁰¹⁰ http://www.europeanpwn.net/files/mckinsey_2007_gender_matters.pdf

¹¹ <http://www.dr.dk/P1/Detektor/Udsendelser/2012/03/13131436.htm>

3 Political Landscape

Government involvement and regulation were highly scrutinized in the aftermath of the financial crisis. As this section will show, regarding corporate governance, discussion centered on how to voluntarily increase gender diversity on the boards, or whether governments should enforce strict legislation relating to gender diversity.

These following sections examine numerous countries, of which several of the banks sampled operate within, and highlight their political landscape relating to legislating board diversity. Furthermore, it aims to highlight the situation in some of the countries today in terms of their political likelihood to enforce quotas promoting gender diversity on corporate boards. For the banks, the political landscape must be followed closely as enforcing quotas would lead to most banks needing to significantly alter their current mix of serving directors.

3.1 Countries with legislation - Europe:

3.1.1 Norway

In 2003, Norway became the first country in the world to enforce mandatory requirements for all publicly listed companies; to maintain at least a 40% female presence on corporate boards¹². This imposed quota came into full effect in 2008, ensuring that companies were given a 5-year-grace period to increase their board's gender diversity if required. As a result of the quota, gender diversity on boards increased from approximately 7%¹³ in 2003, until it reached the imposed 40%¹⁴ in 2008.

The Norwegian quota does not however apply to all firms. It is restricted to companies that are considered to be ASAs¹⁵, meaning only firms with a minimum share capital of 1 million NOK. Small stock companies classified in Norway as A/S,¹⁶ are not required to follow the imposed quota, resulting in the gender diversity on

¹² <http://www.nikk.no/Kvoteringsloven+i+Norge%3A+Veien+til+40%25.9UFRvG58.ips>

¹³ <http://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-1322671773271/Pande-Gender-Quotas-April-2011.pdf>

¹⁴ The average is around 37% because not all firms are meeting the quota

¹⁵ Requires a minimum share capital of 1 million NOK

¹⁶ Small stock companies with a minimum 30,000-100,000 NOK share capital

those boards to be only 17%¹⁷ in 2012. Due to the more lenient regulation on A/S compared to ASAs, Norway saw a dramatic drop in the number of ASA companies from 2008-2010¹⁸. This movement to A/S's contributed to the total number of females on ASA boards to be reduced from 900 in 2008 down to 730 in 2010. However, though there are additional reasons for this drop, no study has yet to show that it is solely based on the gender diversity quota.

Additionally, the Norwegian government imposed steep penalties for not complying with the new legislation. Companies faced potential compulsory termination of the company¹⁹.

As the first country to impose a quota, Norway has seen the number of females on board increase. However with the recent development of firms transitioning from ASA to A/S, it remains to be seen if the quota in Norway will be successful in the long run.

3.1.2 Spain

Spain promptly followed Norway's push for gender diversity where the government imposed equality legislation in 2007²⁰ for boards. Though the quota was intended to be taken into effect by 2011, companies were given an extension until 2015 to comply. However, unlike Norway the companies face no penalties for not meeting the quota. Rather, they must disclose why the company has chosen not to be within compliance. The main substantial effect breaching this quota is in relation to the tender of governmental contracts, where the selection of a company will consider the gender diversity of the board²¹.

¹⁷ <http://e24.no/jobb/naa-vil-regjeringen-ha-kvinner-i-alle-styrer/20060520>

¹⁸ <http://e24.no/jobb/faerre-kvinner-i-styrerommene/20192326> (page in Norwegian)

¹⁹ <http://www.magma.no/flere-kvinner-i-norske-styrer-bra-eller-darlig>

²⁰ <http://www.quotaproject.org/uid/countryview.cfm?CountryCode=ES> Law called "Ley de Igualdad"

²¹ <http://www.20-first.com/737-0-spanish-quota-does-not-take-hold.html>

3.1.3 Italy

In 2011 the Italian parliament made additions to a 1998 law²² regarding corporate boards, to include several quotas enforcing gender diversity. The new law requires that public and government owned Italian firms are forced to have one fifth of board's positions open to be filled by the least represented gender for the first term that the law comes into effect. For the following terms the companies are required to increase this to one third²³.

The Italian government imposes harsh penalties for non-complying firms. Firstly, the Consob²⁴ gives a warning if firms are not in compliance, where the firms are then given a four-month-grace period to comply. Should the firms fail to do so, the Consob has the authority to exclude firms from governmental contracts.

3.1.4 France

France was one of the first countries to follow Norway's example, by drawing up a proposal and then implementing a quota. The legislation was first proposed by the UMP²⁵ party, led by the President at the time, Nicolas Sarkozy. The initial legislation proposal required a 50/50 share of men and women, of which was implemented in stages where the full quota was required to be satisfied by 2015²⁶. At the time of the proposed legislation, women on the boards of CAC 40²⁷ companies only accounted for 10.5%²⁸.

The quota took approximately 2 years to pass through the French Parliament, where significant alterations had occurred. The initial 50% requirement of women on the board was reduced to 40% (i.e. matching Norway). In addition, companies would have six years to comply with the new rules so the quota will be in full effect by

²² <http://italianbusinesslaw.wordpress.com/>

²³ http://www.deloitte.com/assets/Dcom-Tanzania/Local%20Assets/Documents/Deloitte%20Article_Women%20in%20the%20boardroom.pdf

²⁴ Equivalent to the American SEC

²⁵ Union pour un Mouvement Populaire

²⁶ <http://www.forbes.com/2009/12/04/french-legislation-boards-quotas-forbes-woman-leadership-directors.html>

²⁷ The French Stock Market index.

²⁸ <http://www.forbes.com/2009/12/04/french-legislation-boards-quotas-forbes-woman-leadership-directors.html>

2017²⁹. Similarly, the quota will be implemented in stages, by having gender diversity goals for various periods.

Similarly to Norway, the new legislation will not be applicable to all companies. Rather, the quota will only apply to; listed companies, companies with more than 500 employees or companies that have revenues over 50 million Euros per annum. The total number of firms affected by the new rules is estimated to be around 2000³⁰.

3.1.5 Netherlands

The Dutch politicians have imposed legislations that enforced gender diversity of at least 30% women³¹ in both the supervisory board and the executive board.

Netherlands, along with Spain, did not make the quota mandatory as they only required firms to disclose their reasoning as to why they chose non-compliance.

The new legislation only affects firms that meet two out of these three criteria; Active balances exceed 17.5 million euro, gross revenue of more than 35 million euro or average number of employees exceeding 250³². This means that smaller Dutch firms are exempt from the new diversity quota.

3.1.6 Belgium

In 2011, the Belgian legislation finalized a board legislation that imposed a 30% quota on listed firms³³. The firms have until 2017 to meet requirement where non-compliance can result in numerous penalties. The most predominant penalty removes the financial benefits, such as bonuses and stock options to directors on boards who do not comply. Furthermore, the law states that companies who do not meet the quota must nominate a member of the other gender at the next director's appointment.

²⁹ <http://www.forbes.com/2009/12/04/french-legislation-boards-quotas-forbes-woman-leadership-directors.html>

³⁰ <http://www.reuters.com/article/2011/01/13/us-france-equality-idUSTRE70C5ZA20110113>

³¹ <http://www.staffingindustry.com/eng/Research-Publications/Daily-News/Netherlands-Few-companies-meet-female-board-quota>

³² http://www.deloitte.com/assets/Dcom-Tanzania/Local%20Assets/Documents/Deloitte%20Article_Women%20in%20the%20boardroom.pdf

³³ <http://www.eurofound.europa.eu/eiro/2011/06/articles/be1106021i.htm>

3.2 Countries without firm legislation - Europe

3.2.1 Germany

The largest economy in the European Union is yet to impose a quota on gender diversity. A possible quota and other alternatives to increase gender diversity were heavily debated in 2011³⁴. The result of these deliberations was a pledge from the 30 companies on Germany's blue chip DAX stock index to increase the number of women on management board to 30 percent by 2013³⁵. This increase would be voluntary with no penalties to be incurred for non-compliance. The leading driver behind this pledge was Deutsche Telekom, who became the first company to set a firm goal of at least 30% of females in management position by 2015³⁶.

In addition, Germany decided to update its corporate governance code in 2010 to include considerations for gender diversity. Three new codes were introduced to encourage company's management boards and supervisory boards to take into consideration gender diversity when filling management and board positions. No penalties are to be faced for not following the code, but companies are required to disclose any non-compliance.

3.2.2 Great Britain

Politicians in Great Britain were reluctant to alter the corporate governance legislation regarding gender diversity. Lord Davis of Abersoch was put in charge of making a governmental report in 2011³⁷ highlighting the issue of gender diversity within top level management and board compositions. Outcomes of this report saw the government moving to promote a goal for FTSE 100 companies of having at least 25% female representatives on the boards by 2015. However, as the Parliament did not turn this goal into legislation, it currently serves only as a guideline.

³⁴ <http://www.theatlantic.com/international/archive/2012/02/what-the-world-can-learn-from-germanys-debate-over-gender-quotas/253664/>

³⁵ <http://www.theatlantic.com/international/archive/2012/02/what-the-world-can-learn-from-germanys-debate-over-gender-quotas/253664/>

³⁶ http://www.deloitte.com/assets/Dcom-Tanzania/Local%20Assets/Documents/Deloitte%20Article_Women%20in%20the%20boardroom.pdf

³⁷ <http://www.guardian.co.uk/business/2011/feb/24/double-number-of-women-directors-davies-tells-firms>

David Cameron, the Prime Minister of Britain at the time, noted that a quota on corporate boards may be considered at a future time. He suggested that this quota would be around a minimum of 30%³⁸ women on the boards. However, he has given no timeline as to when such legislation would be put in place.

3.2.3 Denmark

In Denmark, the debate regarding board quotas was brought back to the political agenda following the election of the socialist coalition in 2011. The Danish Prime Minister at the time, Helle Thorning Schmidt, has on a numerous occasions promoted the Norwegian model of board quotas³⁹. Therefore, it was expected that the new government would enforce similar legislation when they took office in 2011. However the Equality Minister of the time, Manu Sareen from the Danish Social liberal party has yet to take any action on the matter. This occurred as the coalition remained divided on deciding whether the quota was the most effective option in promoting gender diversity. While the parties S and SF⁴⁰, as well as the supporting party “Enhedslisten,” were in favor of a quota, the remaining party RV⁴¹ appears to be reluctant. Furthermore, a poll from March ⁴²2012, done for the Danish newspaper Jyllands Posten, showed that the general public in Denmark was greatly against such a quota with 79.6% of respondents being against it. Recent articles also indicated that the party (S) was changing their stance on board quotas⁴³, so it remains to be seen whether Denmark will have firm legislation regarding gender diversity on public boards in the future.”

3.2.3 European Union

The European Union is currently working on a proposal that would force all listed companies to increase the number of women on the boards to 40%⁴⁴. The proposal is meeting resistance from some of the member countries most dominantly the United

³⁸ <http://www.bbc.co.uk/news/uk-politics-16958852>

³⁹ <http://politiken.dk/politik/ECE1603187/s-vil-droppe-kvindevoter/>

⁴⁰ S- SocialDemokratene, SF-Socialistisk Folkeparti

⁴¹ Radikale vænstre- Danish Social liberal party

⁴² <http://www.dr.dk/Nyheder/Penge/2012/03/13/0313070502.htm>

⁴³ <http://politiken.dk/politik/ECE1603187/s-vil-droppe-kvindevoter/> (in danish)

⁴⁴ <http://www.ft.com/intl/cms/s/0/65f494e6-f5e7-11e1-a6c2-00144feabdc0.html#axzz2AKw3rBap>

Kingdom and Sweden. It is the Union's justice commissioner Viviane Reding, who is pushing for this quota to be enforced. The legislation would force all companies with more than 250 employees or 50 million euro in revenue to report the gender diversity of their boards. Failure to comply with the new rules would result in fines or the prospect of not being able to obtain state aid or contracts. The new legislation is expected to be put forward in late 2012 or early 2013 and would overrule any national legislation on the matter.

3.3 North America

3.3.1 Canada

In Canada, there are ongoing debates as to whether the government should become involved in corporate affairs. Senator Celine Hrevieux-Payette from the Liberal party introduced a private member's bill in the Senate which would require the Canadian government to adopt quotas for women on corporate boards⁴⁵. She argued that a quota was a necessary step to achieving gender diversity, given that recent surveys have found that women comprised of approximately 10% of public companies in 2009⁴⁶. Supporting this suggestion, Anne Golden, President and CEO of the conference board of Canada, promoted a quota as being a necessary enforceable law given that voluntary measures did not appear to work⁴⁷.

However, the overall tone in corporate Canada is distinctly different. A 2011 report by Canada's Institute of Corporate Directors showed that a vast majority of corporate directors in Canada were opposed to a possible mandatory quota,⁴⁸ where they urged that Canada opt the route of voluntary policies in order to increase gender diversity. Additionally, the report found that 90% of Canadian directors believed that diversity is important, where 80% of Canadian directors believed that it could lead to better decision making.

⁴⁵ <http://www.theglobeandmail.com/report-on-business/directors-group-gives-thumbs-down-to-mandatory-quotas-for-boards/article4236447/>

⁴⁶ Same as footnote 23.

⁴⁷ http://www.conferenceboard.ca/press/speech_oped/12-05-10/Diversity_Where_for_Art_Thou_Women_in_Leadership_in_Canada.aspx

⁴⁸ <http://www.theglobeandmail.com/report-on-business/directors-group-gives-thumbs-down-to-mandatory-quotas-for-boards/article4236447/>

3.3.2 The United States

Within the United States, the topic of board diversity has not been gaining much political backing. Nevertheless, in 2010 the SEC enforced new amendments to the proxy enhancement rules, requiring companies to disclose diversity related to the company's boards⁴⁹. However, as this amendment allows companies to define what diversity is, there is no direct requirement to address gender issues on the boards. Furthermore, the amendment was not without controversy, where a study completed by PWC⁵⁰ that same year showed that rating diversity on the boards were the least valuable of all the new amendments added by the SEC⁵¹. In contrast to this, a recent survey by Corporate Board Member magazine showed that approximately 58%⁵² of a surveyed population believed that the amendment would have a positive impact on promoting diversity.

There are independent groups within the United States working to promote gender diversity. For example, the special interest group 20/20⁵³ is actively working to promote gender diversity and works toward a goal of 20% women on the boards by 2020. However it remains to be seen if this goal will get any traction with mainstream politics in the US.

3.4 Asia

3.4.1 China

Currently there are no laws regarding gender diversity in China. Rather, current corporate governance codes do not take gender diversity into account when discussing desirable attributes of board members⁵⁴. Many points to the fact that

⁴⁹ <http://www.thevaluealliance.com/PDF/CGADigest010510.pdf>

⁵⁰ PriceWaterhouseCoopers

⁵¹ <http://www.pwc.com/us/en/corporate-governance/assets/annual-corporate-directors-survey-2010.pdf>

⁵² <http://www.spencerstuart.com/about/media/73/>

⁵³ <http://www.2020wob.com/>

⁵⁴ http://www.deloitte.com/assets/Dcom-Tanzania/Local%20Assets/Documents/Deloitte%20Article_Women%20in%20the%20boardroom.pdf

Chinese and Asian women in general are more likely to fall into traditional gender roles where women are staying at home caring for the family⁵⁵.

Interestingly for the Chinese Communist Party (CCP), which remain in total political control of China, the number of female members is 23.3%,⁵⁶ and women account for 40%⁵⁷ of government officials. As of September 2012, out of a possible 2978 Parliament seats, 635 are occupied by women⁵⁸, which placed China at 62nd in the world, when it comes to diversity in government. This puts China above the American average, which is 79th with 16.9% of women. However, numerous critics point out that woman within the CCP only holds leadership positions within areas of social services, meaning that they are excluded for roles that entail economic power⁵⁹. This may be the underlying reason as to why there is little support for corporate gender quotas within the CCP.

3.4.2 Japan

Similarly to China, Japan has no firm legislation relating to gender diversity. In 2005, Japan set a goal to have women fill 30% leadership positions in both the public and private sector⁶⁰. However, a 2011 report by the Japanese Gender Equality Bureau (GEB) criticized this goal as being “unrealistic”⁶¹. Additionally, the report sparked discussion as to whether Japan should enforce quotas by using Norway as an example of a country that have successfully implemented quotas. As a result, Japan does not have a quota, rather it remains in discussion where the GEB has at least modified the original goals, from the 2005 goal of 30% women in legislative position by 2010, to 10% by 2015 for the private sector⁶² in regards to management positions.

3.4.3 India

⁵⁵ <http://www.20-first.com/1638-0-asian-boardrooms-lacking-women.html>

⁵⁶ <http://www.chinatoday.com/org/cpc/>

⁵⁷ <http://ilookchina.net/tag/chinese-women-in-the-communist-party/>

⁵⁸ <http://www.ipu.org/wmn-e/classif.htm>

⁵⁹ <http://www.bloomberg.com/news/2011-06-22/women-knowing-china-men-rule-prove-mao-s-half-sky-unfulfilled.html>

⁶⁰ <http://online.wsj.com/article/SB10001424052702304569504576403401964052630.html>

⁶¹ <http://online.wsj.com/article/SB10001424052702304569504576403401964052630.html>

⁶² http://www.gender.go.jp/english_contents/mge/process/index.html

Within India though the first talk of legal quotas for women was presented in 1996, it took 14 years for it to be passed. The quota requires one third of all seats on the national Parliament and 30 seats on the state Parliament to be women⁶³. The bill was not without controversy, where many smaller parties in parliament opposed the bill.

The issue of implementing corporate quotas on the boards has met even more obstacles. It was proposed as an addition to the Companies Bill of 2009⁶⁴. The addition aimed to require all boards with five or more members to have at least one female director. The Companies Bill would take full effect as soon as it passed in the parliament. The bill has been presented several times, yet ongoing discussion and amendments has resulted in the bill not being passed by the expected time of March of 2010⁶⁵. The bill has now been redrawn and renamed the Companies bill of 2011⁶⁶. However, the bill is not expected to pass until after monsoon season (i.e. August) of 2012.

3.4.4 Australia

Currently, Australia has no legislation on gender diversity on corporate boards. Since 2009 special interest groups have pushed for governmental action on the matter, where there have been annual conferences to advocate legislation to promote women on boards⁶⁷. However, it is notable that the current Prime Minister Julia Gillard and opposition leader Tony Abbot are against enforcing a quota. Though Gillard is not ruling out the enforcement of a quota completely, she noted that imposing a quota should only be used as a last resort of the government⁶⁸. As of 2011, Gillard's own cabinet and ministry comprises of only 20 % women serving⁶⁹.

⁶³ <http://news.bbc.co.uk/2/hi/8557237.stm>

⁶⁴ <http://blogs.wsj.com/indiarealtime/2011/03/14/economics-journal-is-a-quota-the-way-to-get-more-female-directors/>

⁶⁵ <http://www.indianexpress.com/news/female-independent-director-a-must/759548/>

⁶⁶ <http://www.thehindu.com/business/companies/article2356718.ece>

⁶⁷ http://www.hreoc.gov.au/about/media/speeches/sex_discrim/2011/20110429_women_boards.html

⁶⁸ <http://www.smh.com.au/executive-style/executive-women/pm-backs-quotas-as-last-resort-20110309-1bo36.html>

⁶⁹ <http://www.smh.com.au/national/abbott-breaks-with-hockey-over-board-quotas-for-women-20110308-1bmoi.html>

4.0 Data collection

4.1 Bank Selection

This analysis has been conducted on a large sample of banks selected from the Forbes “2000 biggest company list⁷⁰” in 2006. The sampling selection utilized the purposive sampling (Tongco 2007) technique, where the population was selected based on set criteria. The primary criterion identified companies classified as being within the “banking industry” by Forbes, where banks were then selected based on their availability of financial data. However, as the sample consisted of a wide variety of international banks, this created the issue of conflicting governance models. In order to limit the impacts of these variations, the full sample was subdivided into banks with geographical connections. Additionally, this classification ensures that the banks are exposed to the same market volatility during the investigated time frame.

The initial sample, based on the criteria of firms classified within the banking industry, contained a total of 315 companies. Upon further research it became clear that the numbers of companies within this sample had to be narrowed down due to three main reasons. The first reason being that some of the banks from 2006 no longer existed as a result of going bankrupt or mergers during the 4 year period. The second reason was that the required level of financial data necessary to undertake the analysis was missing. Ordinarily, unattainable information largely related to missing ROAE/ROAA numbers, as well as inadequate information surrounding the board. The third reason was that banks were excluded if their annual reports were not available online.

When the initial sample was matched with the criteria put forth the final sample ended up consisting of 165 banks and a list of all banks is shown in appendix 1.

4.2 Board information

4.2.1 Governance systems

The challenge with some banks operating in different governance systems was highlighted by the problem of some banks having a two tier board system and some a

⁷⁰ http://www.forbes.com/lists/2006/18/06f2000_The-Forbes-2000_IndName.html

one tier. The difference in the two systems is that a two tier system consists of a management board and a supervisory board (Thomsen 2011), while a one tier system only has one board. In order to make banks from two tier models comparable to one tier, the management board in the two tier system was excluded. This means that supervisory boards were selected in countries operating in the two tier system. The problem of comparing two different governance systems is also that there are individual differences within each system (Bohnic 2011). For example the laws and regulation regarding director spots for employee representatives may differ from country to country⁷¹. In this paper the nuances within the systems are not examined. Therefore the analysis in this paper is done by using the supervisory boards and one-tier boards and other factors such as regulation regarding employee representation are disregarded. Furthermore by having the full sample divided into smaller samples some of the issue with different board system is removed. However even within Europe there are variations in the tiered system used amongst banks, which highlights the issue that geographical location will not completely eliminate governance variations.

4.2.3 Annual Reports

A primary principle of this paper is to analyze the gender diversity on the boards and company performance. As a result it was necessary to collect data concerning the gender characteristics present within the board compositions. This information was ascertained by collecting and examining the annual reports of the selected sample from the period spanning 2007-10. A total of 660 reports were obtained.

As the style of annual reports vary from country to country it has been necessary to collect some company's annual report for 2011. These deviations specifically related to the Japanese banks where the reporting system differs from the majority. A Japanese annual report from 2007 would contain information regarding the year 2006-2007. This is unlike the other reports where a 2007 report contains information about the financial year of 2007.

All annual reports are taken from the various company websites which infer they should be 100% accurate when it comes to board compositions.

⁷¹ <http://www.eurofound.europa.eu/eiro/1998/09/study/tn9809201s.htm>

4.2.4 Gender

Various methods were used in order to ascertain the gender of the board representatives over the four year period. The primary method was to search the annual reports for images or prefixes⁷². Given this information was not available; the first name was matched to commonly gender specific names. Finally, where names were ambiguous, third party sources were consulted for example BusinessWeek. The process of determining gender was completed for each year during the period from 2007-2010. As a result, the identification of gender within the analysis is considered to be accurate.

4.3 Performance

All data collected in relation to performance were obtained from secondary sources. The financial data were primarily collected from Bankscope⁷³. Bankscope is a financial database which contains financial data relating to over 30,000 banks around the world. When there were missing data in the database it was necessary to supplement financial data from other sources such as Yahoo Finance.

The performance measure in this paper is divided into two parts. The first being a performance measure closely related to the company's own performance; using the Return on Average Assets (ROAA) ratio and Return on Average Equity (ROAE) ratio. By using the average return the results indicate an average of the return in the given examined period. The second performance measure is stock growth and is more reliant on external factors than the two others.

There are weaknesses connected with ROAE and ROAA as performance measures as they are numbers that can vary depending on the accounting styles preferred. However since the two most cited publications in this area (Catalyst and McKinsey) use these measures of performance they are also chosen in this paper. Another possible performance measure, not included in this paper, would be Tobin's Q. Due to data availability and time constraints this was not included in this paper.

⁷² Mr, Mrs, Ms, Baroness, Sir, Lady etc

⁷³ <https://bankscope2.bvdep.com/version-2012713/home.serv?product=scope2006> (requires login via CBS website)

4.3.1 ROAA

The banks ROAA are collected through the use of Bankscope⁷⁴. The ratio is calculated as the yearly net income divided by the average total assets for the year in question. ROAA is an indicator of how profitable the bank's assets are.

4.3.2 ROAE

The ROAE ratio for all banks is also collected through Bankscope. The ROAE is calculated as net income divided by the average equity for each year. The ROAE measures the banks' ability to generate returns based on the average shareholder equity of a given period.

4.3.3 Difference between ROAE and ROAA

ROE has for long been the preferred performance measure for investors⁷⁵. However, during the financial crisis ROE was criticized for failing to capture the real risk exposure faced by the banks. Robert Jenkins, member of the Bank of England's policy committee⁷⁶, argues strongly that the banks need to look at alternative performance measure like ROA or RORWA⁷⁷. This is a result of experiences regarding the banks during the financial crisis, having too much focus on ROE as a measure of performance, which led the banks to try to minimize equity in order to distort the ROE figure.

A key difference between ROE and ROA is the manner in which each ratio deal with financial leverage. As long as the banks have no liabilities then, Assets equal Shareholders equity, and ROE and ROA would be the same. When the banks implement procedures to minimize equity, they may focus on increasing the ROE.

⁷⁴ https://webhelp.bvdep.com.esc-web.lib.cbs.dk:8443/Robo/BIN/Robo.dll?project=scope2006_EN&newsess=1&refer=https%3A//bankscope2.bvdep.com/version-2012713/FormatDefinition.serv%3F_CID%3D46%26context%3D3V077Y77CFFJ65W the financial ratios are also explained in detail here. (requires CBS login)

⁷⁵ <http://www.theaustralian.com.au/business/wealth/return-on-equity-a-performance-measure/story-e6frgac6-1225829841505>

⁷⁶ <http://blogs.cfainstitute.org/investor/2012/01/11/take-15-roe-the-wrong-performance-measure-for-banks/>

⁷⁷ Return on Risk Weighted Assets

This has been a frequent occurrence in the banking sector where ROE for this industry has underperformed in relation to the utility sector⁷⁸.

The aim of this paper is not to discuss in detail the differences between the ROAE and ROAA but to examine the bank's performance using these two variables.

4.4 Stock Performance

The yearly stock prices are collected from Bankscope. The date of collection differs amongst regions. Collection date has been set at yearend where possible, March or June. As the banks are split into regional samples, the majority of the reporting is consistent in these areas and therefore the different reporting dates do not pose a problem. When the data about the stock price have been unavailable from Bankscope, secondary sources have been consulted. The date the stock prices have been collected from secondary sources are consistent with the available data from Bankscope⁷⁹.

5.0 Empirical Research

5.1 Gender diversity on the Boards

This part of the paper will examine the gender diversity on the boards of the banks for each of the five geographical areas. The aim is to highlight the four year trend for gender diversity in the boardrooms of the various banks. The following section will highlight if there is a need for political pressure to increase the gender diversity. If no political pressure is needed the data should show a clear trend towards banks A) either already have sufficient gender diversity or B) show a trend towards accomplishing a satisfactory one.

⁷⁸ <http://blogs.cfainstitute.org/investor/2012/01/11/take-15-roe-the-wrong-performance-measure-for-banks/>

⁷⁹ i.e. if bankscope reports stock prices from march each year. The stock price collected from secondary sources would also be from march each year.

5.2 Europe

Europe / Year	Board Members	Women	Percentage	Increase from following year
2007	743	82	11,0 %	N/A
2008	741	91	12,3 %	10,9%
2009	742	85	11,5 %	-6,5 %
2010	746	94	12,9 %	10,5%

Table 5.0

The number of female directors fluctuates over the four year period. It seems that banks hastened to bring in more women in 2008 in the midst of the financial crisis. The banks that increased women were primarily those who already had female directors in the previous years. A total of eight banks that already had female directors in 2007 increased the diversity while only two banks without one did.

For 2009 the number of total board members increased yet the number of female directors was declining. Only four banks in the European sample replaced a female board member with a male counterpart. While the other banks shrank the board sizes and did not replace a leaving female director.

In 2010 the total amount of board members grew slightly while the number of female directors is increased with 10.5%. Three banks that previously had no female directors added one to the board.

All in all the number of banks that had no female directors in 2007 and in 2010 has gone from 14 to 12. This means that of the total sample of 51 European banks 23.5% of them still have no female directors serving on the boards.

5.2.1 Breakdown of European Countries

Within the European countries there are large discrepancies between the average numbers of female directors, as indicated by table 5.1. In the table only countries with at least two banks in the sample is included.

Percentage of Women				
Country	2007	2008	2009	2010
<i>Sweden</i>	32 %	35 %	32 %	34 %
<i>Denmark</i>	18 %	21 %	21 %	21 %
<i>Austria</i>	21 %	21 %	21 %	21 %
<i>Israel</i>	15 %	16 %	22 %	20 %
<i>France</i>	8 %	12 %	13 %	17 %
<i>Germany</i>	17 %	22 %	14 %	15 %
<i>Switzerland</i>	13 %	13 %	13 %	13 %
<i>Belgium</i>	3 %	6 %	6 %	11 %
<i>UK</i>	12 %	11 %	9 %	11 %
<i>Greece</i>	4 %	6 %	9 %	10 %
<i>Turkey</i>	8 %	8 %	8 %	8 %
<i>Spain</i>	8 %	6 %	6 %	8 %
<i>Portugal</i>	2 %	2 %	2 %	2 %
<i>Italy</i>	3 %	3 %	1 %	1 %

Table 5.1

Of the countries in Central Europe, the French banks have shown the most improvement in diversity through raising the percentage of women on their boards from 8% in 2007 to 17% in 2010. The UK banks who contains three of the world's largest banks (HSBC, Standard Chartered and Barclays), have remained relatively stable at around 11% over the four year period.

In comparison, the banks in Southern Europe, the presence of women on the banking board is considerably low. In the sample, Italy is represented by five banks where only 1% of the board spots were occupied by women. For example, of a total of 125 board positions in Italy in 2010, only 2 were occupied by women, the two directors at UniCredit Group.

5.2.3 How will legislation change the diversity

As shown in part 3.1-2, the legislation surrounding gender diversity on boards in Europe is divided. It is clear that the overarching legislation from the EU would force quite the transition for the European boards. Should the proposal from the European Union be accepted, the banks face a monumental task of increasing the number of

women from 2010's 94 to 299⁸⁰ by 2020. The Italian and Portuguese banks in particular would have to make drastic changes to the board composition.

The French banks in the sample have already shown a willingness to increase the percentage of women on the boards but they remain still far from the mandatory 40% by 2017. The same is the case for the Spanish banks that would have to go from 8% in 2010 to 36% by 2015. However Spanish banks have shown no willingness to improve the gender diversity in the four year period.

For countries with already firm legislation it becomes clear that they already know they face a challenge with either acquiring female talent or shrinking their boards.

5.3 North America

North America	Board Members	Women	Percentage	Increase from previous year
2007	488	71	14,5 %	N/A
2008	481	74	15,4 %	4,2 %
2009	456	72	15,8 %	-2,7 %
2010	442	73	16,5 %	1,3 %

Table 5.2

The gender diversity of the North American boards has remained fairly stable during the four year examined. For 2008 three female directors were added to the boards while a total of seven members were cut from the boards. There were only two banks in 2007 without female directors this number has not changed for 2008.

In 2009 the number of female directors declined slightly. However looking at the number of board members that were let go and not replaced for the period (25) the fact that only two women went un-replaced is encouraging.

For 2010 the trend from the previous years is continued in regards to the shrinking of members on the bank boards, however unlike 2009 the number of women is increased by one this year. A small increase of course but this must be seen in light with the shrinking of the members on the boards.

In general what is observed with the North American sample is that the proportion of women is increasing by 2 %. This is roughly the same increase which was found in the

⁸⁰ This number takes into account that the total number of board members remains unchanged.

European sample however in the North American one the overall proportion of women is greater.

5.3.1 Breakdown of North American Countries

Percentage of Women				
Country	2007	2008	2009	2010
Canada	21 %	23 %	27 %	27 %
United States	13 %	13 %	14 %	12 %

Table 5.3

Within the two countries in the North American sample there is a quite distinct difference in the average percentage of female directors. Canada is one of the countries with the highest rate of gender diversity in the full sample. The United States on the other hand is around the middle of the total sample in regards to diversity.

The seven Canadian banks employ a total of 26 female directors in 2010 compared to the twenty six US banks that have 47. The Canadian banks also show a continuous percentage yearly growth while the American banks have declined. While all Canadian banks have female directors, there are vast differences within the banks in the US, ranging from; Associated Banc-Corp(28% female),BB&T (27%), Wells Fargo (27%) to Astoria Financial (0%), City National (0%) and Flagstar Bancorp (0%) .

5.3.2 How will legislation change the diversity

Both Canada and the United States have as shown in section 3.3, no firm legislation in place for gender diversity on the boards. For the Canadian banks it remains to be seen if such legislation is necessary at least for the banking industry if the percentage of women are continuing to increase in the futures.

Should the lobbyist group 20/20 in the United States gain traction it is clear that some of the US banks would need to drastically alter the board composition seen in 2010, as only five of the twenty six banks have reached this goal. It remains to be seen if the new legislation from the SEC will have banks voluntarily increase gender diversity in the future.

5.4 Asia

Asia	Board Members	Women	Percentage	Increase from previous year
2007	841	49	5,8 %	N/A
2008	831	50	6,0 %	2 %
2009	822	54	6,6 %	8 %
2010	824	60	7,3 %	11 %

Table 5.4

The data from the Asian sample show that over the four year period the number of female directors have been steadily growing. As was the case with the North American sample we see that the banks have reduced the board size over the period examined. For 2007 the Asian board consisted of a mere 5.8% of women. The lowest of the three main geographical regions examined.

From 2007 until 2008 there is little improvement done to increase gender diversity. While the total number of directors is going down, the number of women only increased with 1. Both in Europe and North America the new number of female directors were greater.

In 2009 there is a continuation of what was found in the previous year. The number of women increased while the tendency to shrink the number of board members continued. While in 2010 the data show that the board size increased slightly, this is also the year where the most female directors are added.

5.4.1 Breakdown of Asian Countries

Percentage of Women				
Country	2007	2008	2009	2010
China	16 %	12 %	12 %	15 %
HK/China	5 %	5 %	5 %	3 %
India	7 %	7 %	7 %	11 %
Indonesia	7 %	14 %	14 %	12 %
Japan	1 %	1 %	1 %	1 %
Kuwait	0 %	0 %	0 %	0 %
Qatar	0 %	0 %	0 %	0 %
Saudi Arabia	0 %	0 %	0 %	0 %
Singapore	2 %	5 %	5 %	6 %
Taiwan	5 %	10 %	10 %	6 %
UAE	0 %	0 %	0 %	0 %

Table 5.5

The outline of percentage of women on the boards in the individual countries is shown in the table 5.5. The countries that have no female directors are predominantly Middle Eastern in the Asian sample. Therefore it is easy to say that the reason is because these are Islamic countries but Indonesia which is also primarily an Islamic country has an average of 12% female directors in this sample. Therefore the reason behind having no women seems cultural rather than religious. The number of women on the board in Japan, which is a male dominated society⁸¹ also exemplifies that the cause of this could be cultural.

China which is the forerunner in the Asian sample on gender diversity is quite different from their neighbors Japan which only have 1% female directors. However the two Chinese territories Hong Kong and Taiwan are lagging far behind the Chinese banks when it comes to diversity. Both territories saw a drop in the percentage of female board members from 2009-2010.

5.4.2 How will legislation change the diversity

China's unwillingness to legislate on female diversity could stem from the fact that in their economic region they are already on the forefront. Whether or not gender

⁸¹ <http://www.japantoday.com/category/commentary/view/for-japanese-men-dysfunction-starts-in-the-cradle>

diversity will increase in the future because of legislation, remains to be seen as more and more women are put in governmental positions.

The goal from the GEB in Japan seems a far reach if the data for the banking sector is representative for the rest of the economy. If they are to reach the goal of 10% female directors by 2015 it would mean increasing the number of directors from 2 in 2010 until 25⁸² by 2015. During the four year period examined in this paper, there has been no growth so it seems likely a quota would need to be enforced.

For the Indian banks in this sample the new company bill would give them no trouble. All banks in this sample from India already have at least one female board member and would therefore not have to alter the composition should the bill be passed as expected.

5.5 Australia and Others

Australia	Board Members	Women	Percentage	Increase from previous year
2007	49	8	16,3 %	N/A
2008	49	10	20,4 %	25%
2009	53	10	18,9 %	0 %
2010	50	10	20,0 %	0 %
Others	Board Members	Women	Percentage	Increase from previous year
2007	59	4	6,8 %	N/A
2008	58	4	6,9 %	0 %
2009	62	4	6,5 %	0 %
2010	62	4	6,5 %	0 %

Table 5.6

The average for the Australian sample is amongst the best when it comes to gender diversity. They have had a strong diversity each year in the study, and from 2007 until 2010 two additional female directors have been added. The Australian sample is being led by the bank Westpac which had a 40% female representation on the board in 2010.

The sample containing banks from around the world (Others), show a low representation of female directors, which did not increase over the period examined. Only two of the five banks have female directors and it is the South African bank

⁸² Also assuming the number of total directors remains the same for 2010 and 2015

FirstRand who employ three of them (4 total in the sample). They did however increase the board size from 18 to 23 members over the four year period. None of the new directors were female.

5.5.1 How will legislation change the diversity

None of the countries in this last sample face any immediate legislation regarding gender diversity. The Australian banks seem to have stagnated when it comes to adding female directors on the board and as such may need a legislative push to increase diversity even further.

6.0 Performance of Banks in relation to gender diversity

This following section of the paper will analyze the relationship between the average company performances of banks having no female directors to banks that have. For the North American sample this is not possible because there are too few banks with no women. The sample will instead be divided into three samples; banks with no more than one, exactly two and three or more female directors.

6.1 Europe/Australia

This section will examine the European and Australian banks. ROAA will be analyzed first, followed by ROAE. The banks in each segment are highlighted in appendix 1.

6.1.1 ROAA Europe/Australia

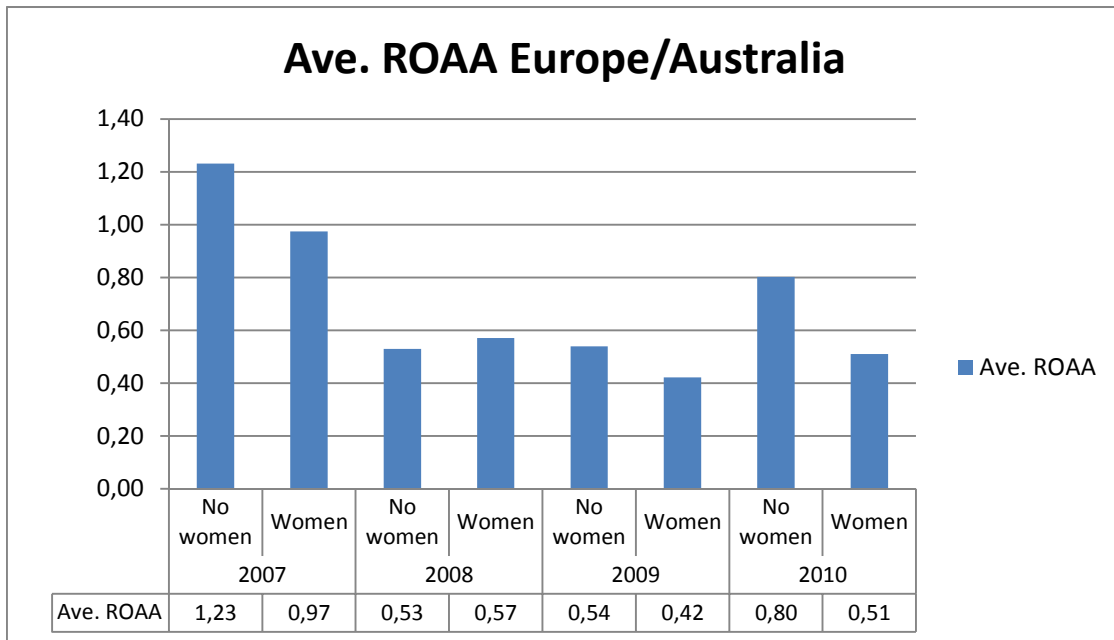


Figure 6.0

Figure 6.0 outlines the relationship between ROAA and board composition. The data indicate that for the year of 2007 the banks that had no women on the board outperformed those who did. The average ROAA of banks with no women was 1.23 compared to 0.97 to those with. The difference is quite significant with a 26% difference in performance.

For 2008 the performance of the two groups has fallen significantly. The two samples are now performing at about the same level with 0.53 and 0.57. The banks with no women performance fell considerably more than those with.

In 2009 the banks with no women are once again outperforming the others. They are performing at about the 2008 level. The average ROAA for banks with women is now down to 0.42 less than half the performance from 2007.

For the last year examined, the banks with no women are once again outperforming those with. The average ROAA is up to 0.8 while banks with women are at 0.51. The banks with no women are now giving on average a 60% better return on the assets.

6.1.2 ROAE Europe/Australia

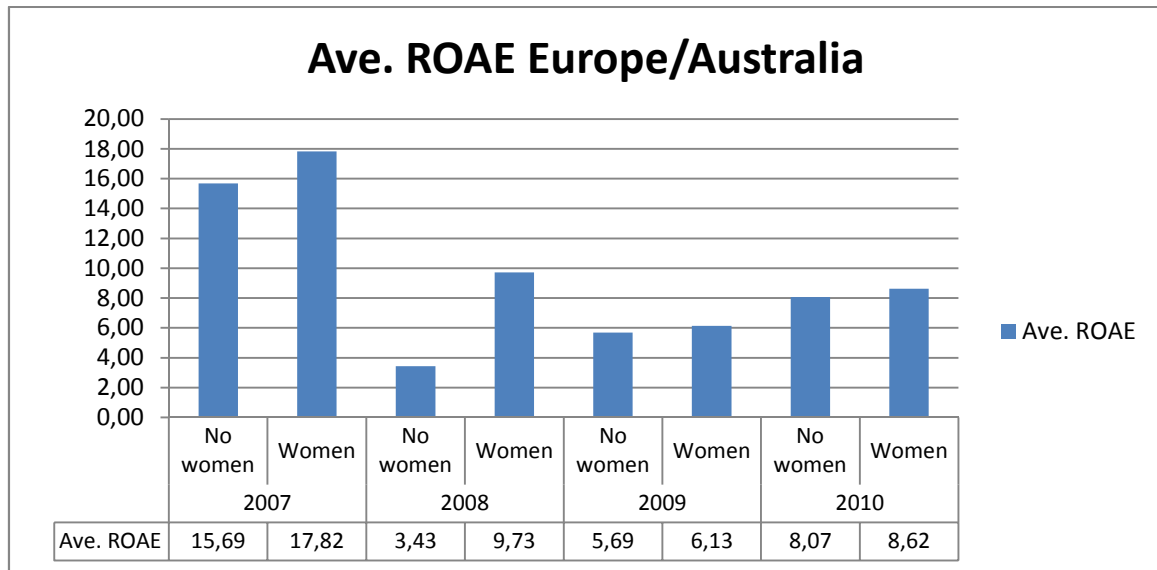


Figure 6.1

Figure 6.1 shows that for 2007 the banks with women had a better return on equity than those without. The ROAE for 2007 are high for both the samples and the difference is fairly small. This is in contrast to what was found with regards to ROAA for 2007.

For 2008 the data show a vast difference between the two samples. The banks with women are greatly outperforming their counterparts in terms of ROAE. The difference is 283% for 2008. Again the ROAE and ROAA numbers are in contrast to each other.

In 2009 we observe that the difference between the two samples have evened out. They are now performing roughly at the same level. There is a slight edge to the banks with female directors.

The pattern between the two samples continues in 2010 where we once again observe that the sample with women slightly outperforms those without. For 2010 the results are still in contrast to the results for ROAA.

6.2 Asia/Others

6.2.1 ROAA Asia/Others

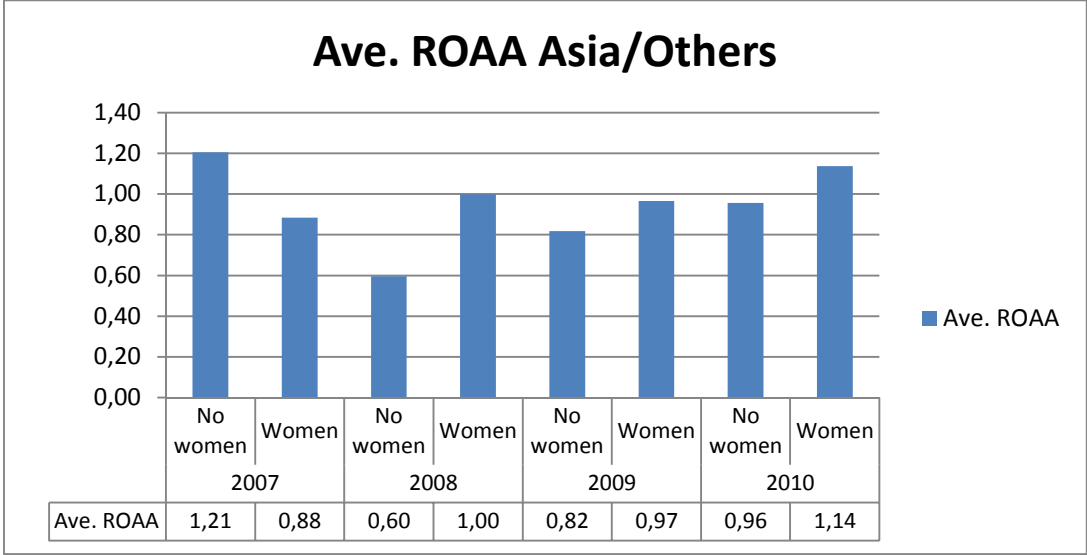


Figure 6.3

As figure 6.3 shows in 2007 the average ROAA was higher for banks with no female directors. The results from the Asia/others analysis are right in line with what was found in the Europe/Australia analysis for 2007, where there was a clear performance difference for banks with women and those without.

In 2008 the results in the Asia/Others analysis are turned around. Now banks with women are outperforming banks without with 1 to 0.6. The banks with no women saw their return on assets halved from 2007 to 2008, while banks with women actually increased their average performance with 13%.

For 2009 the performance of banks without women has improved, with an increase from 0.6 to 0.82. The banks with female directors are seeing a slight drop from last year from 1 to 0.97. However they are still clearly on average outperforming the banks without female directors.

For the last year of this analysis the results are in line with what was found in 2008-09. Both samples are showing a growth in ROAA from the previous year and the group with female directors is the best performing one.

6.2.2 ROAE Asia/Others

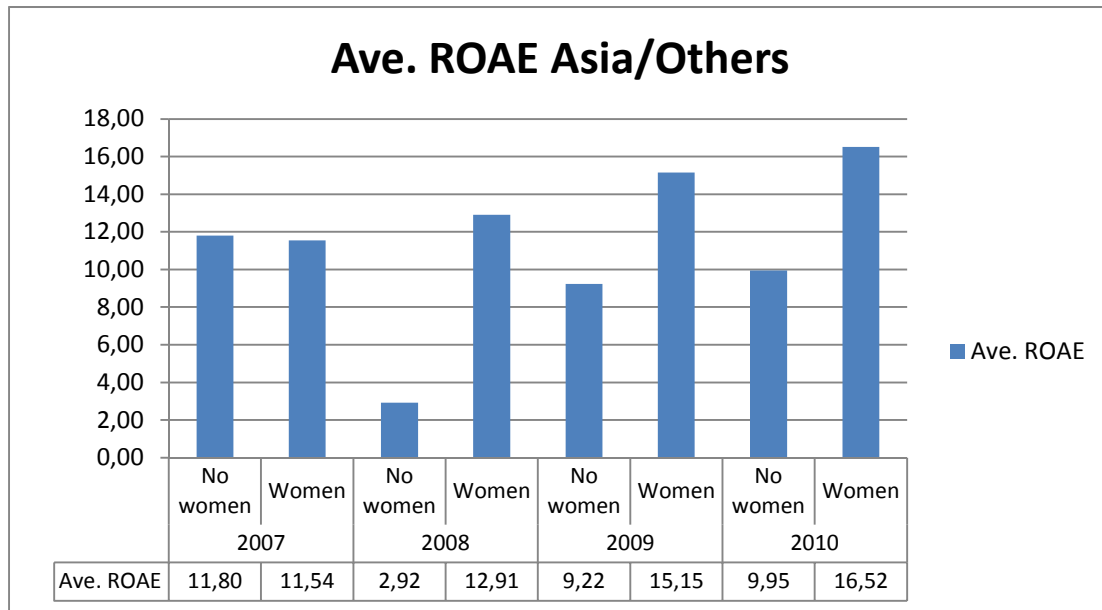


Figure 6.4

Figure 6.4 shows the relationship between ROAE and the two samples during the 2007-10 period. In 2007 the data indicate that there was little performance difference between the two samples. Both samples are having a ROAE return at around 11.5. The average return for the Asia/Other banks are slightly lower than what was found for the Europe/Australia banks in 2007.

In 2008 the table shows a distinct difference between the two samples. Now the banks with female directors are delivering a ROAE that is more than four times as great as banks without women. The ROAE for banks with women has grown from 2007 to 2008 while the banks with no women have fallen by roughly 75%.

For 2009 the banks with no women have increased their performance greatly from the previous year's slump. Even so the banks with women are still outperforming their counterparts with 15.15 ROAE vs. 9.22. The ROAE for the Asian sample far exceeds what was found in the Europe/Australia part of the analysis.

The last year in this analysis show that the ROAE for banks with women is continuing to grow and the return is now an average of 16.52. The banks without women are also showing some growth from previous year going from 9.22 to 9.95. The relationship between the two samples is roughly the same from 2009 until 2010.

6.3 North America

As mentioned the following section examining the North American region differs from the two previous samples. In this part the North American banks are divided into three samples. The samples range from zero to one, two and three or more female directors.

6.3.1 ROAA North America

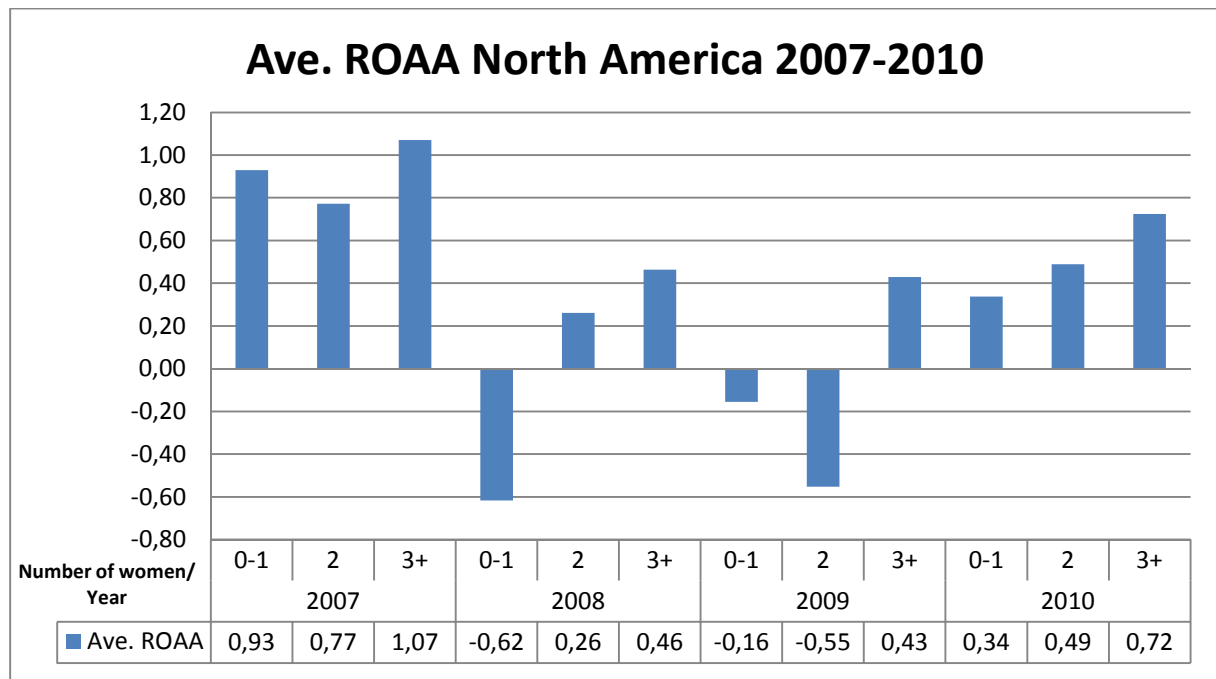


Figure 6.5

As figure 6.5 indicates the average ROAA for the North American banks have fluctuated throughout the four year timeframe. In 2007 there was little difference between banks with a different number of female directors. The lowest performing sample is those with 2 women followed by 0-1 and 3+. The results show that having a lot of female directors would lead to an on-average better ROAA. The fact that banks with 2 directors have been outperformed by those with 0-1 makes it hard to come to a solid conclusion if adding a woman would lead to a better performance.

In 2008 the data show that the banks with a low number of women are taking a severe hit on the ROAA from the previous year. The sample with 0-1 is being outperformed by both those banks with 2 and 3+ women. This clearly indicates that

boards with more women had a more solid performance in terms of ROAA for 2008 and that the banks with the highest number of women were the frontrunners.

For 2009 the data show the same trend as it did in 2007. While the banks with 3+ women are still the best performing group in the sample, the ones with 2 are once again being outperformed by those with 0-1.

In 2010 the results are back to what was found in 2008 where there is a clear trend towards banks with the most women having the best ROAA. The data also show that the banks are still far from the ROAA seen in 2007 and seemingly have failed to get back to the 2007 performances.

6.3.2 ROAE North America

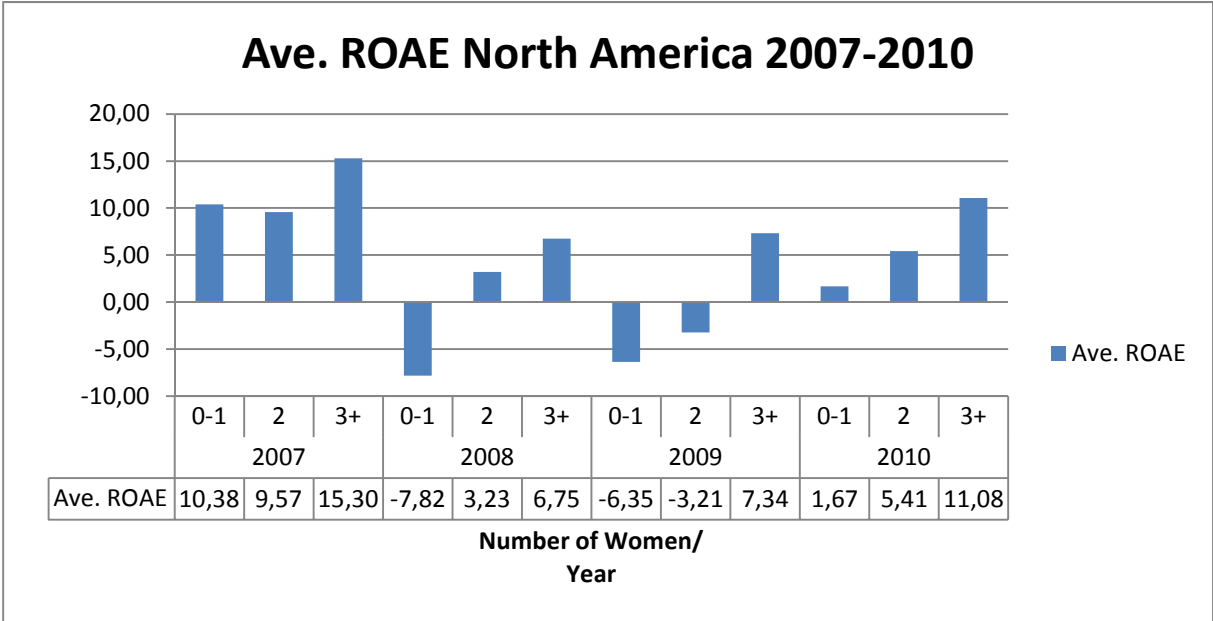


Figure 6.6

For ROAE the case is much the same as what was observed for ROAA. In 2007 the banks with 3+ women are still the best performing group in the sample. The difference between the ones with 0-1 and 2 is small with only a 0.81 difference. The difference between the lowest and highest ROAA and ROAE for 2007 should be noted. With the difference in ROAE being almost 60% (9.57 to 15.30) it was only 39% in terms of ROAA (0.77 to 1.07).

The similarities between the ROAE and ROAA continue in 2008. The banks with low level of female directors are being outperformed by both those with 2 and 3+.

2009 is an interesting year as the data show a result different to what was found in the ROAA analysis, however the difference is mainly due to an extreme outlier in the 0-1 sample. In 2009 the American bank Flagstar had a ROAE of -92.93 which forces the average down to -6.35. Without this outlier the average for the sample would be -2.31 which means they would have outperformed the sample with 2 women. The results would then also have reflected the findings in the ROAA part.

For the last year the data show a clear connection to the ROAA sample, which shows that the more women on the boards the better the performance will be. Once again the observed ratio between the lowest performing sample 0-1 and 3+ is much higher for ROAE than ROAA.

7.0 Gender diversity and Stock performance

This following part of the paper will examine the stock performance of the banks within a three year timeframe. The sample is divided much as it was in the previous section. However since the stock price is more reliant on external factors, Australian and Others have been excluded from the European and Asian sample. Therefore these results are not directly comparable to the results from the ROAA and ROAE analysis.

7.1 Europe - Stock Performance

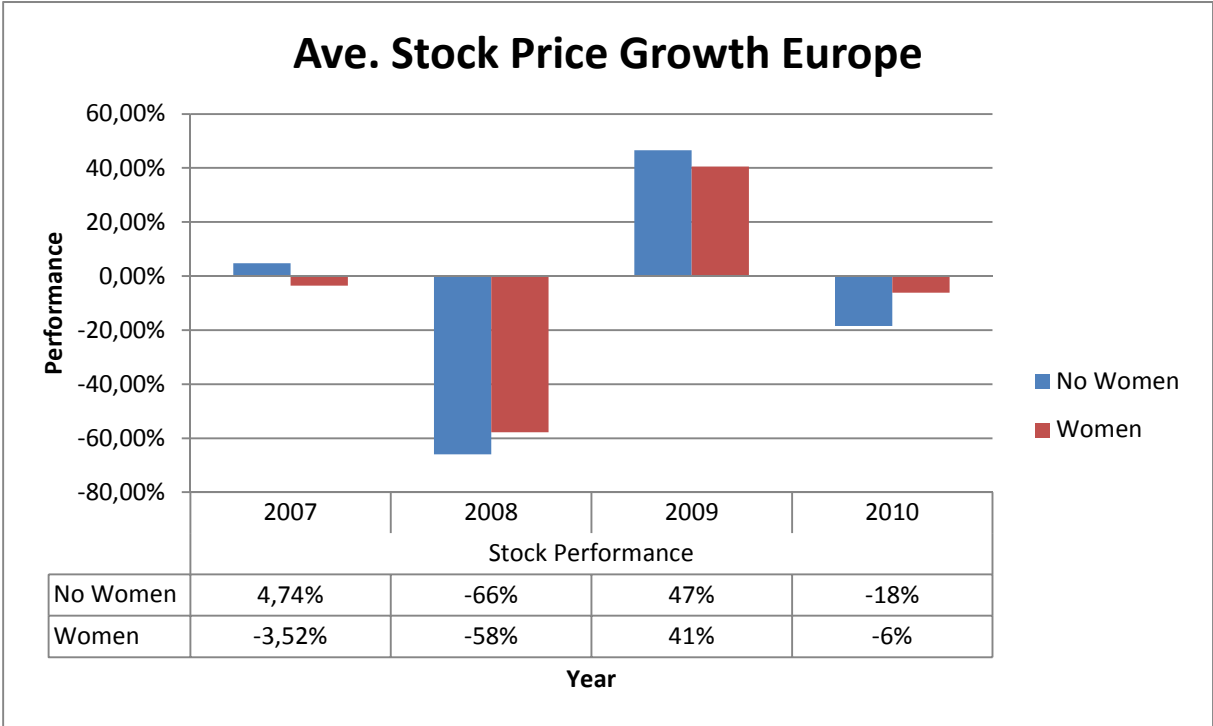


Figure 7.0

Figure 7.0 shows the average stock price growth for the European banks divided into two samples, one with banks which has female directors and one without. The full table with standard deviation is found in appendix 3.0.

For 2007 the banks with no female directors are having a slight better performance than those with. The standard deviations for the two samples are 43% (No women) and 40% (women) which shows that the banks had a widespread performance in 2007.

In 2008 the financial crisis were taking full effect in Europe. The performance of the two samples is down considerably from the previous years. There is also a change in which sample leads the other, with the banks with women now having on average an 8% better performance than those without. The lowered standard deviation (20% no women, 17% women) also show that the banks performance was more unison this year.

By 2009 it seems that the banks are making a recovery with a greatly improved stock performance from the previous years. However it is once again observed that the

group with no women is having the best performance in 2009. However the standard deviations for this year are considerably high.

In the last year of this analysis the European banks performance is again down. The banks with no women are again showing the worse performance compared to those with women. The 12% difference is the biggest observed over the four year period.

7.1.1 Performance Portfolio

In addition to looking at the yearly stock growth an equally weighted portfolio was constructed to show the progress in the stock prices over the four year span. Table 7.0 shows that such a portfolio would see slightly better performance for the sample with women after four years.

		Stock Performance Portfolio			
		2007	2008	2009	2010
No women	100	104,74	35,60	52,18	42,53
Women	100	96,48	40,69	57,21	53,66

Table 7.0

7.2 Asia – Stock Performance

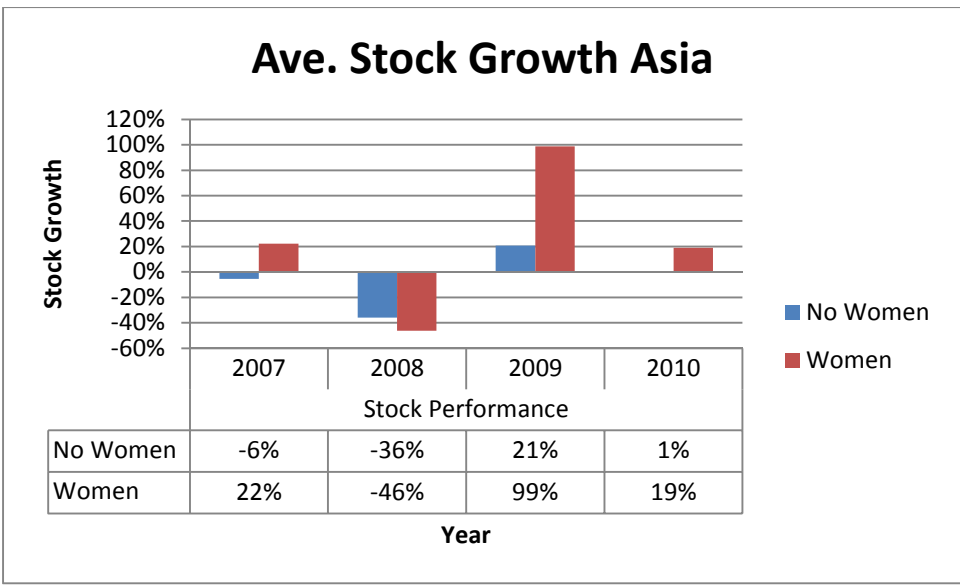


Figure 7.1

Figure 7.1 outlines the stock performance for the Asian banks divided into two samples in a similar manner to the European one. The result from 2007 in the Asian sample differs from what was observed in Europe. The banks with women clearly

outperform those without. The difference is quite significant at 28%. The standard deviations for the two samples (shown in appendix 3.1) are 38% (no women) 44% (women) which is similar to what was observed in the European sample.

In 2008 the Asian banks are experiencing considerably negative growth, which is the case for both samples. However what is observed is a role reversal with the banks with no women performing on average considerably better than their counterparts. The standard deviation has also gone down considerably which indicates that the banks were unison in negative performance.

2009 becomes an extreme year in this analysis as the Asian banks with female directors are seeing an average growth of the stocks of 99%. This is a performance roughly 5 times as strong as the boards without women and twice that of the European banks. However a fairly high standard deviation of 64% for the banks with women shows that the performances of the banks were extremely widespread.

In the last year of this research the performances are back to a more normal level. The banks with women are still outperforming those without, now with an 18% difference. In the Asian sample the banks with no women are being outperformed in 3 out of 4 years.

7.2.1 Performance Portfolio:

Stock Performance Portfolio					
		2007	2008	2009	2010
No Women	100	94,45	60,56	73,05	73,49
Women	100	122,14	65,60	130,38	155,19

Table 7.1

By examining table 7.1 it becomes clear that in Asia the sample of banks with female directors are vastly outperforming their counterparts over a four year period. The final performance of a portfolio created with the criteria of having female directors would yield a much better return than one without female directors.

7.3 North America – Stock Performance

The North American banks are divided in the same manner as they were in the ROAE and ROAA sample.(0-1 , 2 , 3+ female directors)

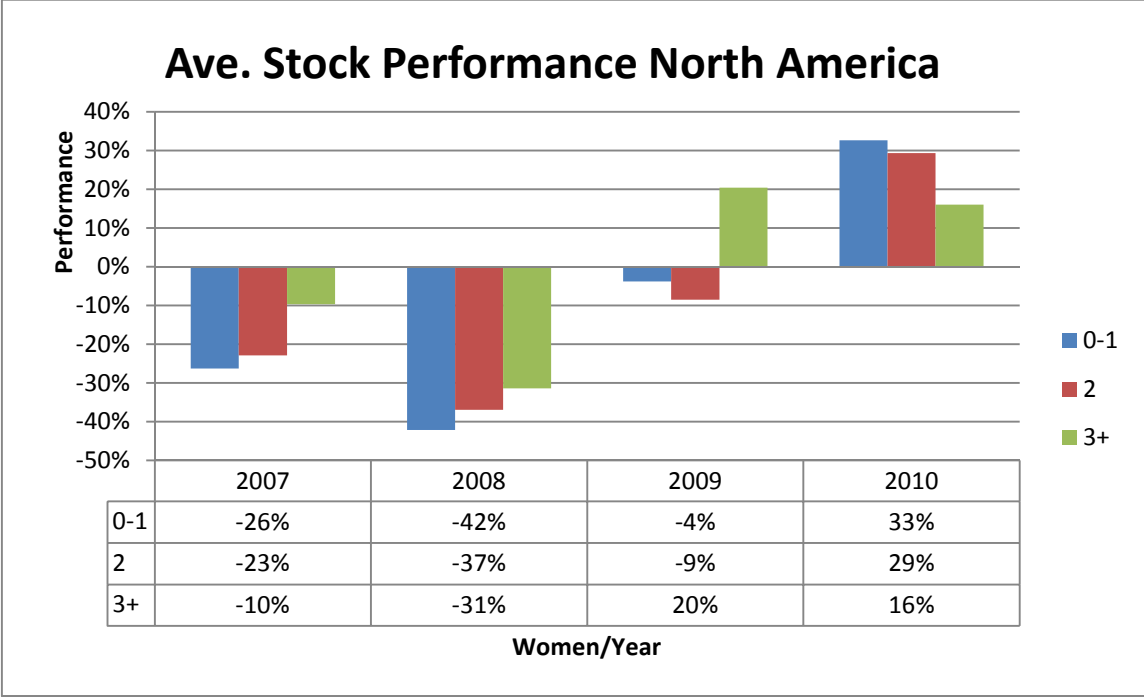


Figure 7.2

By observing the data in figure 7.2 it becomes clear that the financial crisis first took its toll on the North American banks. All three samples are experiencing a negative growth in 2007, however it is the banks with the most female directors that performance at the best level.

The trend from 2007 continues into 2008 where there is still a negative performance across the board. The banks with three or more female directors are still experiencing the least stock price decline.

In 2009 the performances of the three samples are mixed. The banks with three or more female directors are now experiencing positive growth, while the two others are still showing negative stock performances. The standard deviation(appendix 3.2) in 2009 is high for the sample with three or more women so it is clear that not all banks are performing as well within this sample.

For 2010 the roles are completely reversed where the banks with 0-1 female directors are now experiencing on average growth for the first time, as is the case with those

with two female directors. In this year the banks with the lowest number of female directors are performing the best.

7.3.1 Performance Portfolio

Stock Performance Portfolio					
# of Women	Base	2007	2008	2009	2010
0-1	100	73,73	42,66	41,04	54,41
2	100	77,05	48,61	44,47	57,51
3+	100	90,32	61,91	74,53	86,44

Table 7.2

The stock performance portfolio in table 7.2 shows that there is a clear difference in the three samples performance over the four year span. The difference is little between those with 0-1 and 2 compared to those with three or more.

7.4 Discussion

This following section will be used to discuss the findings in the empirical study in relation to gender diversity and company performance.

7.4.1 Gender diversity

As the empirical research in this paper show the gender diversity on boards remain fairly low in this period. There has only been a little increase in female directors in the examined timeframe. In total 214 board seats were occupied by women in 2007 out of a total of 2180 seats for all banks examined. In 2010 this number had increased to 241 out of a possible 2124 seats. This means that the average female board participation in this sample went from 9.8% to 11.3% over the four year period. The increased average is also in large part helped by the shrinking of banking boards in the four year period.

The empirical research also shows that within confined geographical areas there are big differences in gender diversity on the boards. Within Europe the biggest difference in gender diversity is from Sweden’s 34% and Italy’s 1% in 2010. This is most likely due to a deep cultural difference between northern and Southern Europe.

Yet even if northern European countries can boast to have more diverse boards in terms of gender there has been little progress to further increase this over the four year period. The numbers in table 5.1 show that should a European diversity quota of 20% be enforced, then the banks are faced with a difficult task altering the composition of their boards.

For North America the results are similar to what was found in Europe. Over the four year period only 2 female directors were added to the boards. However boards were slimmed with 46 director positions in the same period. The numbers also show a gap between the two countries, whereas Canadian banks have increased the percentage of women over this period, the American banks have decreased.

While the Asian banks are far from having as diverse boards as their European and North American counterparts, there are still small signs of improvement in this region. With 11 female directors being added the countries of India and Indonesia are the ones improving the most.

The Australian banks should also be considered amongst the best on diversity with 20% female directors on average. They are tied for the top 5 spot when it comes to diversity in the total sample.

What the numbers show however, is that even in these financially troubling times there is little evidence for the theory presented by Luckerath-Rovers (2010) that the firms would increase diversity in troubling times. It does not however mean that the board composition was not altered but the criteria for new appointments cannot be said to have been gender.

Based on the data found in this empirical research it is hard to predict whether or not one should expect increased gender diversity on the boards in the future. As this research found that the growth for female directors has remained fairly low.

7.4.2 Diversity and performance

This following section will discuss the diversity and its relation to performance. The section will first examine the ROAE and ROAA for each segment followed by the stock price growth.

7.4.2.1 Europe/Australia

It is clear from the data that boards with female directors have consistently over the four year period delivered better ROAE. The four year average for boards with women is 10.57 compared to boards without at 8.2. The difference was roughly 29% over the four year period. However most of the differences in the numbers arise from 2008 where there was a distinct difference between the two samples. If this year is excluded from the sample the difference over the three year period is only 10.5%⁸³. The findings in this thesis for the European/Australian sample show that for the banking sector, boards with women are outperforming those without in terms of ROAE.

In terms of ROAA the case is entirely different than with ROAE. The four year average for no women is 0.775 while for boards with women it is 0.6175. This is a 25% difference in terms of the averages over the four years.

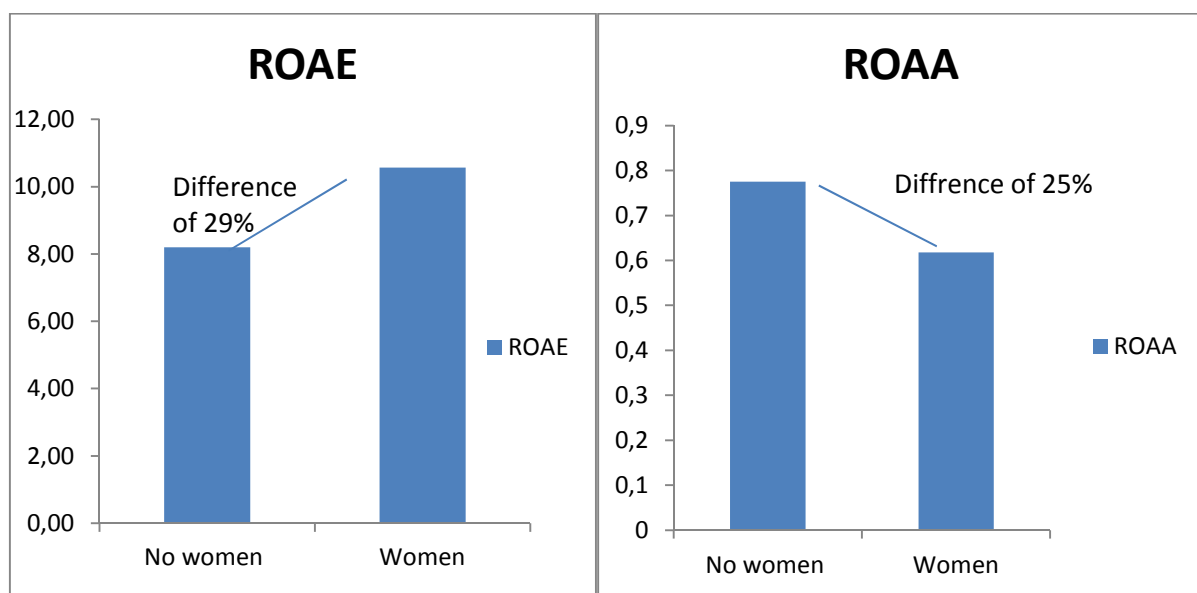


Figure 7.3

What is observed for Europe/Australia is that boards with female members are outperforming their counterparts in terms of ROAE however not when examining ROAA.

⁸³ Ave. Women =10,86 Ave.No Women 9.82

In terms of the stock price movement for European banks, no great deal of difference between the banks with women compared to those without was observed. Observing that in two out of four years the banks without female directors were experiencing a greater growth (less decline) it is hard to make a solid case as to a real difference of female/male directors when it comes to stock price movement.

7.4.2.2 Asia/Others

For the Asian/Others sample the average ROAE over the four year timeframe is 14.03 for banks with female directors and 8.47 for those without. This is an average difference of 65% for the period. For the Asian/Others sample the same thing as for the European is observed. In 2008 there is a vast difference in the performance of ROAE in terms of the two segments. This difference could stem from the theory that boards with women had taken less risk before the financial crisis. This would be in support of the theory that there is a risk-awareness difference between men and women (Barsky, Juster, Kimball and Shapiro in 1997, Hudgens and Fatkin, 1985, Levin, Snyder and Chapman 1988, Byrnes, Miller and Schafer, 1999). However, this thesis does not examine this relationship and as such cannot verify this.

In terms of ROAA the differences of the four year period is an average ROAA at 1.00 for boards with women compared to 0,89 for those without, a difference of 11.5%. This is far below the 65% difference found in ROAE.

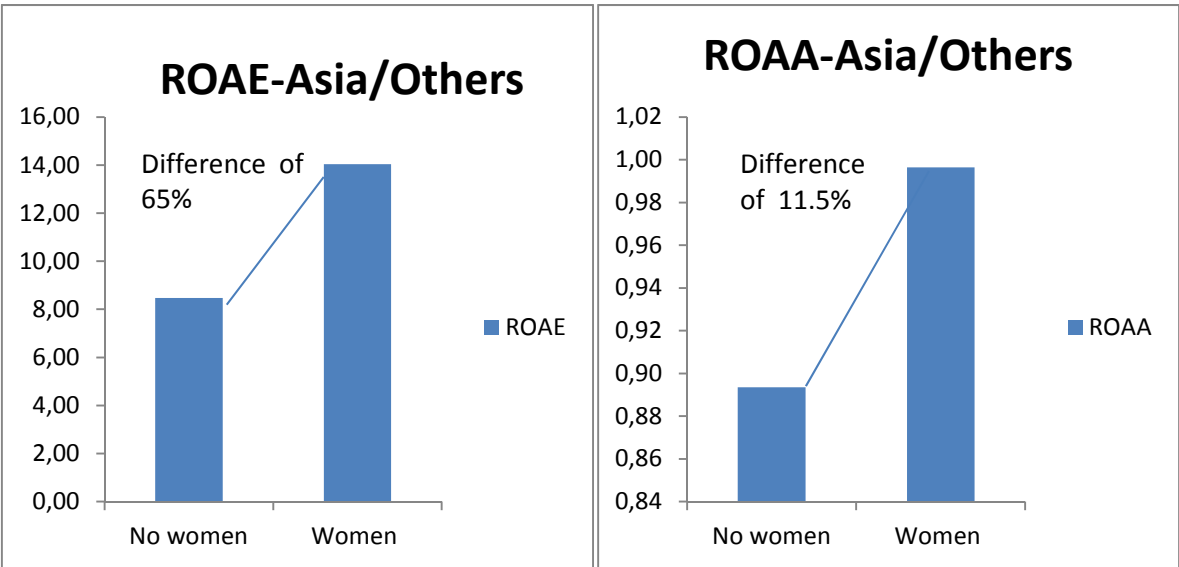


Figure 7.4

The stock price movement in Asia indicates a clear difference amongst the boards that feature women and those without. While 2008 being the only year the banks with female board members are outperformed they on average deliver much better returns than their counterparts. This serves as a clear indicator that at least having female board members could lead to increased performances in the stock market.

7.4.2.3 North America

For the North American banks the average ROAE for the three different samples are; 0-1 female directors:(-0.53) 2 female directors :(3.75) 3 or more female directors :(10.12). This indicates that in North America there is a clear difference between performances of boards with different number of female directors.

In terms of ROAA for the North American sample the averages are as followed; 0-1:(0.12) 2:(0.24) 3:(0.67). The results are very much in line with the ROAE. However the difference between the worst performing segment and the best is not as big in terms of ROAA.

The stock market returns give no clear indication as to female directors being connected to better performance. The banks with three or more women do show the best performance out of all the banks, but the fact that boards with two directors are performing in line with those with 0-1 indicates that it might not be females that influences the performance.

8.0 Hypothesis and Design of Correlation Analysis

Based on the empirical research done in this paper this following section aims to create hypotheses to test for a significant correlation. If increasing gender diversity is irrelevant the expected correlation between the two variables tested should be of insignificant statistical importance. The empirical research in this paper examined the relationship between boards with no women and those with. This following correlation analysis will examine the data for a positive correlation between the variable percentage of women (the % of the board made up of female directors) and the three performance measures also used in the empirical research. There are three hypotheses tested in this paper and they are as followed:

Hypothesis 1 (H1): (Impact on ROAE) A positive significant relationship exist between the percentage of female directors and ROAE.

Hypothesis 2 (H2): (Impact on ROAA): A positive significant relationship exists between the percentage of female directors and ROAA.

Hypothesis 3 (H3): (Impact on Stock Growth): A positive significant relationship exists between the percentage of female directors and Stock Growth.

These hypotheses are tested for each year in each of the geographical areas in this paper.

8.1 Variables

The variables tested in this paper are as followed:

% of women	The percentage of female directors serving as board member in the given period examined
ROAA	The return on Average Assets in the given period
ROAE	The return on average Equity in the given period
% stock growth	The growth of the stock price for a given time period examined.

The independent variable in all parts examined is the % of women, while the other three are classified as dependent variables in this research.

8.2 Correlation set up

The analysis is set up with the two variables (i.e. % of women/ROAA or %of Women/ROAE) being examined for a possible correlation. They are tested for a significant probability of $\alpha = 0.05$ in order to test if the null hypothesis is rejected. Significances below 0.05 do not however mean that the hypothesis is true; it merely means that the hypothesis cannot be rejected.

The two variables values' are put into two tables and a multivariate analysis is performed using the statistical software JMP. In the following section these multivariate analyses are presented while a scatterplot matrix are found in appendix 4.0-19.2.

8.3 Correlations:

This paper is analyzing the data using two different correlations. The first correlation used is Pairwise correlation (Pearson product-moment correlations). In addition to the pairwise correlation the Spearman's correlation ρ is given. This because the Pearson product correlation assumes the two underlying variables are normally distributed⁸⁴, which the data in this sample is not. Therefore the Spearman's ρ is added to verify the correlation and statistical significance of the sample. Where there is only a significant correlation in either Pairwise or Spearman's the hypothesis will be rejected.

9.0 Correlation Analysis

This following section contains the analysis of the correlation between the two variables “% of Women” and ROAA/ROAE. Each year will be presented in detail for the three different samples. Firstly Europe/Australia followed by Asia/Other and lastly North America. In the paper the table containing the pairwise and Spearman's correlation is presented. In the appendix scatterplots are presented. The result of the analysis is discussed full in the discussion section following this part.

9.1 Europe/Australia

This following section will examine the relationship between the % of women and ROAE and ROAA for Europe and Australia.

⁸⁴ <http://changingminds.org/explanations/research/analysis/pearson.htm>

9.1.1 Europe/Australia 2007

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2007	% of Women 2007	0,1191	56	-0,1484	0,3704	0,3819
ROAA 2007	% of Women 2007	-0,0788	56	-0,3348	0,188	0,5637
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2007	% of Women 2007	0,1983	0,1429			
ROAA 2007	% of Women 2007	-0,0264	0,8467			

Table 9.1

The top part of table 9.1 shows that for the ROAE there is a small positive correlation between the two variables. The scatter plot in appendix 4.0 also show how dispersed the banks are in terms of the variables. Even if the pairwise correlation shows a positive result the confidence interval contains 0 and the significant probability far exceeds the alpha of 0.05.

In terms of the relationship of ROAA and % of women the data show a weak negative correlation. The Scatterplot in the appendix 4.1 also show that the performance is clustered around ROAA =1. There are outliers but those contain banks with no women on the board as well as banks with a high percentage of female director. As for the ROAE the confidence interval contains zero and the significance probability is high.

Because the three variables are not normally distributed the standard pairwise correlation has been supplemented with the Spearman's correlation (ρ). For the ROAE the data show an even stronger correlation than with the pairwise and the significance level is also declining from 0.3819 to 0.1429. For The ROAA the correlation is now weaker with -0.0788 becoming -0.0264, however the significance probability is increasing sharply.

The data in table 9.1 clearly show that the hypothesis H1 and H2 are rejected because the significance probability exceeds the 0.05 alpha in both cases.

9.1.2 Europe/Australia 2008

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2008	% of Women 2008	0,1999	56	-0,0665	0,4397	0,1396
ROAA 2008	% of Women 2008	0,0317	56	-0,2331	0,2922	0,8164
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2008	% of Women 2008	0,097	0,477			
ROAA 2008	% of Women 2008	-0,0193	0,8875			

Table 9.2

The results from 2008 in table 9.2 indicate once again that in Europe there is a weak positive correlation between ROAE and % of women. The correlation is slightly stronger than that found in 2007. Also this year the confidence interval contains the value zero and the significance probability is above the required alpha.

The scatterplot found in appendix 5.1 shows how the banks are distributed. For this year it also shows that the worst and best performing banks in terms of ROAA are the ones that have no women serving. This year the cluster is situated around an ROAA of 0 to 1.

For ROAA the situation has changed from a weak negative correlation to a positive compared to 2007. The 0.0317 correlation for 2008 is close to zero which is exemplified by the high significance probability for this year.

The Spearman's correlation shows a weaker correlation than the pairwise for the ROAE and a negative one for the ROAA. Both numbers again very close to zero indicating very little correlation and both significance probabilities are high.

The data for 2008 also show that the hypothesis H1 and H2 are rejected.

9.1.3 Europe/Australia 2009

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2009	% of Women 2009	-0,1067	56	-0,3596	0,1607	0,4336
ROAA 2009	% of Women 2009	-0,1858	56	-0,4278	0,0811	0,1704
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2009	% of Women 2009	-0,0206	0,8803			
ROAA 2009	% of Women 2009	-0,0366	0,789			

Table 9.3

For the 2009 period the table 9.3 shows that there was a negative correlation between both the ROAE and ROAA for 2009. There was a stronger negative correlation for ROAA with -0.1851 in comparison to ROAE with -0.1067. The significance probabilities are for both variables above the required alpha of 0.05 with 0.4336 and 0.1704 respectively.

The scatterplots for the two variables are found in appendix 6.0-1. For the ROAE in particular it is clear that the banks are mostly clustered around ROAE from around -10 to 20. However there is one extreme outlier which is the Bank of Ireland with 14% women on the board and a ROAE performance of -56.42.

The Spearman’s correlation does reconfirm that the correlation between both ROAE/% of women and ROAA/% of women is negative. Once again the observed statistical significance is far above Alpha 0.05.

The data from the European sample in 2009 leads to a rejection of the hypothesis H1 and H2.

9.1.4 Europe/Australia 2010

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2010	% of Women 2010	0,0788	56	-0,188	0,3348	0,5638
ROAA 2010	% of Women 2010	-0,1205	56	-0,3717	0,147	0,3762
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2010	% of Women 2010	0,1489	0,2733			
ROAA 2010	% of Women 2010	0,0183	0,8938			

Table 9.4

The results in 2010 do not differ much from what was observed in the previous periods. Once again the correlation between the two variables is found to be weakly positive or weakly negative. We also observe significance probabilities that are far exceeding the acceptable alpha.

The scatterplots found in appendix 7.0-1 show that we once again observe the ROAA to be fairly clustered with a few outliers in terms of above average performance. They show that in terms of ROAE this year the banks performance are more dispersed with most banks returning a positive ROAE regardless of female board participation.

The Spearman’s correlation is also this year weakly positive, but as with previous years the significance probability is above the alpha.

Therefore the hypothesis H1 and H2 are also rejected for 2010 in terms of European and Australian banks.

9.2 Asia – Others

This following section will examine the same relationship as in Europe but with the Asian and Other banks in the main sample. The procedure of the analysis follows that of Europe with both pairwise and Spearman’s correlation being analyzed.

9.2.1 Asia/Others 2007

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2007	% of Women 2007	0,2354	75	0,009	0,4389	0,0420*
ROAA 2007	% of Women 2007	-0,1126	75	-0,3297	0,1158	0,3327
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2007	% of Women 2007	0,2453	0,0339*			
ROAA 2007	% of Women 2007	0,111	0,3399			

Table 9.5

The table 9.5 outlines the results from the analysis of the Asian/other banks in 2007. It follows that of Europe/Australian sample in that it shows a weak positive correlation for ROAE and a negative correlation for ROAA. This year the observed correlation for ROAE was 0.2354 but unlike what was observed in Europe/Australia the value is statistically significant with a probability of 0.0420. For ROAA the case is different and the value exceeds alpha.

By examining the scatterplot found in appendix 8.0-1 that shows the relationship between the ROAE and % of women, it is clear that the banks that did have female directors serving are showing strong ROAE numbers.

For the Spearman’s correlation the data show that the numbers found in the pairwise correlation regarding ROAE are confirmed. The correlation is steady at 0.2453

indicating a weak positive correlation. The statistical significance is even stronger for the spearman’s correlation which validates that the numbers are statistical significant.

For ROAA the correlation is shown to be positive but with a high statistical probability.

The results from the analysis in 2007 are in support of hypothesis H1 which is accepted. The hypothesis H2 on the other hand is rejected.

9.2.2 Asia/Others 2008

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2008	% of Women 2008	0,2488	75	0,0232	0,4504	0,0313*
ROAA 2008	% of Women 2008	0,1222	75	-0,1062	0,3384	0,2929
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2008	% of Women 2008	0,2353	0,0421*			
ROAA 2008	% of Women 2008	0,1991	0,0847			

Table 9.6

The results for 2008 are similar to what was found in 2007. Once again the data points to a positive correlation between ROAE and the % of women. The correlation is slightly stronger for 2008 and the significance probability has gone from 0.0420 to 0.0313.

The ROAA correlation has changed from weakly negative to positive this year but the significance probability observed is high at 0.2929.

In appendix 9.0 the scatterplot for the ROAE in 2008 clearly show that most firms that do have female directors are generating largely positive returns. The performance from the banks with no women is spread all over the range from -40 until +25.

For the ROAA the case is somewhat different. In appendix 9.1 the scatterplot shows that the banks that had the best return in terms of ROAA were banks⁸⁵ with no female directors. Banks with female directors serving seem clustered around 0 - 2.

The Spearman’s correlation supports the pairwise in that it shows the ROAE correlation to be 0.2353 with a significance probability of 0.0421. It is slightly higher than for the pairwise correlation but still below the required alpha. For ROAA the Spearman’s is showing a stronger correlation than the pairwise but with a significance probability slightly above the required alpha.

As was the case with the analysis of 2007, the hypothesis H1 is accepted while hypothesis H2 is rejected.

9.2.3 Asia/Others 2009

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2009	% of Women 2009	0,286	75	0,0648	0,4805	0,0122*
ROAA 2009	% of Women 2009	0,0765	75	-0,1516	0,2968	0,5114
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2009	% of Women 2009	0,301	0,0082*			
ROAA 2009	% of Women 2009	0,2089	0,0701			

Table 9.7

The table 9.7 shows that for 2009 the strength of the correlation between % of women and ROAE is increased from 0.2488 to 0.286. For all three years now analyzed this relationship has been positive and statistically significant. The pairwise significance probability is now at 0.0122.

For ROAA the pairwise correlation is insignificant this year. The relationship is weakly positive and the significance far exceeds alpha as was the case with the two previous years.

⁸⁵ The best performing bank in terms of ROAA was Al Rajhi Bank from Saudi Arabia (ROAA= 4,53)

The Spearman's also show a positive correlation for the two variables. The ROAA is stronger than what the pairwise showed with an increase from 0.0765 to 0.2089. The significance probability is also much closer to the required alpha at 0.0701. For the ROAE the correlation is 0.301 and the statistical significance is much stronger with 0.0082. The correlation would be accepted at a 1% level.

For 2009 the results are the same as previous years with hypothesis H1 accepted and hypothesis H2 rejected.

9.2.4 Asia/Others 2010

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2010	% of Women 2010	0,4262	75	0,222	0,5945	0,0001*
ROAA 2010	% of Women 2010	0,1409	75	-0,0874	0,355	0,2248
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2010	% of Women 2010	0,4692	<,0001*			
ROAA 2010	% of Women 2010	0,2738	0,0167*			

Table 9.8

The results from 2010 follow the three previous years and there is now support for hypothesis H1 in all four years. The pairwise correlation for ROAE shows the strongest correlation found so far in the study. The 0.4262 correlation is further supported by the strongest significance probability found at 0.0001.

The correlation for ROAA and % of women show a weak positive pairwise correlation for 2010. This is also the strongest positive correlation between the two variables observed for the Asian/Others sample.

The scatterplot found in appendix 11.0 shows how most banks with no female directors are clustered towards the lower end of ROAE. While banks with female directors are scattered more towards the right side, indicating higher ROAE returns.

For ROAA the situation is similar. Appendix 11.1 shows that many of the banks with no female directors have ROAA returns below 0.5. Banks with female directors have the cluster of performances around 0.5-1.5.

For the Spearman's the data indicate an even stronger correlation between both ROAE and ROAA and % of women. The ROAE correlation is at 0.4692 which is the strongest observed in the Asian sample. The significance probability is also at its lowest with 0.0001. For ROAA the correlation is at 0.2738 which is also the strongest correlation in terms of ROAA found in the Asian sample. The statistical significance for ROAA is 0.0167 which means that 2010 is the first year with a statistical significance in relation to the correlation between ROAA and % of women in terms of the Spearman's.

For 2010 hypothesis H1 is accepted and H2 is rejected.

9.3 North America

9.3.1 North America 2007

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2007	2007 % of Women	0,2369	33	-0,1158	0,5366	0,1844
ROAA 2007	2007 % of Women	0,0805	33	-0,2703	0,4124	0,6561
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2007	2007 % of Women	0,2983	0,0917			
ROAA 2007	2007 % of Women	0,0949	0,5995			

Table 9.9

Table 9.9 shows the data for the correlation between ROAE/ROAA and % of women for the banks located in North America. As was observed in the two previous samples we also find a positive correlation for the two variables. The relationship is stronger for the ROAE with 0.2369 compared to the ROAA of 0.0805. The significance

probability for both the ROAA and ROAE exceeds 0.05 as was the case with the European/Australian sample.

Appendix 12.0 shows the scatterplot matrix for ROAE/% of women. It is clear that the banks performance is dispersed. The banks with the best performance have around 5-15% of women serving which is also the case for the worst performing ones. The bank with the most women serving (30%) has an average return for 2007. While the two banks with no female directors are in the same range.

For ROAA the case is similar. In appendix 12.1 the scatterplot clearly show a cluster at ROAA=1. Those banks in this cluster have a range from 0 to 25% female directors.

The Spearman’s correlation for 2007 is in the same range as the pairwise. The correlation for the ROAE is slightly stronger at 0.2983. The significance probability is lower at 0.0917 but still exceeds the required alpha. The hypothesis H1 and H2 is therefore rejected.

9.3.2 North America 2008

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2008	2008 % of Women	0,4622	33	0,1413	0,6952	0,0068*
ROAA 2008	2008 % of Women	0,3772	33	0,0389	0,6379	0,0305*
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2008	2008 % of Women	0,4302	0,0125*			
ROAA 2008	2008 % of Women	0,3298	0,0609			

Table 9.10

For 2008 the numbers show a strong correlation between both ROAE and ROAA. The ROAE and ROAA correlations are the strongest observed so far in all the samples at 0.4622 and 0.3772. Both correlations are within the required significance probability which is also the first time observed in all the samples. The ROAE probability is strong with 0.0068.

The scatterplot for ROAE in appendix 13.0 clearly show how the banks with the most women on the boards are the ones reporting positive ROAE numbers for 2008. The outlier in this sample is Flagstar Bancorp who had a ROAE of -47.27 in 2008. The results found for ROAA is similar as shown in appendix 13.1. Banks with the most female directors all return a positive ROAA.

The correlation is slightly weakened in the Spearman's from 0.4622 until 0.4302 for ROAE which means the correlation found in Asia/others in 2010 was stronger. The ROAA correlation is also slightly weaker however the significance probability has risen above the alpha.

Since the significance for the Spearman's correlation for ROAA is higher than alpha, hypothesis H2 is rejected. However the hypothesis H1 is accepted for 2008.

9.3.3 North America 2009

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2009	2009 % of Women	0,35	33	0,0077	0,619	0,0458*
ROAA 2009	2009 % of Women	0,1955	33	-0,1585	0,5049	0,2757
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2009	2009 % of Women	0,387	0,0261*			
ROAA 2009	2009 % of Women	0,1762	0,3266			

Table 9.11

For 2009 the correlation between ROAE/% of women is slightly weaker than what was found in 2008. The statistical significance is also weaker at 0.0458 yet still below alpha. For ROAA the correlation and significance is also weaker with 0.1955 and 0.2757 respectively.

The scatterplot found in appendix 14.0 for ROAE shows a clear outlier. The outlier is again Flagstar who had a negative ROAE of 92.93 for 2009. For ROAA found in

appendix 14.1 most of the banks are clustered around a ROAA of +-1. The outlier in terms of ROAA is Huntington bank with -5.84.

For the Spearman’s correlation the data show that the ROAE for 2009 had a positive correlation at 0.387. The significance probability is stronger than for the pairwise one having gone from 0.0458 to 0.0261. For the ROAA the correlation and statistical significance is slightly weaker at 0.1762 and 0.3266.

For 2009 the hypothesis H1 is accepted while H2 is rejected.

9.3.4 North America 2010

Pairwise Correlations						
Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
ROAE 2010	2010 % of Women	0,3675	33	0,0277	0,6312	0,0354*
ROAA 2010	2010 % of Women	0,2025	33	-0,1513	0,5104	0,2583
Nonparametric: Spearman's ρ						
Variable	by Variable	Spearman ρ	Prob> ρ			
ROAE 2010	2010 % of Women	0,2631	0,1391			
ROAA 2010	2010 % of Women	-0,0603	0,7389			

Table 9.12

The table 9.12 is the last one in this part of the analysis. The table indicates that there still is a correlation between the ROAE performance and the % of women on the boards. The correlation is now at 0.3675 with a significance probability of 0.0354. For ROAA the numbers show a weak positive correlation at 0.2025 but with a low significance probability of 0.2583.

The Spearman’s correlation indicates a weak positive correlation for ROAE and for the first time in the North American sample a negative correlation for ROAA. For both variables the significance probability exceeds 0.05.

This leads to the conclusion that for 2010 both hypothesis H1 and H2 are rejected.

10.0 Stock Performance and Female Directors

This section will examine the stock performance and the % of female directors. The results are presented in the same manner as the previous analysis however for this part the three samples are shown in the same tables.

10.1 Stock Growth 2007

Pairwise Correlations							
	Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
Europe	% Stock Growth 2007	% of Women 2007	-0,0563	51	-0,3268	0,2227	0,6946
Asia	% Stock Growth 2007	% of Women 2007	0,3636	71	0,1424	0,5503	0,0018*
North America	% Stock growth 2007	% of Women 2007	0,3301	33	-0,0149	0,6048	0,0607
Nonparametric: Spearman's ρ							
	Variable	by Variable	Spearman ρ	Prob> ρ			
Europe	% Stock Growth 2007	% of Women 2007	-0,0498	0,7285			
Asia	% Stock Growth 2007	% of Women 2007	0,3532	0,0025*			
North America	% stock growth 2007	% of Women 2007	0,2827	0,1109			

Table 10.0

The table 10.0 outlines the correlation analysis for 2007 for all the three geographical segments. The data show a statistical significant positive correlation for the Asian sample which is supported by both types of correlation.

For Europe the correlation this year is reported as slightly negative however the correlation significance is far exceeding alpha. The North American analysis shows a positive correlation that is almost as strong as the Asian one but the statistical significance is not below alpha.

As table 10.0 shows H₃ is accepted for the Asian sample while rejected for Europe and North America

10.2 Stock Growth 2008

Pairwise Correlations							
	Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
Europe	% Stock Growth 2008	% of women 2008	0,1099	51	-0,1709	0,3741	0,4427
Asia	% Stock Growth 2008	% of Women 2008	-0,2256	71	-0,436	0,0081	0,0585
North America	% Stock Growth 2008	% of Women 2008	0,256	33	-0,0957	0,5509	0,1505
Nonparametric: Spearman's ρ							
	Variable	by Variable	Spearman ρ	Prob> ρ			
Europe	% Stock Growth 2008	% of women 2008	0,1961	0,1678			
Asia	% Stock Growth 2008	% of Women 2008	-0,2264	0,0576			
North America	% Stock Growth 2008	% of Women 2008	0,1958	0,2749			

Table 10.1

In 2008 the most notable correlation is for the Asian sample. While the previous year this correlation was shown to be at around 0.35, it has this year gone to a negative 0.2256. This would indicate that increasing gender diversity on the boards would correlate to a worsened performance. The correlation is however not statistically significant but very close to alpha.

The North American as well as the European samples both show a weak positive correlation which in both cases is not statistically significant.

H3 is therefore rejected for all three samples in 2008.

10.3 Stock Growth 2009

Pairwise Correlations							
	Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
Europe	% Stock Growth 2009	% of Women 2009	0,1773	51	-0,1033	0,4318	0,2131
Asia	% Stock Growth 2009	% of Women 2009	0,4801	71	0,2779	0,6415	<,0001*
North America	% Stock Growth 2009	% of Women 2009	0,3795	33	0,0416	0,6395	0,0294*
Nonparametric: Spearman's ρ							
	Variable	by Variable	Spearman ρ	Prob> ρ			
Europe	% Stock Growth 2009	% of Women 2009	0,1686	0,237			
Asia	% Stock Growth 2009	% of Women 2009	0,5507	<,0001*			
North America	% Stock Growth 2009	% of Women 2009	0,2827	0,1109			

Table 10.2

In 2009 the Asian sample shows the highest correlation of all samples with 0.48 and 0.55 both which are statistically significant. This correlation indicates that compared to the previous year that once again increasing the gender diversity is leading to better performance. Which is in line with what was found in 2007 yet the correlation is stronger for this year.

This year the North American sample shows a positive statistical significant correlation for the pairwise correlation yet it is not supported by the Spearman's. The European one does once again show positive correlation that is not statistical significant.

H₃ is accepted for the Asian sample while rejected for the two others.

10.4 Stock Growth 2010:

Pairwise Correlations							
	Variable	by Variable	Correlation	Count	Lower 95%	Upper 95%	Signif Prob
Europe	% Stock Growth 2010	% of Women 2010	0,3893	51	0,1274	0,6005	0,0047*
Asia	% Stock Growth 2010	% of Women 2010	0,1833	71	-0,0522	0,3996	0,1259
North America	% Stock Growth 2010	% of Women 2010	-0,213	33	-0,5184	0,1406	0,234
Nonparametric: Spearman's ρ							
	Variable	by Variable	Spearman ρ	Prob> ρ			
Europe	% Stock Growth 2010	% of Women 2010	0,3363	0,0158*			
Asia	% Stock Growth 2010	% of Women 2010	0,3254	0,0056*			
North America	% Stock Growth 2010	% of Women 2010	-0,164	0,3618			

Table 10.3

In 2010 the European sample is the one showing a positive correlation between the two variables. The correlation is fairly strong at 0.3893 (0.3363 Spearman) and is statistically significant. This is the first year this correlation is found for the European sample.

The Asian sample shows a positive correlation yet only statistically significant for the Spearman's correlation. The North American sample on the other hand is showing a negative correlation which is not found to be statistically significant.

H₃ is accepted for the European sample while rejected for the two others.

11.0 Discussion

The correlation analysis gave mixed results as to the correlation between the variables analyzed. This part of the paper will aim to examine the results from the different samples and to put those in light with what the empirical study showed.

11.1 Europe/Australia

For the European/Australian sample there were no positive correlations found in any of the years regarding the % of female directors and ROAE and ROAA. This means that even if the empirical research showed that there was a distinct difference in terms of ROAE and ROAA in section 6.1, between boards with no women and those with, the correlation analysis show that increasing the number of women does not have a positive significant correlation with performance⁸⁶. For ROAA the correlation was mostly reported to be negative yet not statistical significant. The fact that the correlation is negative is in line with what was found in the empirical research in section 6.1 which showed that the ROAA for firms without women were higher than for those with. One could therefore conclude that the data would show a significant negative correlation. However this does not have to be the case if banks with a high number of women are seeing great ROAA returns while those with a few are seeing lower returns.

No positive significant correlation was found until 2010 for Europe in regards to stock growth. This indicates that for most years there was no statistical gain from increasing the gender diversity on the boards. This means that boards with a low number of female director's statically could perform as well as those with a high number.

11.2 Asia/Others

For the Asian sample a positive significant correlation was found for ROAE and the % of women for all the years tested in this correlation analysis, with the correlation being the strongest in 2010. This would mean that the correlation between female directors and ROAE is highly significant in Asia and that boards with a high number of female directors have delivered strong results in terms of ROAE on a consistent basis.

Contrary to this there is no such correlation when it comes to ROAA, which is interesting when there were a positive correlation in terms of ROAE. This indicates that highly diverse boards are capable of delivering great ROAE returns while the

⁸⁶ The Australian banks are not included in the stock correlation

case is not the same in terms of ROAA. To pinpoint the reason behind this further research on this area would be needed.

For the Asian sample in terms of the stock price two years were found to have a firm statistical significant correlation between the % of women and the stock growth. By examining the data from the empirical analysis it is not surprising that the year 2009 yielded such a result as the banks with female directors experienced an on average 99% stock growth. The result further supports that the more diverse the boards were in this segment the better the performance.

11.3 North America

The North American sample is the one that should be easiest to compare to the empirical data as it was divided into three samples ranging from the lowest number of women 0-1 until 3+. However the empirical data dealt with absolute terms and did not deal with the percentages of the board that women occupied.

For 2008 there is a fairly strong positive correlation in terms of ROAE and ROAA (pairwise). This serves as a confirmation to the results found in the empirical analysis and shows that there is a statistical significant correlation to the numbers found there. In 2009 the ROAE correlation remains although a bit weaker than the previous years. This also serves as a confirmation to the results found in the empirical analysis. For the last year in this analysis there is once again a positive significant pairwise correlation for ROAE which would supports the clear trend found in the empirical analysis.

The North American sample only showed a positive significant correlation in 2009 in terms of the stock growth, which is much in line with what the empirical analysis showed. The average performance for the banks with three or more female directors was far outperforming the ones with less. This relationship is then confirmed by the correlation analysis.

14.0 Conclusion

This thesis has explored the situation regarding gender diversity, from 2007-2010 on the various banking boards around the world. By utilizing the data from 165 banks the thesis has aimed at using empirical data to answer the two research questions. “Have gender diversity on the banking boards improved since the financial crisis?” and “Is there a positive relationship between gender diversity on boards and company performance?”. Answering these questions was done through the means of studying observed data as well as seeking a correlation between the gender diversity and bank performance.

This thesis has shown that gender diversity has seen little improvement on the banking boards from 2007 -2010. The improvement has been slow in all three major geographical areas covered. This could indicate that there could be a need for more direct quota enforcement as this thesis has shown some countries have opted for.

In addition to this, the empirical research has shown a mixed result when it comes to performance and gender diversity. While finding that the ROAE are positively influenced by boards with female directors in all samples, this is not the case with ROAA in the European/Australian sample where there is a negative influence.

In exploring the hypothesis, put forward in this thesis, the study has shown that a positive significant correlation between the percentage of female directors and performance exist for some of the variables. Yet, this correlation is only consistent for ROAE and the % of women for the “Asian/Others” sample in all years examined. For the other samples significant correlation exist in some years but not on a consistent basis.

The evidence in this thesis suggests that those advocating gender diversity are forwarding valid points when arguing that gender diversity is a tool to improve company performance. However the thesis does not find support for claiming that there is a correlation between the % of female directors and performance, apart for in “Asia/others” in regards to ROAE.

14.1 Further research

This thesis has opened up for possibilities for further research in a number of areas. Most predominantly is the need for a deeper study into the years where a positive correlation exists between the different variables. This thesis only shows a correlation and not causation, so further research would be needed to pinpoint the reasons of the positive correlations.

Finally, it would be of importance to study the reason as to why the Asian/Other boards have produced a stronger and more consistent correlation in comparison to the other geographical regions analyzed. These additional areas of research could look into the sociological reasons as to why the women may have a greater impact on boards in this region.

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APPENDIX 1: List of Banks in study

Europe		Credito Valtellinese	Italy	Oceania	
Erste Bank	Austria	UBI Banca	Italy	ANZ Banking	Australia
Raiffeisen International Bank	Austria	UniCredit Group	Italy	Bank of Queensland	Australia
Dexia	Belgium	SNS Reaal	Netherlands	Commonwealth Bank	Australia
KBC Group	Belgium	SpareBank 1 SR-Bank	Norway	National Australia Bank	Australia
Danske Bank Group	Denmark	PKO Bank Polski	Poland	Westpac Banking Group	Australia
Jyske Bank	Denmark	Banco BPI	Portugal	Asia	
Sydbank	Denmark	BCP-Banco Com Português	Portugal	Arab Banking	Bahrain
OKO Bank	Finland	Banco de Sabadell	Spain	Bank of China	China
BNP Paribas	France	Banco Popular Español	Spain	Bank of Communications	China
Crédit Agricole	France	Banco Santander	Spain	CCB-China Construction Bank	China
Natixis	France	Bankinter	Spain	China Merchants Bank	China
Société Générale Group	France	BBVA-Banco Bilbao Vizcaya	Spain	Hua Xia Bank	China
Commerzbank	Germany	Nordea Bank	Sweden	ICBC	China
Landesbank Berlin (AG-LBB Holding)	Germany	SEB-Skand Enskilda Bank	Sweden	Bank of East Asia	Hong Kong/China
Alpha Bank Group	Greece	Svenska Handelsbanken	Sweden	BOC Hong Kong	Hong Kong/China
EFG Eurobank Ergasias	Greece	Swedbank	Sweden	Wing Hang Bank	Hong Kong/China
National Bank of Greece	Greece	BCV Group	Switzerland	Axis Bank	India
OTP Bank	Hungary	St Galler Kantonalbank	Switzerland	Bank of Baroda	India
Bank of Ireland	Ireland	Akbank	Turkey	Bank of India	India
Bank Hapoalim	Israel	Türkiye Garanti Bankasi	Turkey	Canara Bank	India
Israel Discount Bank	Israel	Barclays	United Kingdom	HDFC Bank	India
Banca MPS	Italy	HSBC Holdings	United Kingdom	Icici Bank	India
Banca Popolare di Milano	Italy	Lloyds TSB Group	United Kingdom	Indian Overseas Bank	India
Banco Popolare	Italy	Royal Bank of Scotland	United Kingdom	Indl Dev Bank of India	India
Credito Emiliano	Italy	Standard Chartered Group	United Kingdom	Punjab National Bank	India

Bank Mandiri	Indonesia	Gulf Bank	Kuwait	North America	
Bank Negara Indonesia	Indonesia	National Bank of Kuwait	Kuwait	Bank of Montreal	Canada
Aichi Bank	Japan	AMMB Holdings	Malaysia	Bank of Nova Scotia	Canada
Bank of Kyoto	Japan	Commercial Bank Qatar	Qatar	Canadian Imperial Bank	Canada
Bank of Yokohama	Japan	Qatar National Bank	Qatar	Laurentian Bank	Canada
Chiba Bank	Japan	Sberbank	Russia	National Bank of Canada	Canada
Daishi Bank	Japan	Al Rajhi Bank	Saudi Arabia	Royal Bank of Canada	Canada
Fukuoka Financial Group	Japan	Banque Saudi Fransi	Saudi Arabia	Toronto-Dominion Bank	Canada
Hachijuni Bank	Japan	Riyad Bank	Saudi Arabia	Associated Banc-Corp	United States
Hiroshima Bank	Japan	DBS Group	Singapore	Astoria Financial	United States
Hokuhoku Finl Group	Japan	Oversea-Chinese Banking	Singapore	Bank of America	United States
Joyo Bank	Japan	United Overseas Bank	Singapore	Bank of New York Mellon	United States
Juroku Bank	Japan	Chinatrust Financial	Taiwan	BB&T	United States
Mitsubishi UFJ Financial	Japan	SinoPac Financial Holdings	Taiwan	BOK Financial	United States
Mizuho Financial	Japan	Taishin Financial Holding	Taiwan	Citigroup	United States
Nanto Bank	Japan	Taiwan Business Bank	Taiwan	City National	United States
Nishi-Nippon City Bank	Japan	Bangkok Bank	Thailand	Comerica	United States
Resona Holdings	Japan	Bank of Ayudhya	Thailand	Fifth Third Bancorp	United States
Shiga Bank	Japan	Kasikornbank	Thailand	First Horizon National	United States
Shinkin Central Bank	Japan	Krung-Thai Bank	Thailand	Flagstar Bancorp	United States
Shinsei Bank	Japan	Siam Commercial Bank	Thailand	Fulton Financial	United States
Shizuoka Bank	Japan	TMB Bank	Thailand	Huntington Bancshs	United States
Toho Bank	Japan	First Gulf Bank	United Arab Emirates	JPMorgan Chase	United States
Tokyo Tomin Bank	Japan	Mashreqbank	United Arab Emirates	M&T Bank	United States
Yamanashi Chuo Bank	Japan	National Bank of Abu Dhabi	United Arab Emirates	New York Community	United States
Arab Bank	Jordan	Union National Bank	United Arab Emirates	Northern Trust	United States

PNC Financial Services	United States
Regions Financial	United States
SunTrust Banks	United States
TCF Financial	United States
US Bancorp	United States
Webster Financial	United States
Wells Fargo	United States
Zions Bancorp	United States

Appendix 2.0 Ave ROAE/ROAA Europe/Australia

	2007		2008		2009		2010	
	No women	Women	No women	Women	No women	Women	No women	Women
Ave. ROAA	1,23	0,97	0,53	0,57	0,54	0,42	0,80	0,51
Ave. ROAE	15,69	17,82	3,43	9,73	5,69	6,13	8,07	8,62
St. Dev ROAA	0,98	0,55	1,20	0,56	0,88	0,59	0,81	0,45
St.Dev ROAE	9,41	6,97	18,27	9,96	10,33	12,39	6,35	5,56

Appendix 2.1 Ave ROAE/ROAA Asia/Others

	2007		2008		2009		2010	
	No women	Women	No women	Women	No women	Women	No women	Women
Ave. ROAA	1,21	0,88	0,60	1,00	0,82	0,97	0,96	1,14
Ave. ROAE	11,80	11,54	2,92	12,91	9,22	15,15	9,95	16,52
Std roaa	1,25	1,49	1,75	0,60	1,02	0,46	0,95	0,51
std ROAE	8,60	21,06	25,12	8,43	6,16	6,19	6,32	6,90

Appendix 2.2 Ave ROAE/ROAA North America

Year	2007			2008			2009			2010		
	0-1	2	3+	0-1	2	3+	0-1	2	3+	0-1	2	3+
Number of Women												
Ave. ROAA	0,93	0,77	1,07	-0,62	0,26	0,46	-0,16	-0,55	0,43	0,34	0,49	0,72
Ave. ROAE	10,38	9,57	15,30	-7,82	3,23	6,75	-6,35	-3,21	7,34	1,67	5,41	11,08
St.Dev ROAA	0,54	0,59	0,30	1,53	0,79	0,41	1,28	2,11	0,44	1,27	0,53	0,33
St.Dev ROAE	7,63	8,38	5,27	18,72	11,35	8,29	29,30	19,00	6,32	17,15	5,62	5,28

Appendix 3.0 Europe Stock Growth

	Stock Performance					St.Dev			
	2007	2008	2009	2010		2007	2008	2009	2010
No Women	4,74 %	-66 %	47 %	-18 %		43 %	20 %	62 %	23 %
Women	-3,52 %	-58 %	41 %	-6 %		40 %	17 %	51 %	30 %

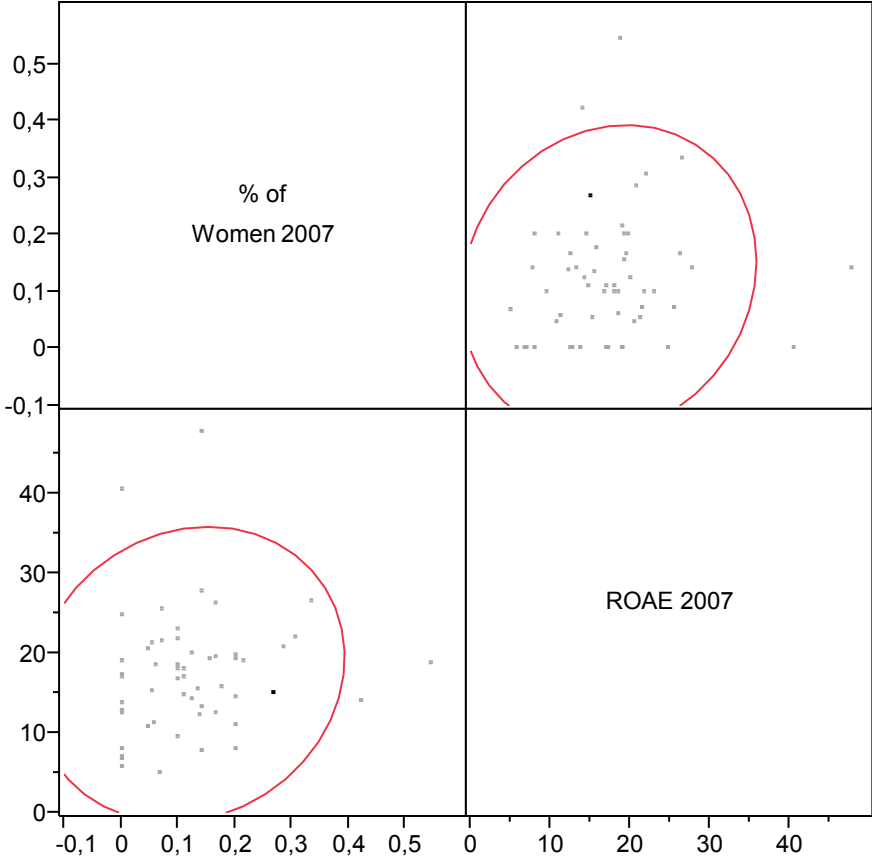
Appendix 3.1 Asia Stock Growth

	Stock Performance					St.Dev			
	2007	2008	2009	2010		2007	2008	2009	2010
No Women	-6 %	-36 %	21 %	1 %		0,38	0,24	0,47	0,34
Women	22 %	-46 %	99 %	19 %		0,44	0,15	0,64	0,39

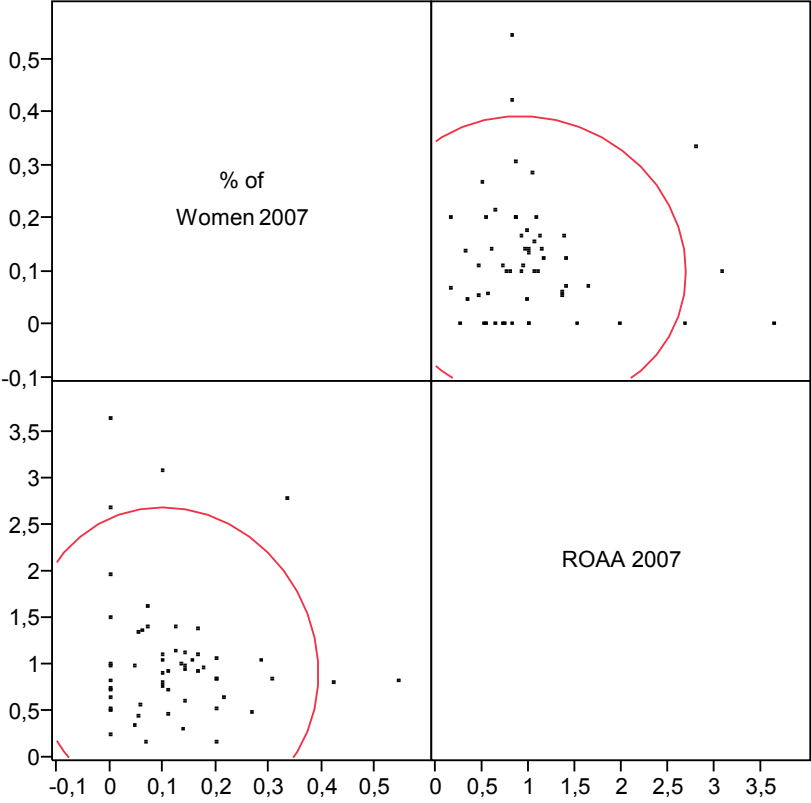
Appendix 3.2 North America Stock Growth

# of Women	Stock Performance					St. Dev			
	2007	2008	2009	2010		2007	2008	2009	2010
0-1	-26 %	-42 %	-4 %	33 %		0,18	0,19	0,27	0,28
2	-23 %	-37 %	-9 %	29 %		0,26	0,20	0,26	0,31
3+	-10 %	-31 %	20 %	16 %		0,20	0,20	0,49	0,10

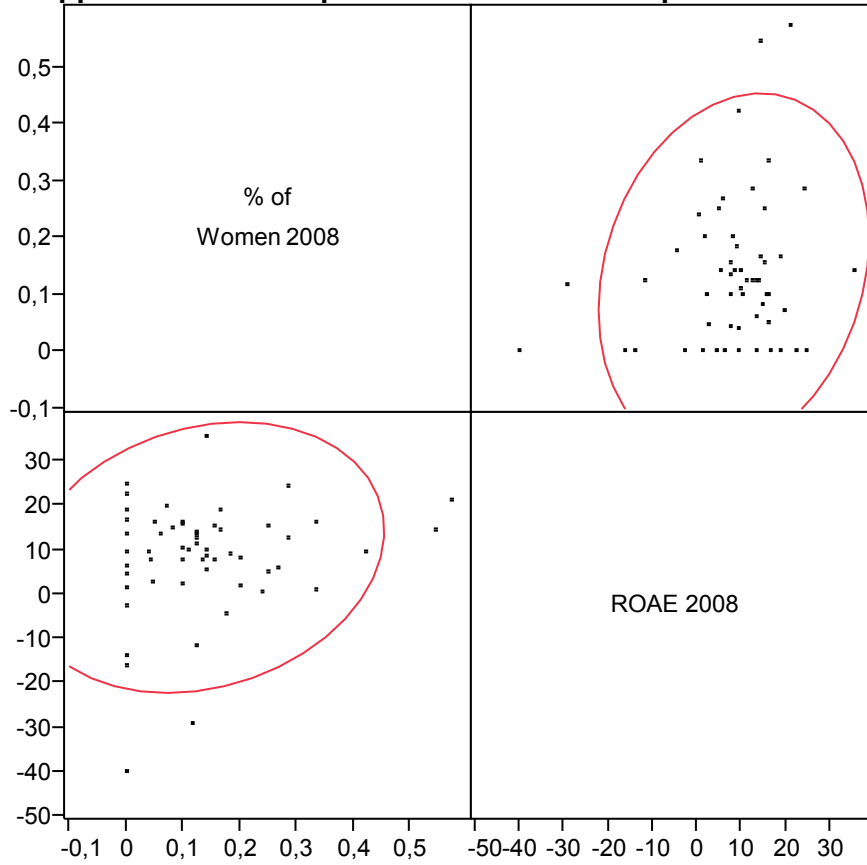
Appendix 4.0 Scatterplots Scatterplot Matrix- ROAE Europe/Australia



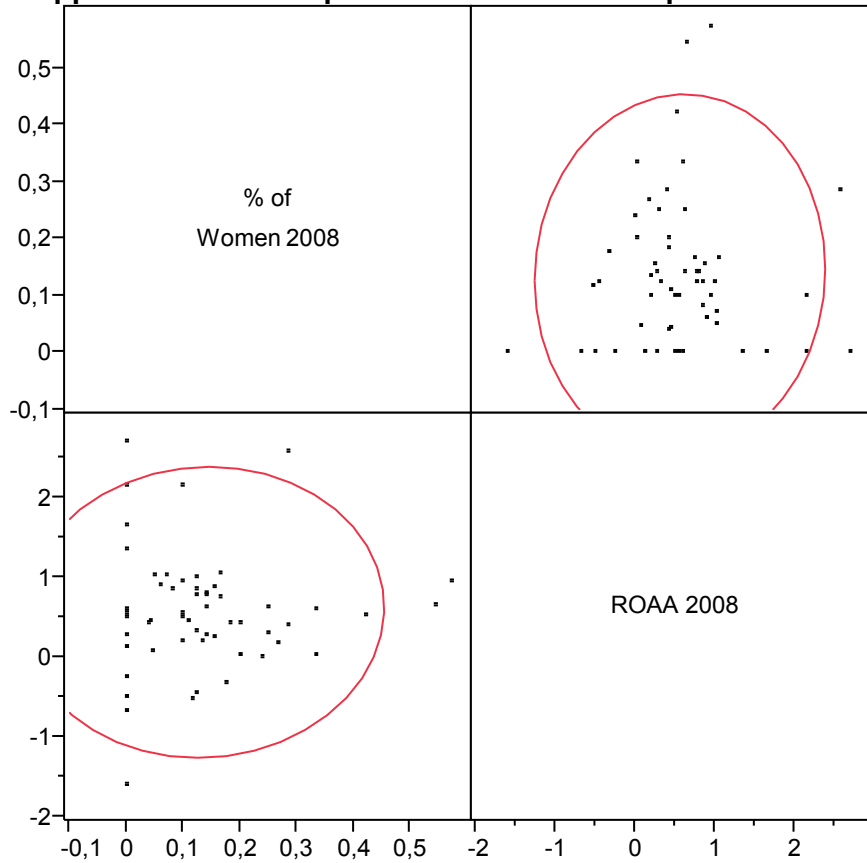
Appendix 4.1 Scatterplot Matrix- ROAA Europe/Australia



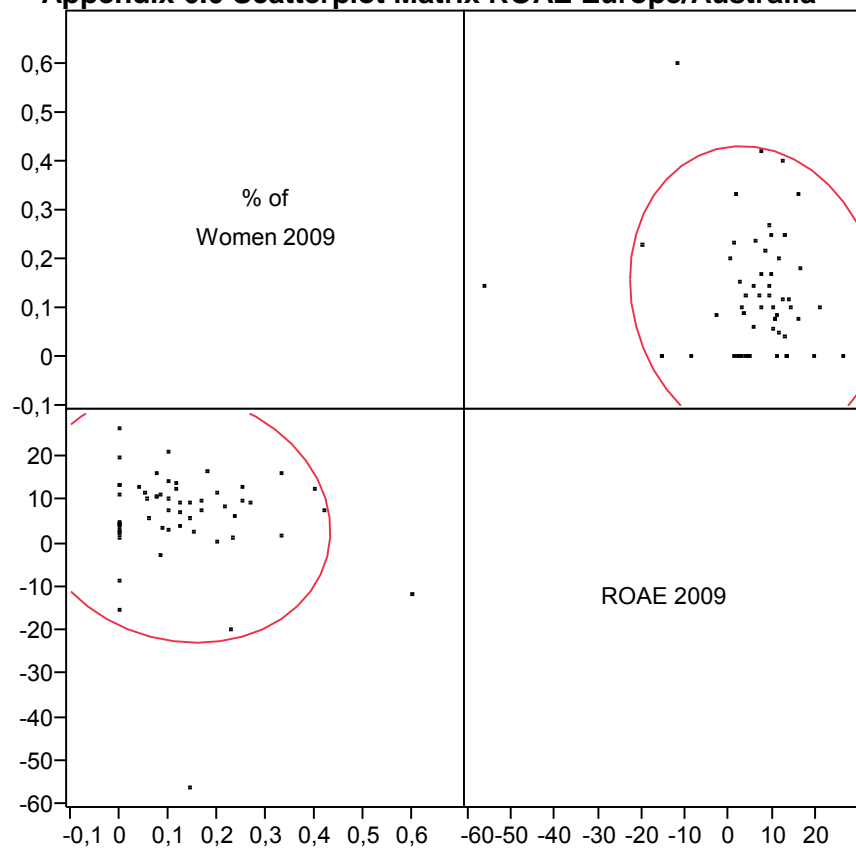
Appendix 5.0 Scatterplot Matrix – ROAE Europe Australia



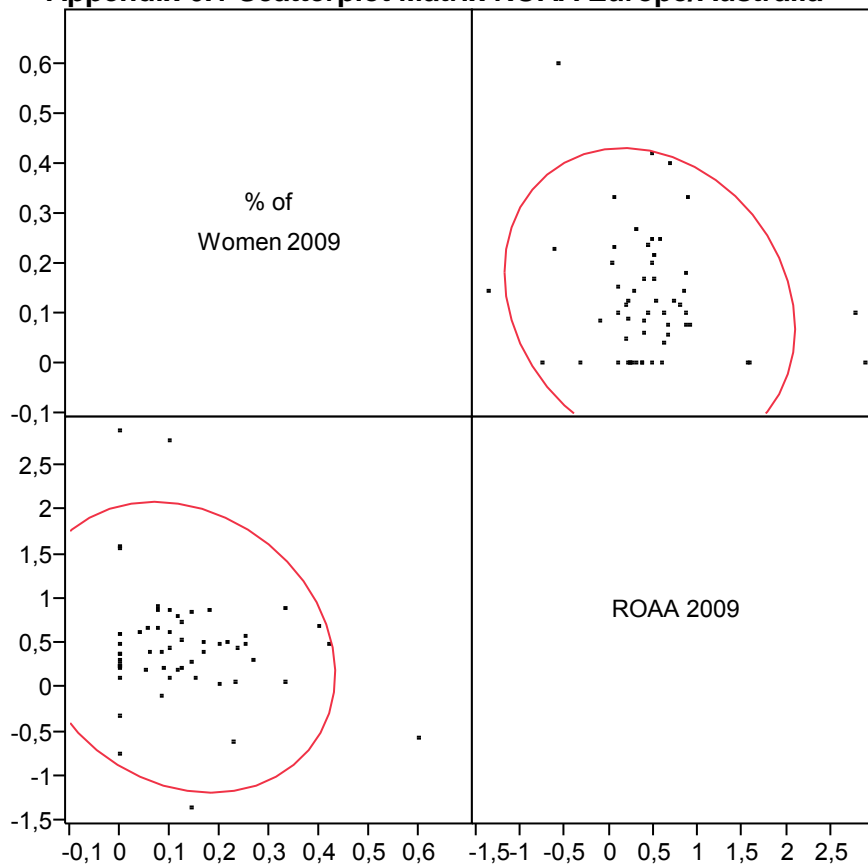
Appendix 5.1 Scatterplot Matrix – ROAA Europe Australia



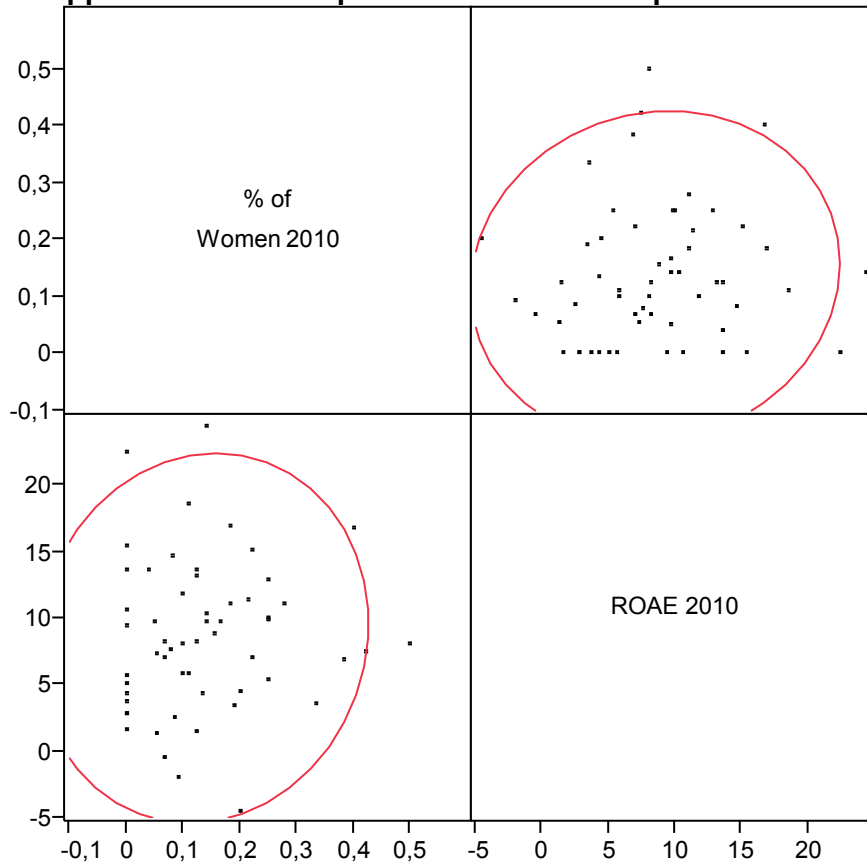
Appendix 6.0 Scatterplot Matrix ROAE Europe/Australia



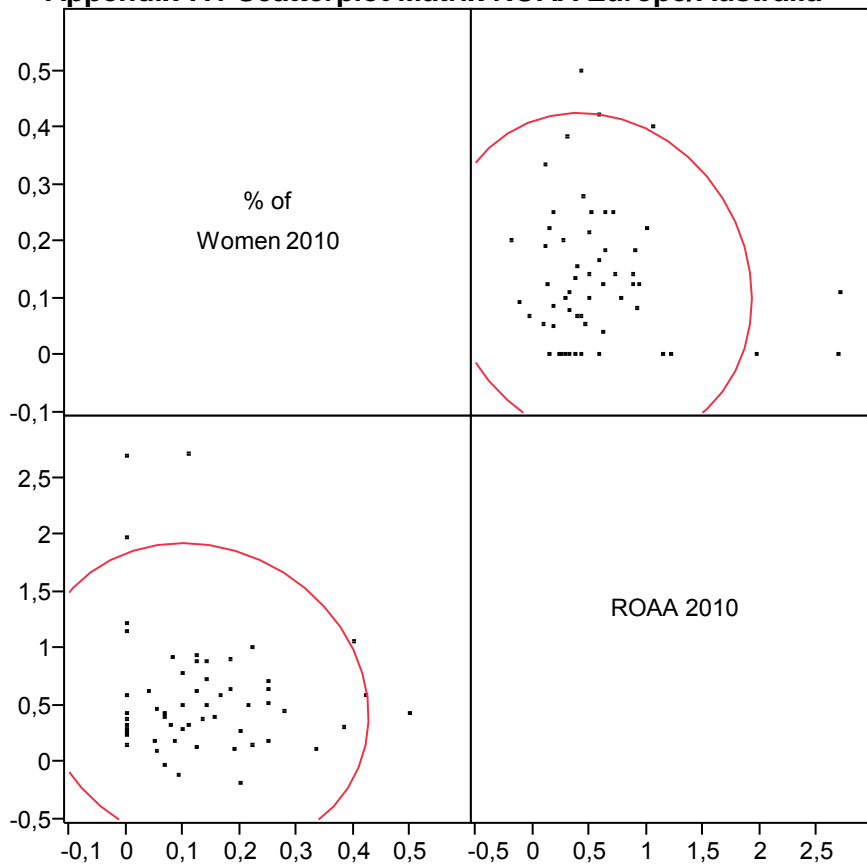
Appendix 6.1 Scatterplot Matrix ROAA Europe/Australia



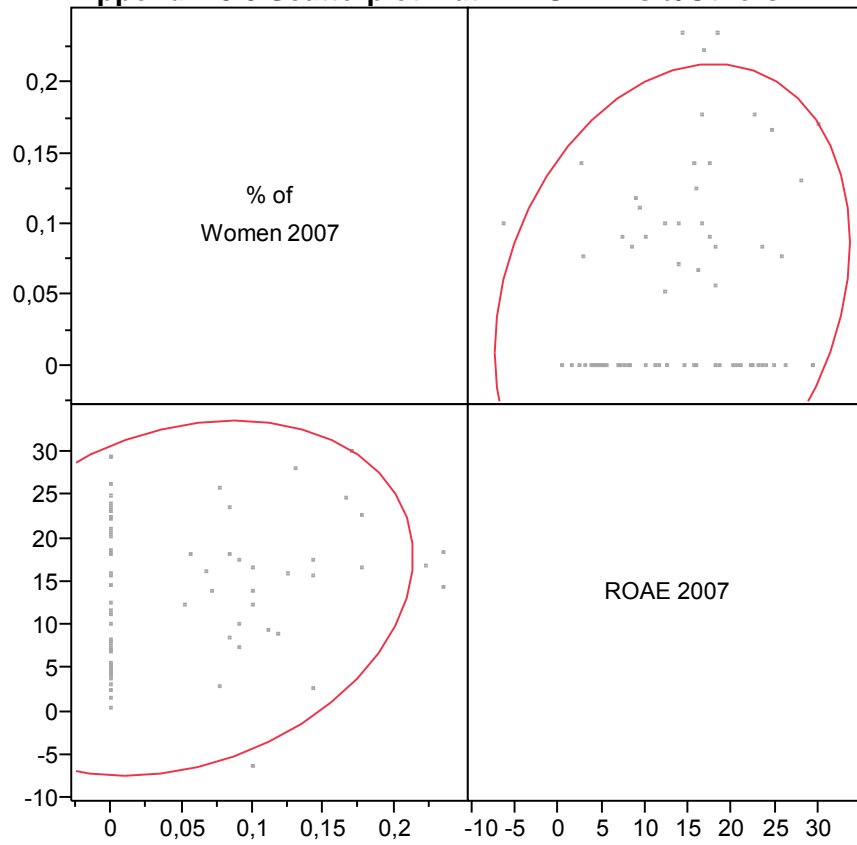
Appendix 7.0 Scatterplot Matrix ROAE Europe/Australia



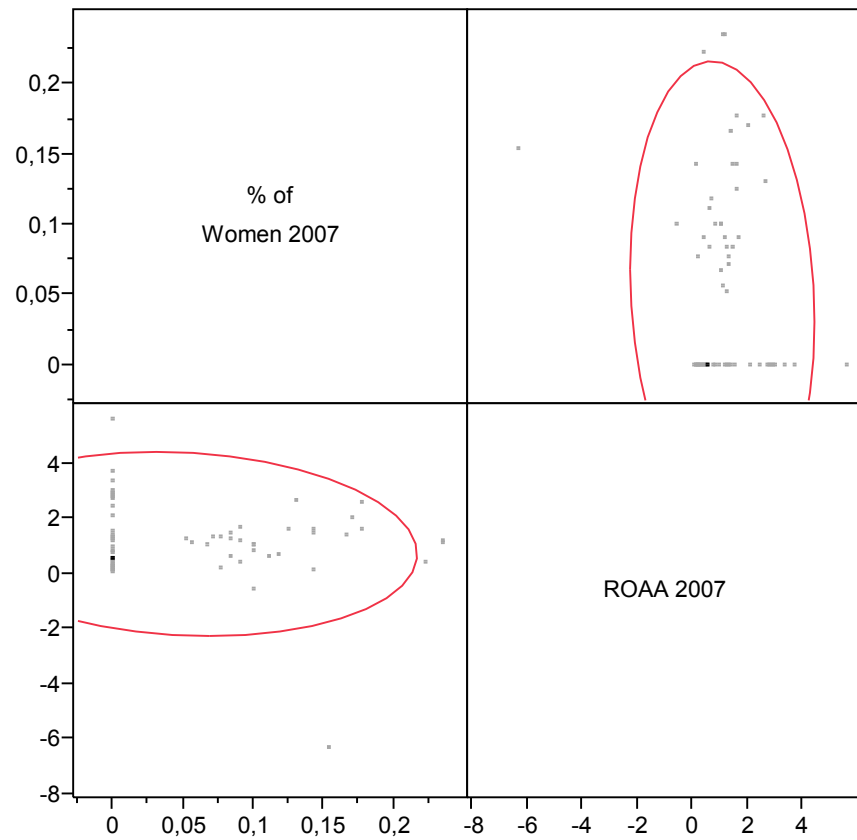
Appendix 7.1 Scatterplot Matrix ROAA Europe/Australia



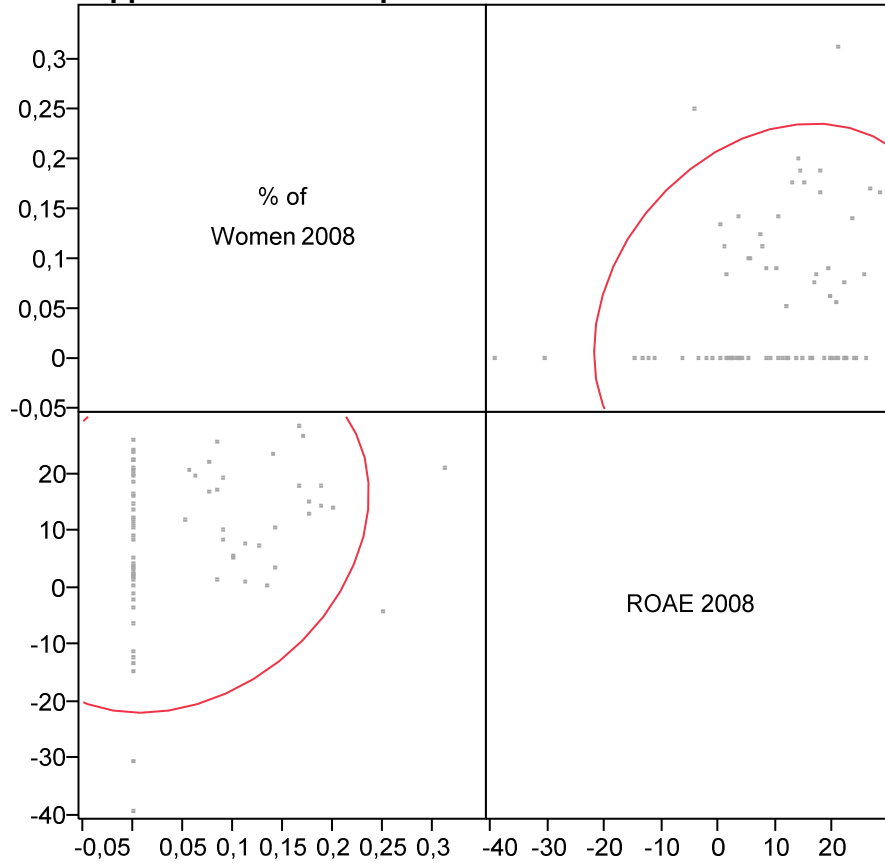
Appendix 8.0 Scatterplot Matrix ROAE Asia/Others



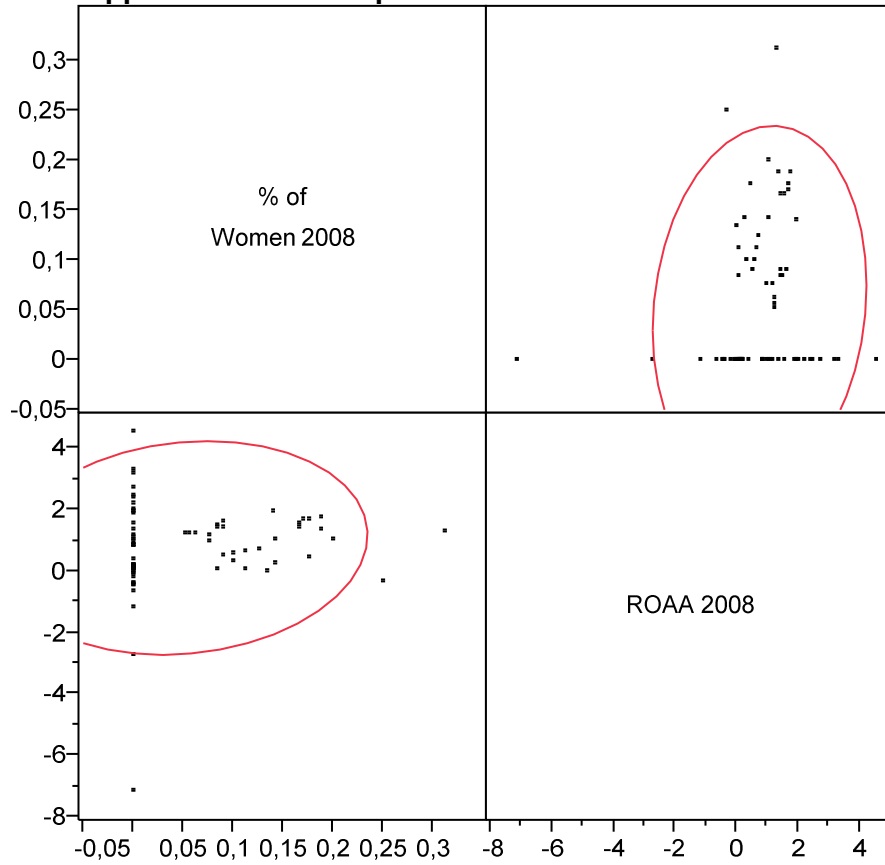
Appendix 8.1 Scatterplot Matrix ROAA Asia/Others



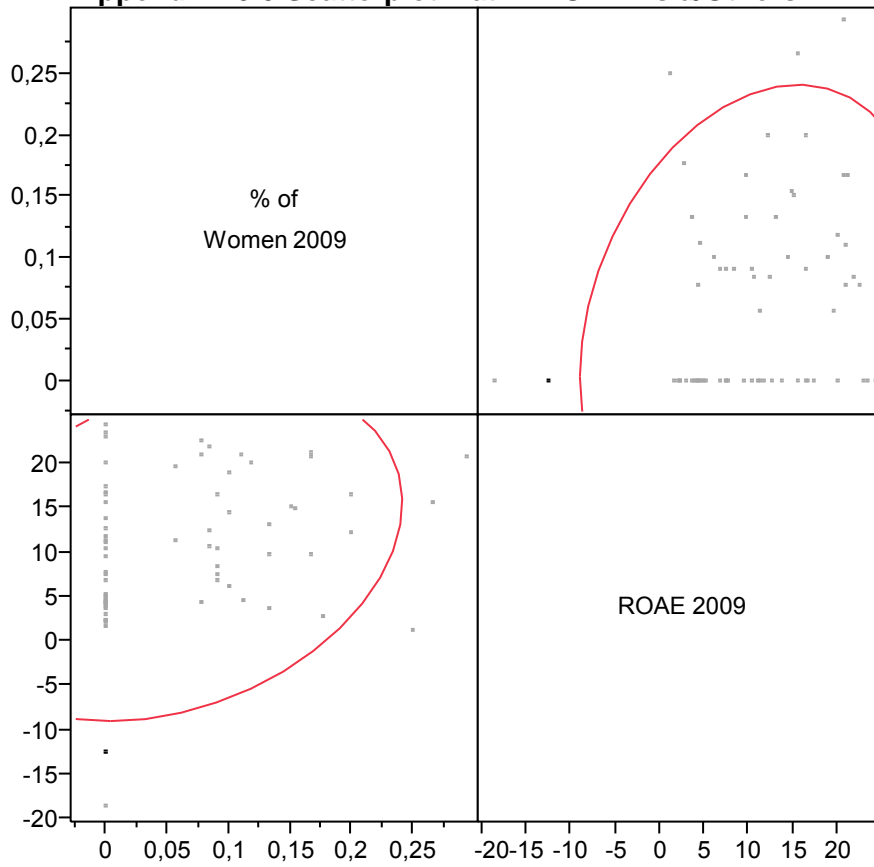
Appendix 9.0 Scatterplot Matrix ROAE Asia/Others



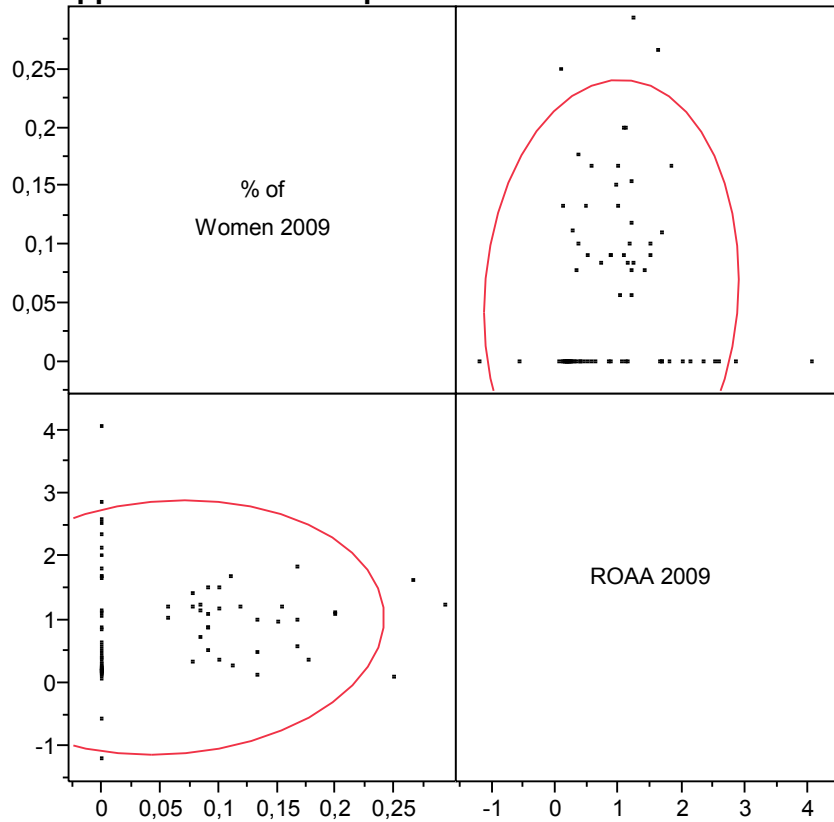
Appendix 9.1 Scatterplot Matrix ROAA Asia/Others



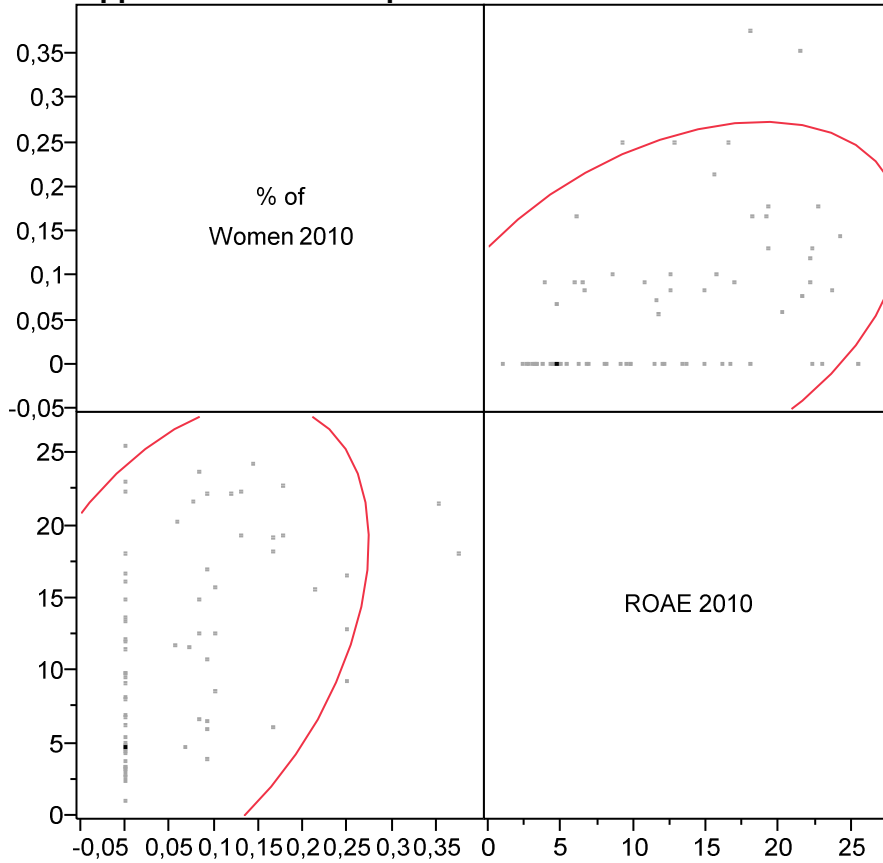
Appendix 10.0 Scatterplot Matrix ROAE Asia/Others



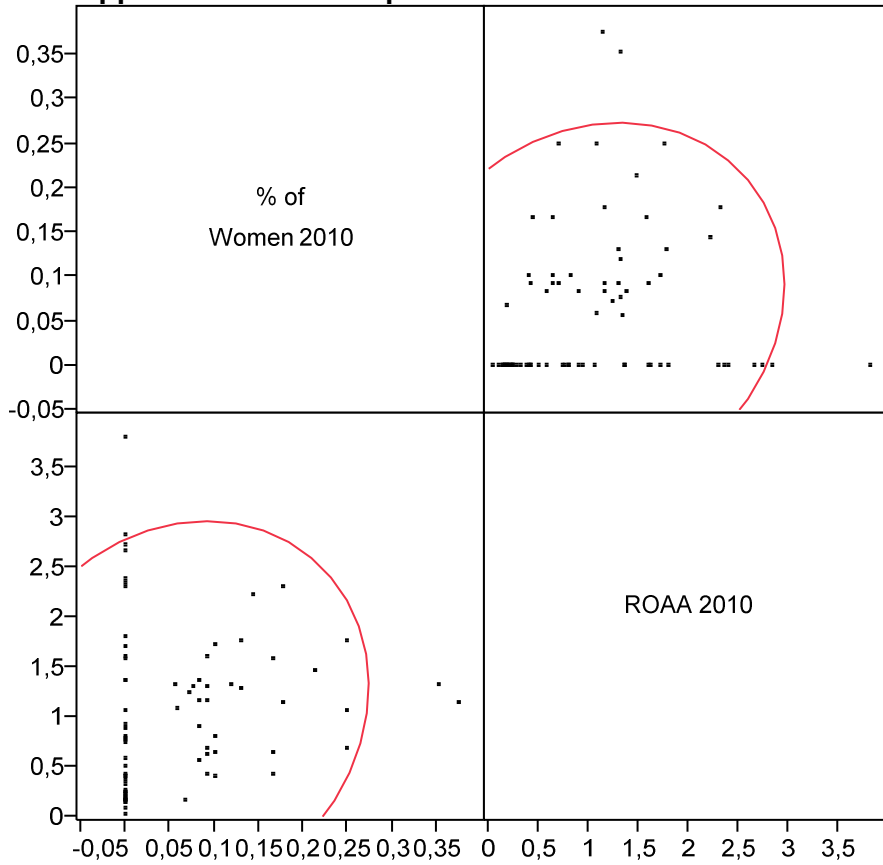
Appendix 10.1 Scatterplot Matrix ROAA Asia/Others



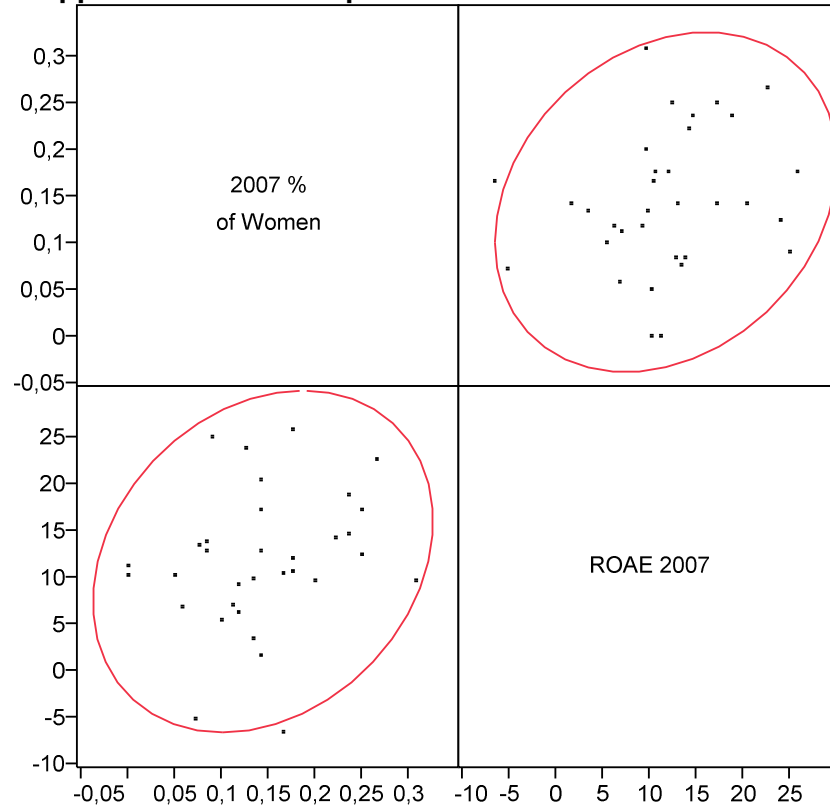
Appendix 11.0 Scatterplot Matrix ROAE Asia/Others



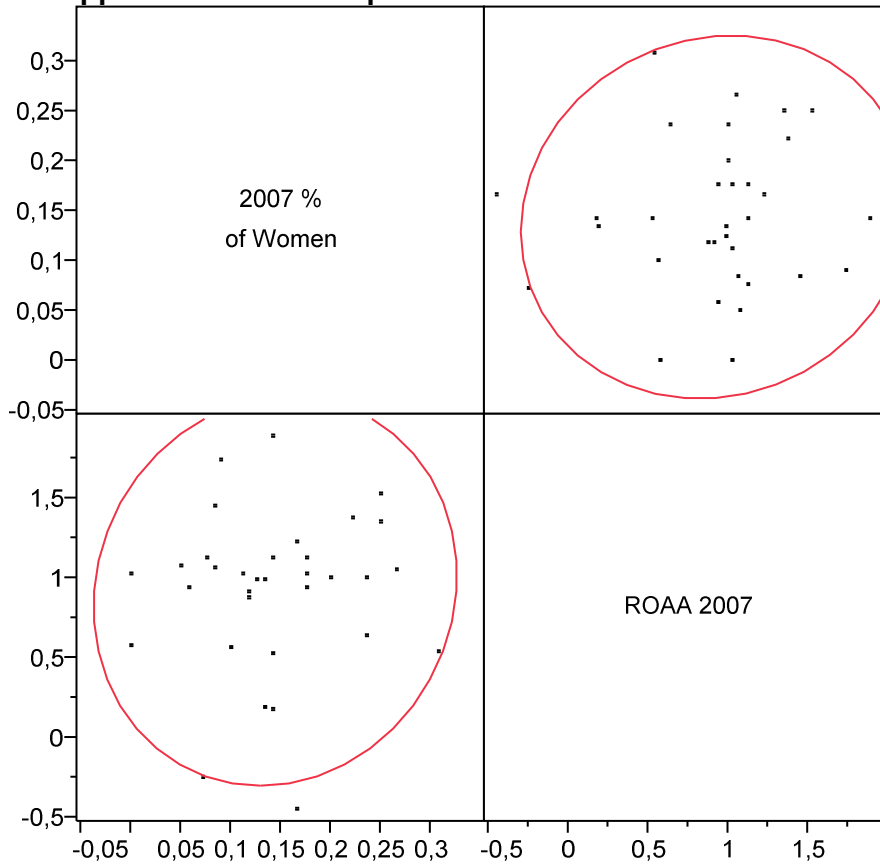
Appendix 11.1 Scatterplot Matrix ROAA Asia/Others



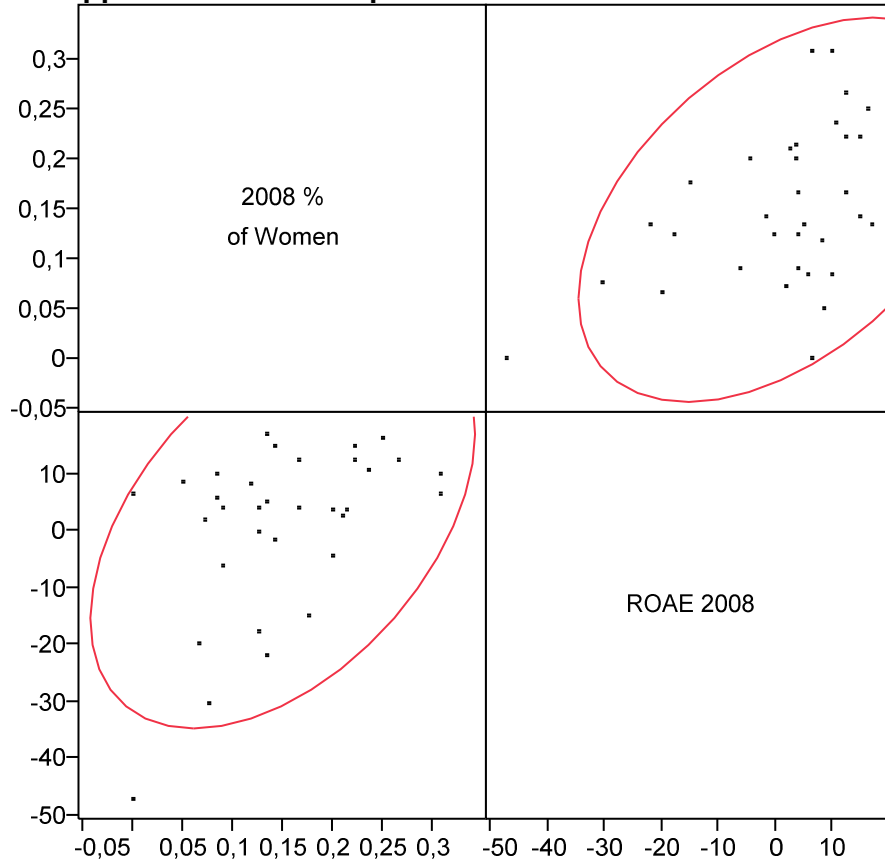
Appendix 12.0 Scatterplot Matrix ROAE North America



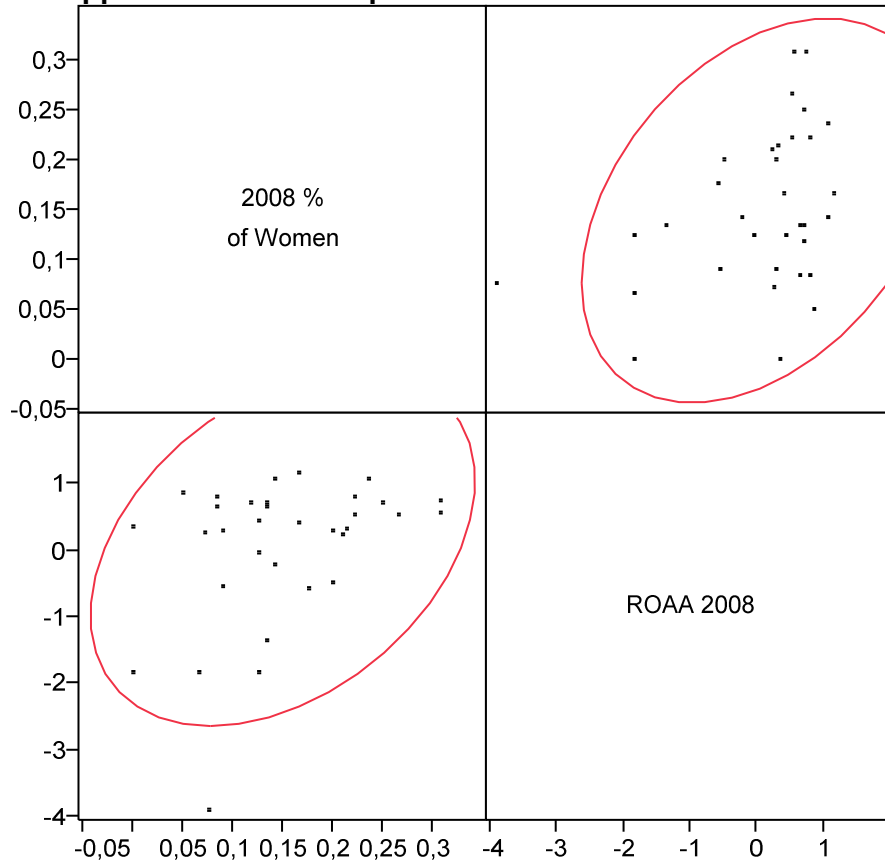
Appendix 12.1 Scatterplot Matrix ROAA North America



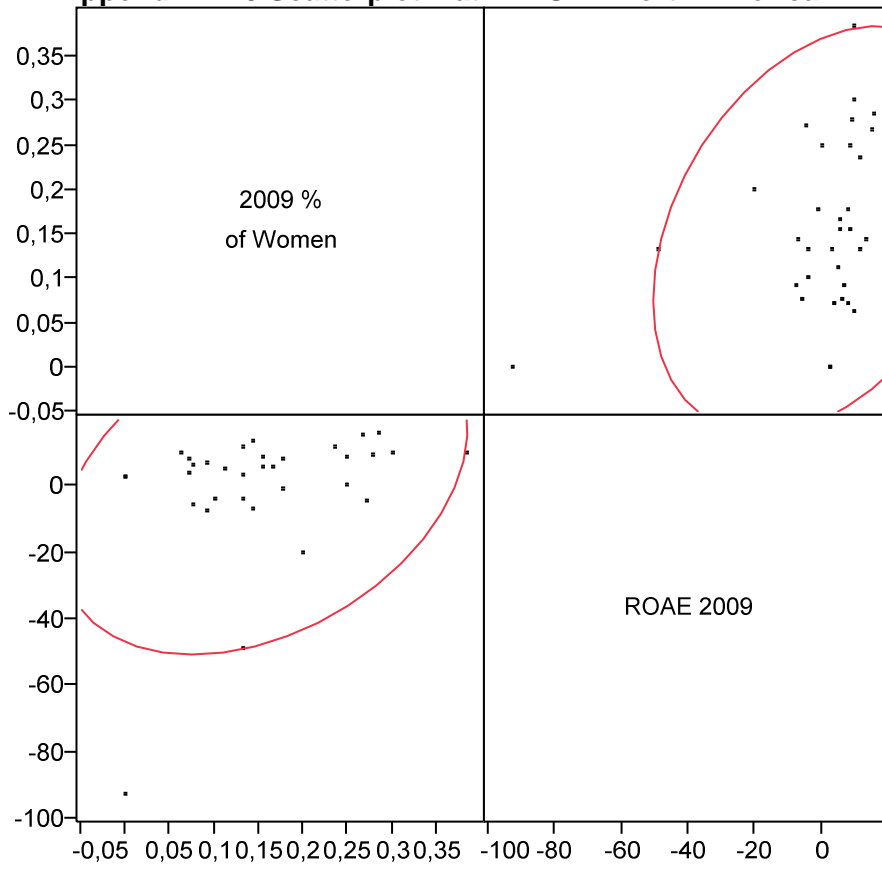
Appendix 13.0 Scatterplot Matrix ROAE North America



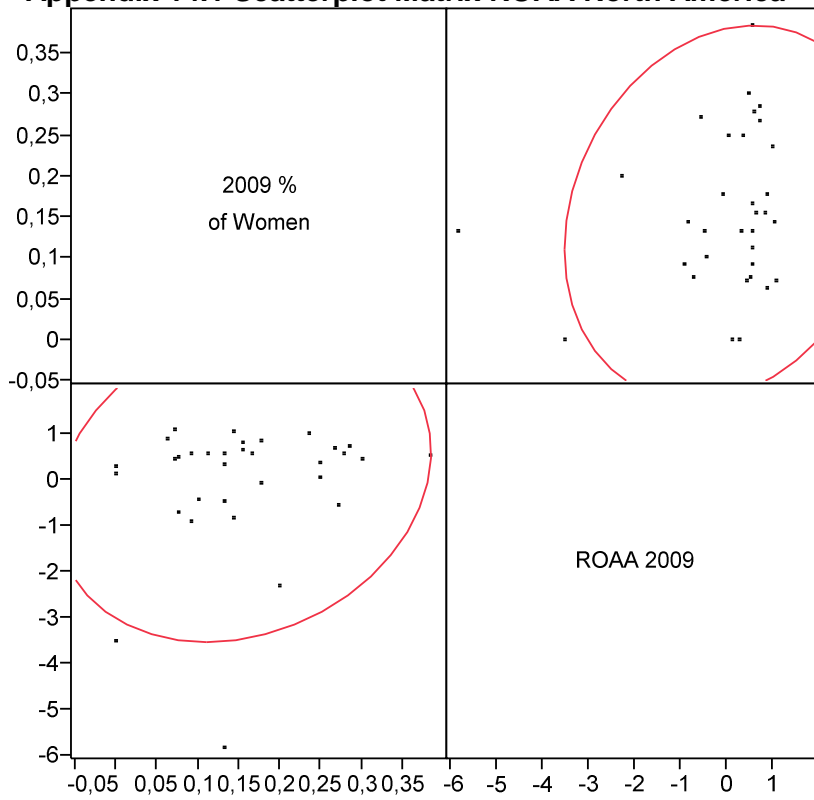
Appendix 13.1 Scatterplot Matrix ROAA North America



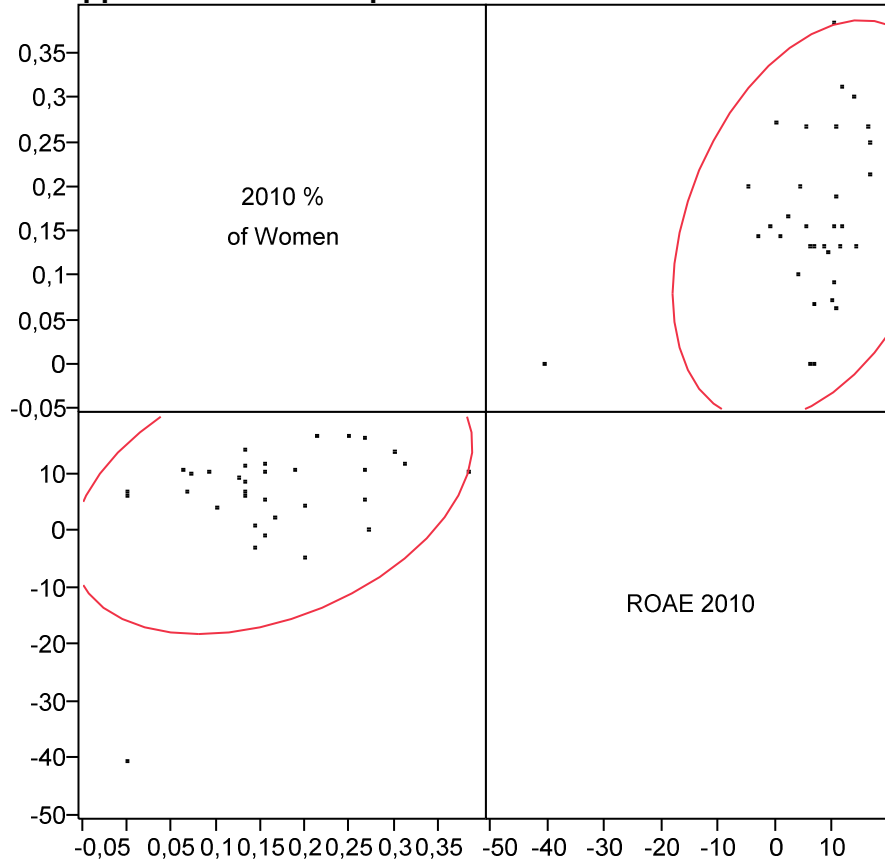
Appendix 14.0 Scatterplot Matrix ROAE North America



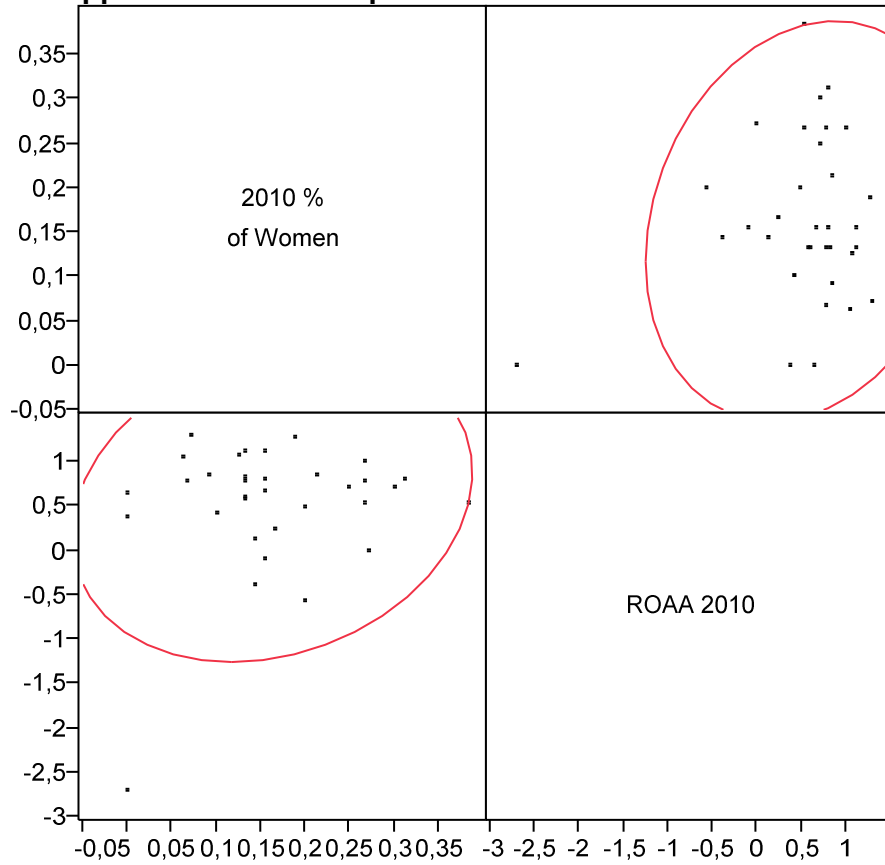
Appendix 14.1 Scatterplot Matrix ROAA North America



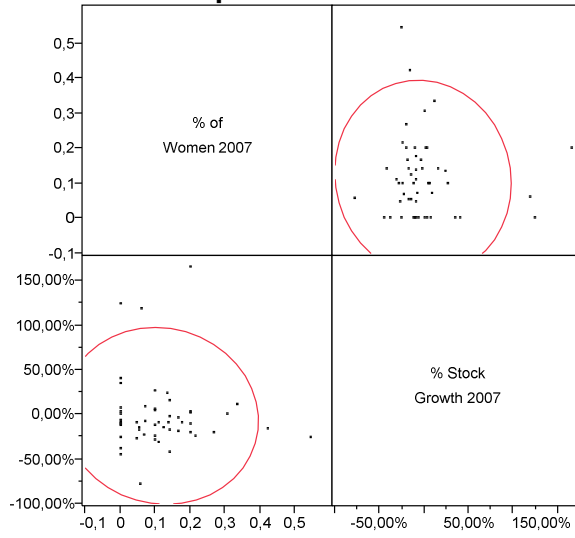
Appendix 15.0 Scatterplot Matrix ROAE North America



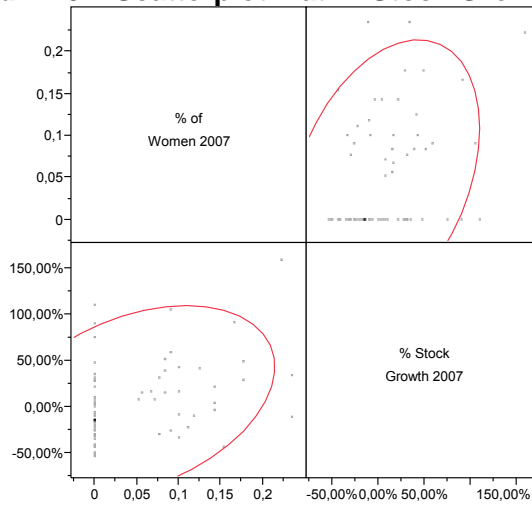
Appendix 15.1 Scatterplot Matrix ROAA North America



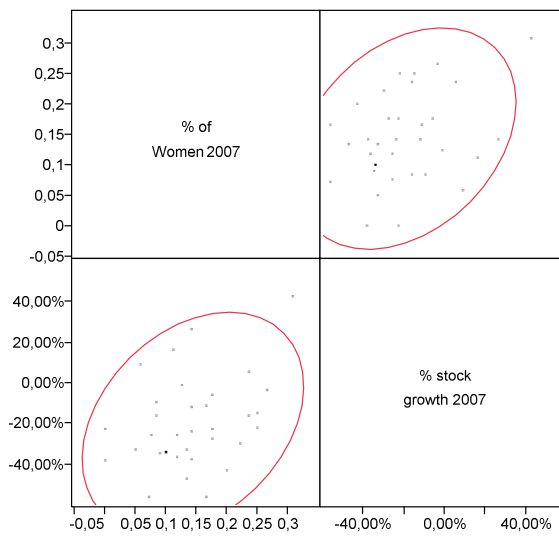
Appendix 16.0 Scatterplot Matrix Stock Growth Europe



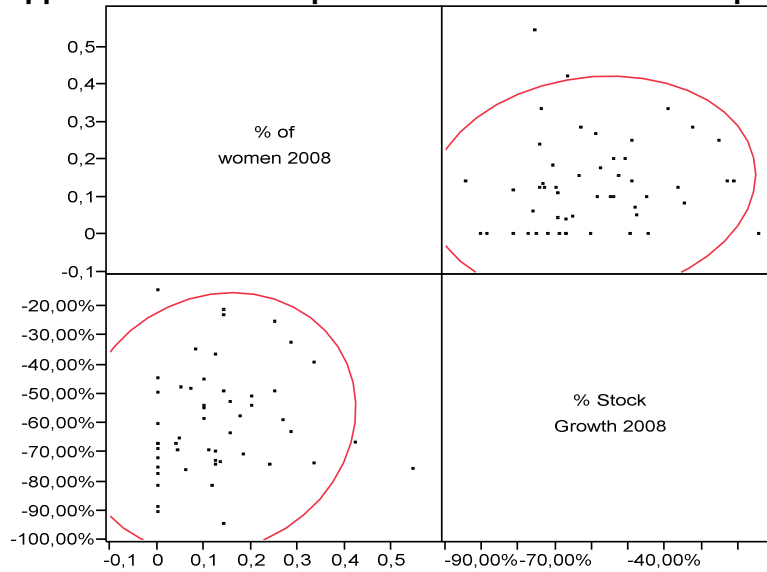
Appendix 16.1 Scatterplot Matrix Stock Growth Asia



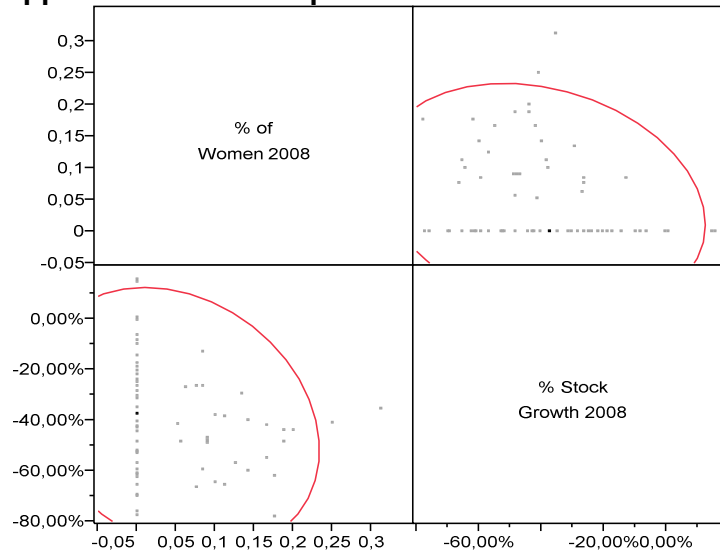
Appendix 16.2 Scatterplot Matrix Stock Growth North America



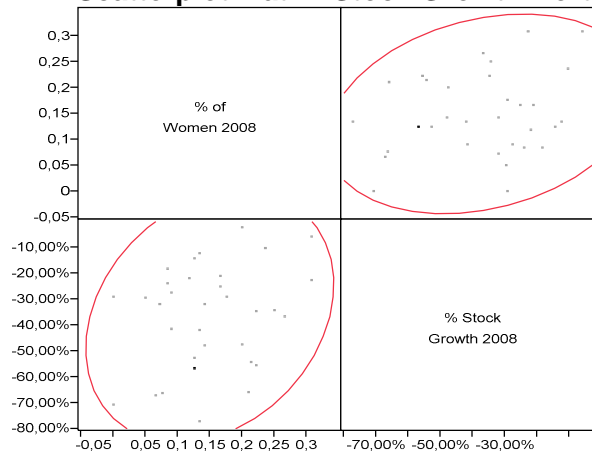
Appendix 17.0 Scatterplot Matrix Stock Growth Europe



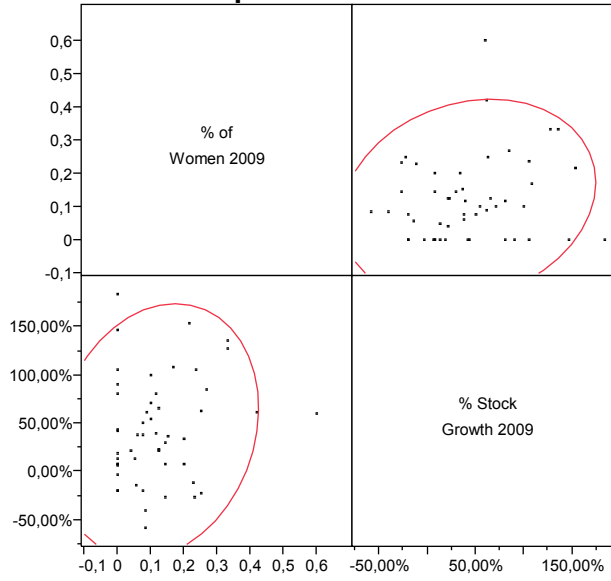
Appendix 17.1 Scatterplot Matrix Stock Growth Asia



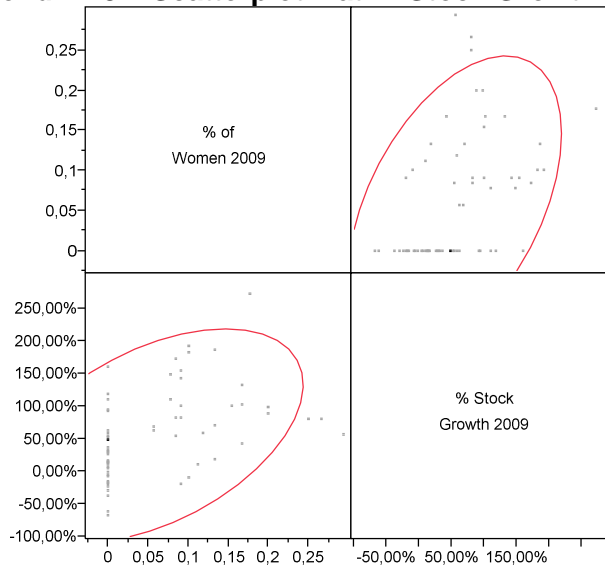
Appendix 17.2 Scatterplot Matrix Stock Growth North America



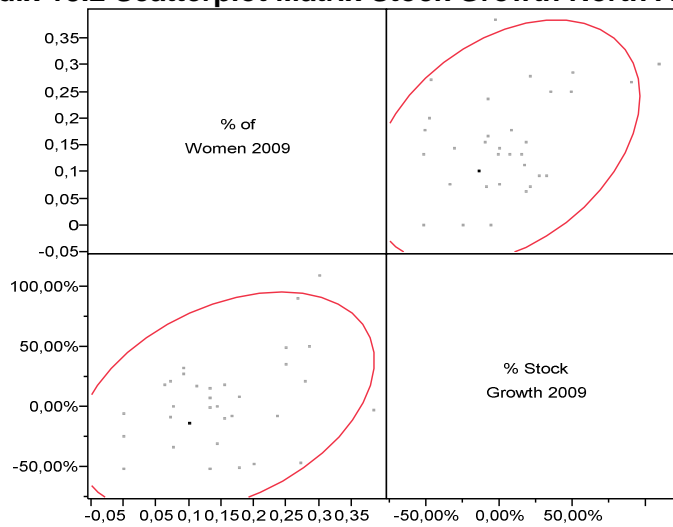
Appendix 18.0 Scatterplot Matrix Stock Growth Europe



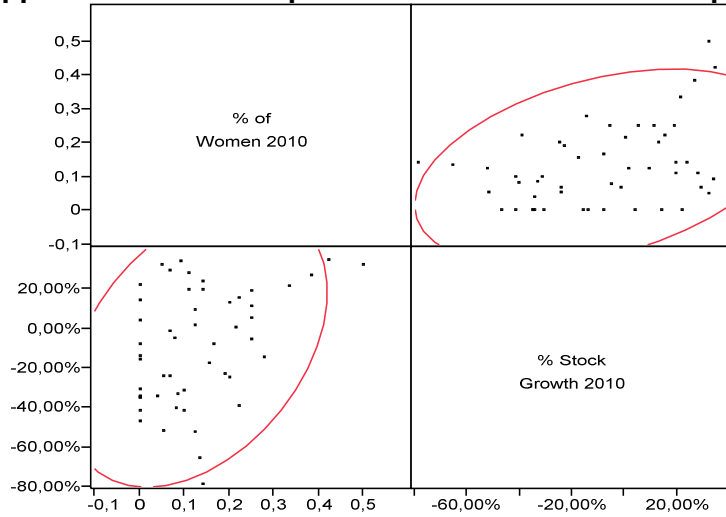
Appendix 18.1 Scatterplot Matrix Stock Growth Asia



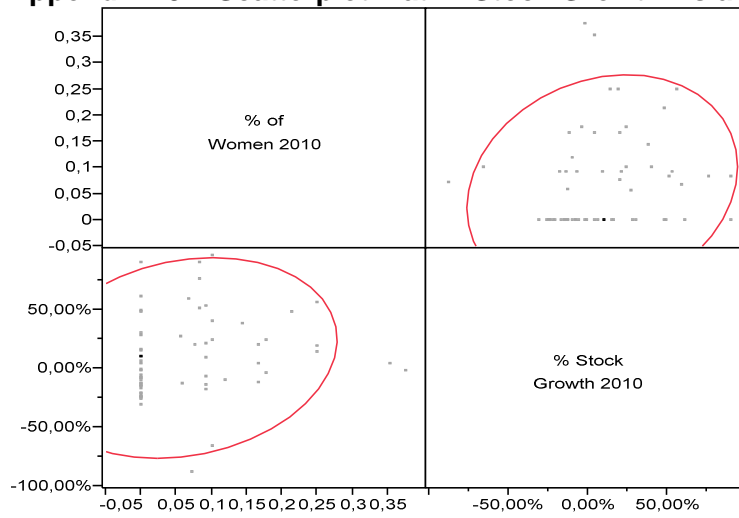
Appendix 18.2 Scatterplot Matrix Stock Growth North America



Appendix 19.0 Scatterplot Matrix Stock Growth Europe



Appendix 19.1 Scatterplot Matrix Stock Growth Asia



Appendix 19.2 Scatterplot Matrix Stock Growth North America

