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**Gender equality:**

**Does gender balance on the corporate board have an  
impact on the equity performance?**

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Financial Economics  
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## Abstract

The objective of this thesis is to examine whether a gender equal board of directors have an impact on the equity performance during the examination period of December 2011 to December 2016. This study shows that the gender balanced portfolio outperforms the non-gender balanced portfolio in all investigated performance measures. The portfolios used in this thesis consists of firms listed on the Swedish stock market which have been classified due to their representation of women on the board. The portfolios are compared and analyzed using the Sharpe Ratio, Treynor Ratio, Jensen's alpha and Appraisal Ratio. The result implies that a gender equal board improves the equity performance of a company. A regression analysis further implies that the performance of the gender balanced portfolio can not be explained by market movements contrary to the non-gender balanced portfolio. In other words, there must be other factors affecting the performance of the gender balanced portfolio. The main difference between the two portfolios is the share of women on the board which implies that this is one of the strengthening factors. The results can be of interest for investors seeking a socially sustainable investment strategy, but also add value to the ongoing debate regarding gender quotas.

**Keywords:** gender equality, board diversity, quotas, performance evaluation, equity performance, corporate social responsibility

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# Introduction

## Purpose and Contribution

The purpose of this thesis is to contribute with an extended understanding of the relation between financial performance and gender diversity. This is examined by comparing the equity performance of companies with a gender balanced board of directors to companies with absence of gender balance. Financial performance is a subjective overall measure of firm performance and can be defined in several ways. Throughout this thesis, financial performance is measured as stock performance. Previous research has shown various results and demonstrates both positive, negative and no link between gender diversity and firm performance. This thesis will, based on data from the examination period December 2011 to December 2016, set two portfolios against each other and compare their equity performance.

## Background

The question of quotas for women on the boards of large companies is under discussion. Recently, the Swedish government proposed legislation for gender quotas as a solution in order to increase the amount of women in the corporate boards of listed as well as state-run companies (Carlström, 2016). It is a controversial subject in which the Swedish top politicians are divided on whether quota is the way to go.

Carter et al (2010) investigates the effects of a diverse corporate board from an organizational perspective. The discussion is based on theories according to resource dependence, human capital, agency and social psychology, where several convincing arguments for diversification can be found. One of the benefits highlighted is that diversity leads to a larger span of information sources and hence better decision making. In addition, people with different backgrounds and experiences tend to approach problems differently, which also can improve the quality of the board's strategic decisions (Carter et al., 2010). Hillman, Cannella & Paetzold (2007) also emphasize the benefits of management diversity from a resource dependence perspective. Diversity favours both the individual and the firm's ability to increase its network, contacts and linkages to other firms, which can expand business relationships but also the degree of external counseling and support. Furthermore, Robinson & Dechant (1997) declares how ethnic, gender and age diversity benefits the firms'

innovative and creative performance.

Carter et al. (2010) arguments for how differences in human capital can have a positive impact on the board's performance. The human capital theory focus on disparities when it comes to education, skills and background experience. Terjesen, Sealy & Singh (2009) brings up the common bias that women are less qualified taking on a board role compared to men, and for example lacks equivalent education or records. Although, the authors found that women generally do not have as extensive business experience as men.

From an organizational perspective there are many advantages with a diversified organization and therefore it has become an important part of Corporate Social Responsibility (CSR) among Swedish firms. On the other hand, the analyses and previous studies on how gender equality efforts affects the financial performance points in different directions.

## Research Question

The primary question of this thesis is to investigate whether gender equality on corporate boards has an impact on the equity performance. Specifically, if there is a difference in the stock return between the two portfolios. Furthermore, if the amount of women on the board are statistically correlated to an increase or decrease in financial performance. Using a portfolio-approach provides us with a more aggregated result, instead of only investigating the performance on firm-level. This will also facilitate the econometric validation due to less risk of heterogeneity issues when company-specific properties are evened out. Another advantage of using portfolios is that the the research question has arised due to a possible introduction of quotas, which would affect the entire market and not just a specific industry and therefore it is more interesting to analyze the results on an aggregated level.

In this thesis, a company is defined as gender equal if the proportion of women in the board of directors is  $\geq 40\%$  and the companies will only be classified due to their representation of women in the board. All board members are assumed to have equal influence when it comes to participation and decision-making, as well as enjoying the same rights and opportunities. The thesis will be based on quantitative data on equity performance only and no further qualitative analysis of each company's gender ethics will be conducted.

## **Hypothesis**

H1: there is a difference in financial performance between a gender and a non-gender diverse portfolio

## **Delimitations**

The selected companies of each portfolios have been chosen based on the amount of women on the corporate board and not the proportion of women in the company as a whole. The results are thereby limited to the 30 companies used in the study and to the specific examination period of 5 years. The study is limited to Swedish companies only and Sweden is generally a prominent country when it comes to gender equality.

## **Section Description**

The first section of the thesis will present previous studies on gender equality and financial performance in order to provide the reader with a deeper insight in what has been examined on the field. Consequently, this will be followed of a review of the financial theories and performance measures used in the study. The data sets and the methodology will also be presented, followed by a section where the results are submitted. Finally, the results are analyzed and lead up to a conclusion.

## Literature Review

Several studies have been conducted on the subject of correlation between a diverse board and firm performance with varied results and have shown both positive, negative or no effect. Böhren and Strøm (2010) shows evidence of that gender diversity has a negative impact on firm performance and that there is no economic argument to require by law that a certain part of the directors must be of a certain gender. However, Catalyst (2004) found a positive correlation between gender diversity and financial performance. Other previous studies have shown no significant relation, such as Carter, D'Souza, Simkins & Simpson (2010). The studies have shown both positive, negative or no effect of diversity on financial performance. The analyses have been done during different circumstances at different times and the incentives for diversity of the board have varied for the firms of interest in the various studies. In this section previous empirical findings are presented.

In Catalyst (2004) report “The Bottom Line: Connecting Corporate Performance and Gender Diversity” it is found that the companies with high representation of women on the board performed better financially than companies with non existent or low representation of women. The study is made on firms in the US and shows an average increase with 35.1% in Return on equity and 34% in Total return to shareholder for gender diverse firms. The study was further divided into different industries but showed the same positive correlation. In conclusion, the report shows that there is a positive link between gender diversity and financial performance, but also the other way around.

Adams and Ferreira (2009) examine the correlation between corporate board diversity and firm financial performance in the US by using tools as a market-based measure of performance, Tobin's q, as well as an accounting measure, return on assets. The authors argue that female directors have a significant impact on board inputs as well as outcomes, in both negative and positive terms. In firms with weak governance, a gender diverse board had a positive impact measured in takeover defenses, while in firms with strong governance a gender diverse board seemed to have the opposite effect. The conclusion of the study is that mandating gender quotas for directors can have a negative impact on firm value for companies with strong governance. A similar study by Carter et al. (2010) implies that decisions regarding quotas should be based on other criteria than future financial performance

and supports the findings of Adams and Ferreira. Furthermore, Carter et al. (2010) investigates the relationship between the number of women and the number of ethnic minority directors on the board and financial performance measured as return on assets as well as Tobin's q. In this investigation neither a positive nor a negative effect is found and the financial performance is declared as endogenous.

Chapple and Humphrey (2014) appose and compare the performance of portfolios of companies with gender diverse boards, defined as minimum one woman on the board, to those without. The study was made on an aggregated market-level in Australia where recently a "soft" regulatory approach was introduced, which basically means no quotas by law but a recommendation that listed firms establish a gender diversity policy. The authors use both one- and four-factor model and the analysis indicated no evidence of an association between diversity and performance. However, a weak negative correlation between having multiple women on the board and performance was found.

Norway introduced a law in 2003 that required 40% of the boards of Norwegian enterprises to be women and at that time the amount was only 9%. Ahern and Dittmar (2012) has studied how this amendment of the law has affected the valuation of Norwegian firms and noted a significant drop in the stock prices when the law was announced. Furthermore, a large decline in Tobin's Q were noticed the following years. The change in law also resulted in a quick shift that led to younger board members with less experience. Furthermore, Strøm and Bøhren (2010) has done a study in the subject on Norwegian companies and find a negative relationship between a gender diversity and performance, which strengthens the result of Ahern and Dittmar. The authors argue that the negative relationship is a result of heterogeneous boards being less effective in their decision making. Rose (2007) investigated the same relationship in Denmark, which is more similar to Sweden in terms of not yet having quotas as law, but implemented as a code of corporate governance. In the study no significant link between firm performance, measured by Tobin's q, was found.



# Theory review

## CAPM

The CAPM model describes the relationship between expected return and the systematic risk for the assets. The systematic risk are risks that can not be diversified away, for example interest rates, recessions and wars. The model is useful in order to determine if the portfolios are over- or undervalued. CAPM presumes infinite divisibility of assets, no transaction costs and no taxes. Furthermore, the model assumes that all investors have a one-period investment horizon, hold the same expectations about asset returns, have mean-variance preference and are able to borrow and lend at a risk-free rate of interest (Oxford Reference, 2009)

### CAPM formula

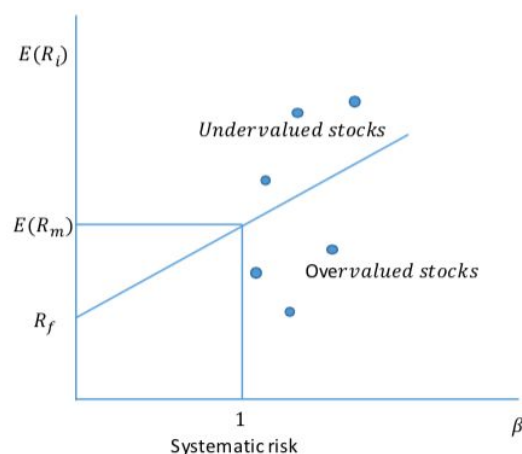
$$r = r_f + \beta_a \cdot (E(r_m) - r_f)$$

$r_f$  = risk free rate.

$\beta_a$  = beta of the security.

$E(r_m)$  = expected market return

**Figure 1.** Illustrates the capital market line, which is a concept from CAPM that depicts the lever of of additional return above the risk free rate for each change in the level of risk. The line determines the fair value of a stock.



## Sharpe Ratio

The Sharpe Ratio was first introduced by William Sharpe (1966) and is one of the most common methods when measuring and comparing investment performance and has become an industry standard. Auer & Schuhmacher (2013) explain that the Sharpe ratio is a method to examine the relationship between the mean and standard deviation of excess returns, which means the return above the risk-free rate. In other words, the Sharpe Ratio is an indicator of return per total risk, measured in sigma, that is achieved. An investor strives for the highest return per risk as possible, and a higher Sharpe Ratio is thereby an indication of a better risk-adjusted rate for the investment. The other way around, a Sharpe Ratio of zero would mean that the asset is risk-free, e.g. Treasury Bills.

Sharpe Ratio formula:

$$\text{Sharpe Ratio} = \frac{E(r_p) - r_f}{\sigma_p}$$

$E(r_p)$  = expected portfolio return.

$r_f$  = risk free rate.

$\sigma_p$  = standard deviation of the portfolio.

## Treynor Ratio

The Treynor Ratio is also risk-adjusted but measures risk with beta and is, in difference to the Sharpe Ratio, adjusted for systematic risk. Francis & Kim (2013) also describes that the Treynor Ratio differs from the Sharpe Ratio because it does not only measure the portfolio performance against a risk-free asset, but also determines whether the portfolio significantly has outperformed the average equity market as a whole.

Treynor Ratio Formula:

$$\text{Treynor Ratio} = \frac{r_p - r_f}{\beta_p}$$

$r_p$  = average return of the portfolio.

$r_f$  = risk free rate.

$\beta_p$  = beta of the portfolio.

## Jensen's Alpha

Lee and Lee (2013) describe Jensen's alpha as a performance measure to measure the retaliated performance of a portfolio and indicates whether the portfolio has over- or underperformed and to what extent. A positive value for Jensen's alpha indicates that the investment has outperformed the market.

Jensen's Alpha formula:

$$\text{Jensen's Alpha} = r_p - r_f + \beta_p \cdot (r_m - r_f)$$

$r_p$  = expected portfolio return.

$r_f$  = risk free rate.

$\beta_p$  = beta of the portfolio.

$r_m$  = market return.

## Appraisal Ratio

The last performance measure used is the Appraisal Ratio which measures a fund's picking ability in comparison to the variable alpha, where alpha is the fund's risk-adjusted return in relation to a benchmark. An alpha-value of one means that the portfolio has performed 1% better than the benchmark. The Appraisal Ratio is alpha divided with the unsystematic risk (M. O'connor, 2015).

Appraisal Ratio formula:

$$\text{Appraisal Ratio} = \frac{r_p - r_m}{\sigma}$$

$r_p$  = expected portfolio return.

$r_m$  = market return

$\sigma$  = tracking error

## Data and Methodology

To examine the performance of companies with a gender equal management, a portfolio with a selection of Swedish firms with a least a share of 40% women in their board are put together. The portfolios consist of 15 companies each which differ in the proportion of women in their board of directors, where one portfolio only includes companies with a proportion of women greater than 40 percent. The portfolios only consist of companies listed on the Swedish stock market (including both large, mid and small cap). The risk-adjusted return of these portfolios are investigated through the Sharpe Ratio, Treynor Ratio, Jensen's alpha and Appraisal Ratio.

The selected firms are based on The AllBright Report 2012. AllBright is a politically independent Swedish organization that aims for equal rights for men and women when it comes to practical opportunities for work, influence and development in their profession and in their workplace. Since 2012, AllBright has measured the female proportion in Swedish listed companies. This portfolio is compared to a portfolio consisting of corresponding companies with less than 40% women in the board. The portfolio is also compared to the index of NASDAQ OMXST.PI, which contains all companies listed on Nasdaq Stockholm. The portfolios include firms from various sectors and industries in order to achieve diversified portfolios equivalent to the Swedish market as a whole.

### Data collection

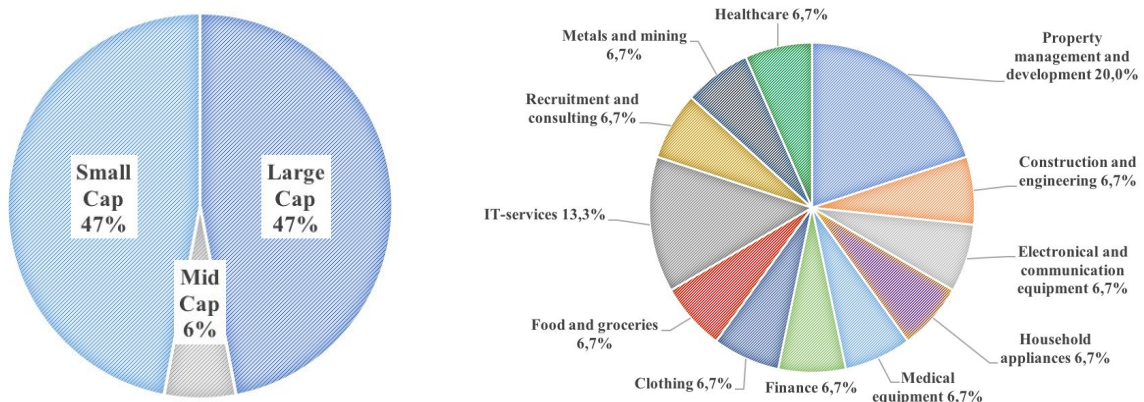
The basic data needed for our study are the stock prices of the companies included in the two portfolios. These share prices are collected from Yahoo Finance and the return for each month are calculated. The Swedish 3-months treasury bills are used as a proxy for the returns on the risk-free assets and is collected from the Central Bank of Sweden. The portfolios are equally weighted and include 15 companies each. The data for the stock prices are gathered from December 2011 to December 2016, including 61 monthly observations for each firm resulting in 1952 observations in total (incl. market observations and Treasury bills). Out of these observations, 60 monthly returns for each portfolio are calculated. Using monthly data increases the continuity and is thereby to prefer compared to yearly data. The time span of the

data was chosen in order to obtain as up-to-date results as possible.

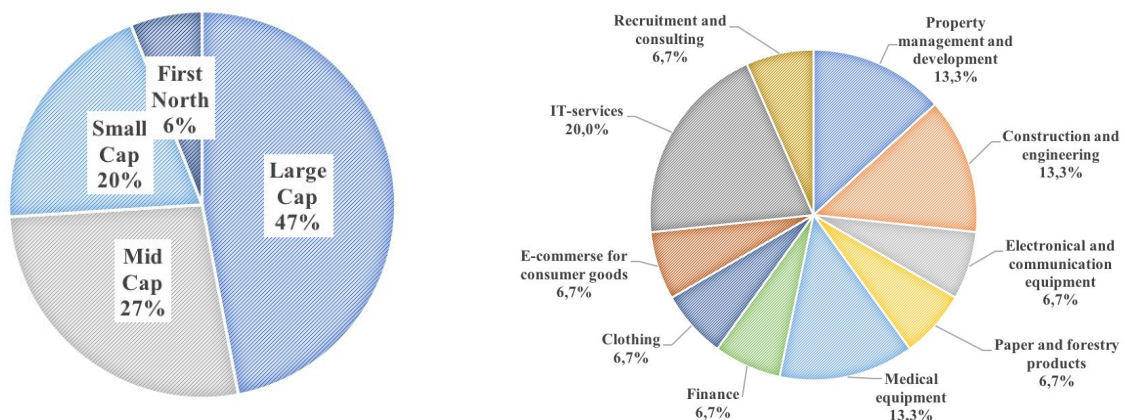
### Portfolio Construction

For a fair comparison to be made, the portfolios are equally weighted but also constructed in order to match each other according to size and industry. The three largest sectors within both of the portfolios are property management, IT-services and construction and engineering. The gender balanced portfolio has an average proportion of 45.8% women on the board whilst the non-gender balanced portfolio has an average of 19.1%. Both portfolios consist of exactly the same amount of large cap listed companies, but differs slightly in the proportion of mid and small cap listed firms. The exact compositions of the portfolios according to listings and sectors are shown in figure 2 and 3 and the exact firms are listed in Appendix 1.

**Figure 2.** Gender balanced portfolio composition



**Figure 3.** Composition of the non-gender balanced portfolio



## Performance measures and theoretical methods

In order to measure and compare the performance of the portfolios, several risk-adjusted financial measures are used. The Capital Asset Pricing Model (CAPM) are used to calculate the required rate of return, as well as to determine if the price of the portfolio is appropriate. The average return of each company is collected and then the average portfolio return is calculated. Furthermore, the portfolios are ranked by using the Sharpe Ratio, Treynor Ratio, Appraisal Ratio and Jensen's Alpha. A regression analysis is carried out to thus conclude if there is a statistically significant difference between the performance of the portfolios and the market. The model estimated in the regression analysis is:

$$y = \alpha + \beta x$$

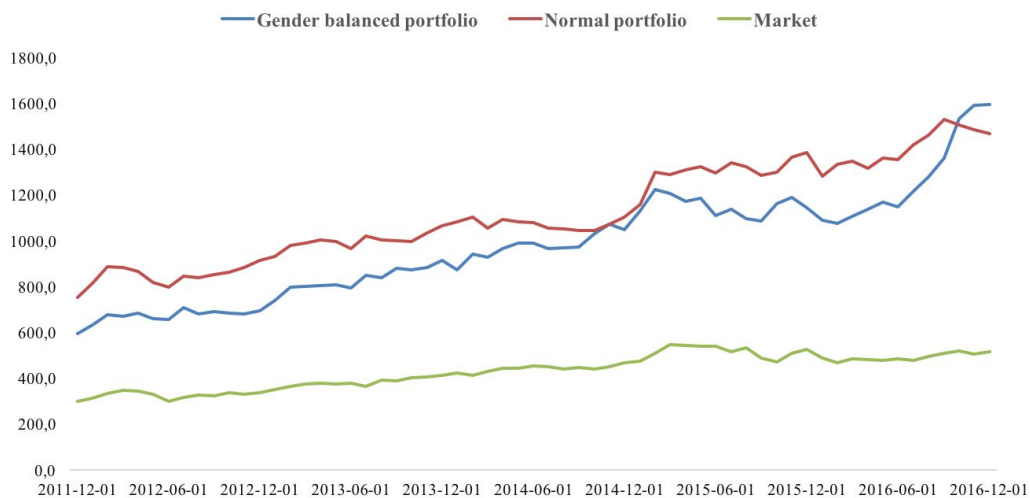
$y$  = *monthly portfolio return*

$x$  = *monthly market return*

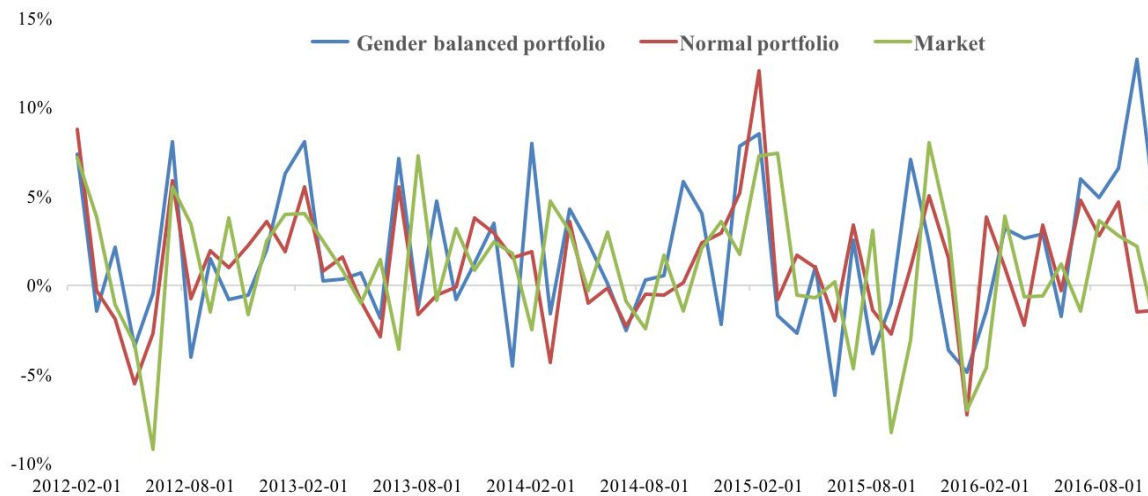
## Result and Analysis

In this section, the results of the study will be presented and analyzed. First, the calculated performance measures for each portfolio as well as the market will be presented. This will be followed by a regression analysis showing whether the performance is a result of market movements. Based on the outcome of this section, the portfolios can be evaluated and compared in order to answer the research question of whether a gender balanced board have an impact on the financial performance.

**Graph 1.** Historical prices for the gender balanced portfolio as well as the non-gender balanced portfolio and the market.



**Graph 2.** Historical monthly return for the gender balanced portfolio as well as the non-gender balanced portfolio and the market.



Graph 1 illustrates the monthly price development for the portfolios and the market in the examined period, December 2011 - December 2016. The graph shows a positive development for both portfolios as well as for the market. Graph 2 shows the monthly return for the portfolios as well as for the market. During the investigated 5 years, positive as well as negative returns have occurred for the portfolios and the market.

## Performance measures

The table below presents the performance measures for the gender balanced portfolios as well as for the non-gender balanced portfolio and the market index OMXSPI.ST. These results are based on monthly data between December 2011 and December 2016.

**Table 1.** Performance measures for each portfolio based on monthly data. For the affected measures, an arithmetical mean has been used.

	Average return	Standard deviation	Beta	Sharpe Ratio	Treynor Ratio	Jensen's alpha	Appraisal Ratio
<i>Gender balanced portfolio</i>	1,74%	4,07%	0,164	41,49%	10,32%	1,54%	14,24%
<i>Non-gender balanced portfolio</i>	1,17%	3,39%	0,37	33,08%	3,04%	0,78%	5,29%
<i>Market</i>	0,98%	3,68%	1,00	25,19%	0,92%	0,0%	0,0%

Table 1 shows an average positive monthly return for both of the portfolios as well as for the market benchmark. A comparison of the generated returns show that the gender balanced portfolio performed best, with an average return of 1,74% compared to the non-gender balanced portfolio (1,17%), which was slightly better than the market (0,98%). However, the gender balanced portfolio has the highest standard deviation which indicates a more volatile and thereby a more risky portfolio. The high standard deviation does not differ noticeably much from the benchmark. On the other hand the standard deviation of the non-gender balanced portfolio is lower than both the market's and the gender balanced portfolio's. As described in the methodology section the portfolios are created trying to reduce the differences in sizes and sectors, regardless there are differences. The gender balanced



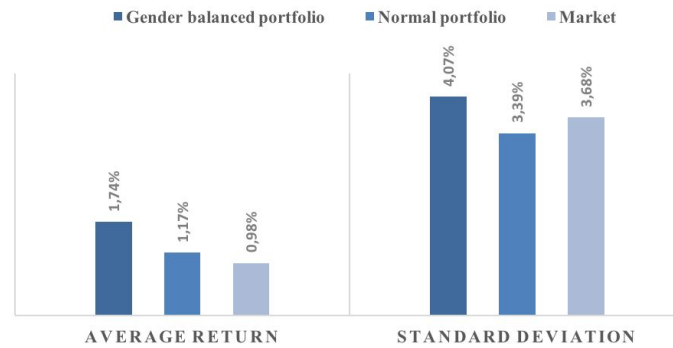
portfolio contains more small cap companies, which might explain the higher standard deviation.

There is a difference between the two portfolios when comparing the beta-values. The gender balanced portfolio has a lower beta, which is notable due to the amount of small cap companies in this portfolio. The low beta value indicates that the covariance between the market benchmark and the portfolio are low. This means that the gender balanced portfolio is less sensitive to movements on the market, compared to the other portfolio.

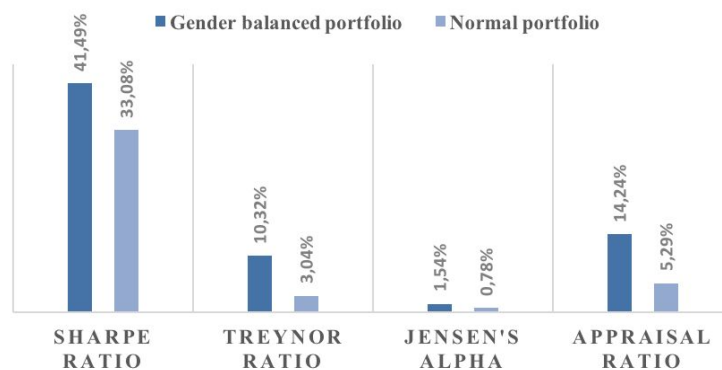
Looking at the Sharpe Ratio, the gender balanced portfolio outperforms the non-gender balanced portfolio (41,49% vs. 33,08%). This factor measures how well the assets compensate for the risk taken and depends on return and standard deviation of the portfolio. The result implies that the gender balanced portfolio is a good choice, despite the higher standard deviation. The Treynor ratio give similar, but even stronger, indications that the gender balanced portfolio outperforms the non-gender balanced portfolio. The Treynor ratio measures the excess return per unit of systematic risk and is calculated with beta in the denominator. The gender balanced portfolio has a Treynor ratio of 10,32% and the non-gender balanced portfolio has 3,04%, whereas the market has 0,92%. This strong indication of a good performance for the gender balanced portfolio is a result of the monthly return in combination with the very low beta for this portfolio. Once again conducting that the gender balanced portfolio outperformed the non-gender balanced one as well as the benchmark.

The value of Jensen's alpha is positive for both portfolios, which means both portfolios have generated higher returns than predicted by the CAPM, given by the average monthly returns and betas. This leads to the interpretation that both portfolios are attractive choices for investors. However, the Jensen's alpha is higher for the gender balanced portfolio (1,54%) than the non-gender balanced portfolio (0,78%), which is in line with the previous presented results. As shown in table 1, also the Appraisal ratio is higher for the gender balanced portfolio (14,24%) than for the non-gender balanced portfolio (5,29%). This is a result of the higher alpha and further indicates that the gender balanced portfolio financially outperforms the non-gender balanced portfolio.

**Graph 3.** Average return and Standard deviation for the gender balanced and non-gender balanced portfolio as well as for the OMXSPI.



**Graph 4.** Illustration of performance measures for the gender balanced portfolio and the non-gender balanced portfolio.



Graph 3 and 4 illustrate the results presented in this section and show that all chosen performance measures indicate the gender balanced portfolio to have performed better financially during the examined period.

Based on all the performance measures used, the gender balanced portfolio performs notably better compared to the non-gender balanced portfolio as well as the market benchmark. This result differs from many of the previous studies presented in the literature review, where the majority shows a negative link between gender diversity on the board and the financial performance.

## Regression analysis

A regression analysis is carried out to thus conclude if there is a statistically significant difference between the performance of the portfolios and the market. The results from the regression analysis on the performance of the two portfolios are displayed in table 2 and 3.

**Table 2.** Regression output: Non-gender balanced portfolio

	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>	<b>R Square</b>
<i>Alpha</i>	0,0081	0,0042	1,9222	0,0595	0,1600
<i>OMXS</i>	0,3695	0,1112	3,3244	0,0015	

The p-value for the non-gender balanced portfolio is 0,0015 and therefore, the implication that the non-gender balanced portfolio performance differ from the market performance can not be made on a 5% significance level. Thus, most of the performance of this portfolio can be explained by market movements. In addition, the coefficient for the alpha is very low which implies that most of the model is explained by the market. The R-square value shows that 16% of the performance of this portfolio is related to market movements. The p-value for the alpha is slightly higher than 0.05 which means that this model does not fully explain the performance of the non-gender portfolio. This indicates that there can be omitted variables.

**Table 3.** Regression output: Gender balanced portfolio

	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>	<b>R Square</b>
<i>Alpha</i>	0,0158	0,0055	2,8875	0,0054	0,0218
<i>OMXS</i>	0,1635	0,1438	1,1376	0,2600	

The results from the regression analysis of the gender balanced portfolio are shown in table 3. For this portfolio the p-value for the OMXS is 0.26 which on a 5% significance level implies that this factor is not a variable that explains the model. Thus, the performance of this portfolio can not be explained by market movements. The value of the R square is close to zero which also indicates that the model is not a good fit with the observed values of the gender balanced portfolio, which also are in line with the low beta value for this portfolio.

This low R-square value is noteworthy, since the portfolio consists of companies included in OMXS and are expected to follow its movements. An explanation for this result could be that the gender balanced portfolio consists of almost 50% small cap companies, compared to the non-gender balanced portfolio that has about half the share.

## Conclusions

The aim of this study is to investigate whether a gender equal board of directors has an impact on the financial performance. A gender balanced and a non-gender balanced portfolio are created out of firms listed on the Swedish stock market and data was collected from December 2011-December 2016. The results are delimited to the specific companies and examination period used and thereby not necessarily expected for all other companies or regions. The selected companies have been chosen based on the amount of women on the corporate board and not the proportion of women in the company as a whole. To examine the objective, performance measures such as beta-value, Sharpe ratio, Treynor ratio, Jensen's alpha and Appraisal ratio are used. A regression analysis is applied to see if the performance of the portfolio distinguish from the performance of the market.

This study shows that the gender balanced portfolio outperforms the non-gender balanced portfolio in all investigated performance measurements. The evaluation of the performance measures shows that both portfolios outperform the market. The gender balanced portfolio has the highest average monthly return but is slightly more volatile than the non-gender balanced portfolio and the market. However, looking at the Sharpe ratio and Treynor ratio the gender balanced portfolio compensates with return for the extra risk taken. The regression analysis further implies that the performance of the gender balanced portfolio can not be explained by market movements contrary to the non-gender balanced portfolio. In other words, there must be other factors affecting the performance of the gender balanced portfolio. The main difference between the two portfolios is the share of women on the board which implies that this is one of the strengthening factors.

This study implies that a gender balanced corporate board has a positive impact on the financial performance of a firm. Much of the previous research on the relation between gender equality and firm performance have shown a negative or no correlation. This analysis is not based on companies with a gender balanced board due to quotas, unlike the studies of Böhren & Strøm (2010) and Ahern & Dittmar (2012). This is one possible explanation of the different outcomes. Another difference between this and the studies presented in the literature review is the origin of the sample in terms of region. Sweden is at the forefront of gender equality which might further explain the difference in results. A third explanation could be that this study is based on a quite small sample, with 15 companies in each portfolio. This

limits the opportunities to draw general conclusions about the actual impact of gender equality on equity performance for the entire Swedish market. The examination period used starts in 2012 and according to the AllBright list 2012 there is a very limited number of Swedish companies with at least 40% women on the board. If the examination period had started 2016, the number of gender balanced companies to include in the sample would have been higher. This increases the possibility for further studies to use a larger sample size.

Quotas for women on the boards of large companies is a topical subject. The Swedish government recently proposed legislation as a solution in order to increase the amount of women in the corporate boards of listed as well as state-run companies. It is a controversial subject in which the Swedish top politicians are divided on whether quota is the way to go. Further research examining the impact of gender equality on financial performance are therefore encouraged. A suggestion for future studies is to review not only the share of women on the board, but also taking top-management into account and thereby give a better overall picture of the company management as a whole.

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## Appendix 1. Portfolio composition

### 1. Gender balanced portfolio

	Sector	Listed	% women on the board (2012)
Klövern	Property management and development	Large Cap	43%
JM	Property management and development	Large Cap	43%
Wallenstam	Property management and development	Large Cap	40%
Sweco	Construction and engineering	Large Cap	50%
Axfood	Food and groceries	Large Cap	57%
Electrolux	Household appliances	Large Cap	44%
Swedbank	Finance	Large Cap	40%
Kappahl	Clothing	Mid Cap	50%
Doro	Communication equipment	Small Cap	40%
Dedicare	Healthcare	Small Cap	50%
Uniflex	Recruitment and consulting	Small Cap	60%
Profilgruppen	Metals and mining	Small Cap	40%
MultiQ	IT-services	Small Cap	50%
Avega Group	IT-services	Small Cap	40%
Boule Diagnostics	Medical equipment	Small Cap	40%

**2. Non-gender balanced portfolio**

	<b>Sector</b>	<b>Listed</b>	<b>% women on the board (2012)</b>
Hufvudstaden	Property management and development	Large Cap	20%
Castellum	Property management and development	Large Cap	29%
PEAB	Construction and engineering	Large Cap	25%
ABB	Electronic equipment	Large Cap	12%
SCA	Paper and forestry products	Large Cap	12%
Getinge	Medical equipment	Large Cap	29%
Handelsbanken	Finance	Large Cap	25%
New Wave Group	Textiles, clothing and luxury items	Mid Cap	33%
Cavotec	Engineering services	Mid Cap	22%
Qliro Group	E-commerce for consumer goods	Mid Cap	33%
Raysearch Laboratories	Medical equipment	Mid Cap	0%
Novotek	IT-services	Small Cap	0%
Wise Group	Recruitment	Small Cap	29%
Vitec Software Group	IT-services	Small Cap	0%
Caperio Holding	IT-services	First north	17%

## Appendix 2. Regression output

### Regression output for the non-gender balanced portfolio

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#### Regression Statistics

Multiple R	0,4001
R Square	0,1600
Adjusted R Square	0,1456
Standard Error	0,0316
Observations	60

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#### ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0,0111	0,0111	11,0513	0,0015
Residual	58	0,0581	0,0010		
Total	59	0,0691			

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	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0,0081	0,0042	1,9222	0,0595	-0,0003	0,0166	-0,0003	0,0166
OMXS	0,3695	0,1112	3,3244	0,0015	0,1470	0,5920	0,1470	0,5920

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**Regression output for the gender balanced portfolio**

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*Regression Statistics*

Multiple R	0,1477
R Square	0,0218
Adjusted R Square	0,0050
Standard Error	0,0409
Observations	60

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ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0,0022	0,0022	1,2941	0,2600
Residual	58	0,0972	0,0017		
Total	59	0,0993			

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	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	0,0158	0,0055	2,8875	0,0054	0,0048	0,0267	0,0048	0,0267
OMXS	0,1635	0,1438	1,1376	0,2600	-0,1242	0,4513	-0,1242	0,4513

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